

Ethical Inquiry in Knowledge Management

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Modern organizations are characterized by knowledge-intensive activities and complex relationships among individuals and groups, both within and outside of the organization. A study of such a system requires both an appreciation of what might constitute knowledge, and some collective notion of the limits of practical knowledge. Consequently the defining feature of systems thinking is reflection on the boundaries of inclusion and exclusion. This paper reviews concepts of knowledge (and ignorance) provided by Kant, and three twentieth century authors - Churchman, Ulrich, and Habermas. We propose a normative theoretical framework comprised of four architectural elements - knowledge perspectives, sources of boundary judgment, system roles and knowledge dynamics. The purpose of the proposed framework is to identify the knowledge concepts that must be addressed to enable those in a position of power (because they are involved with the knowledge management system) to impose order on the behavior of others (who are affected but not involved) by means of ethical inquiry.

1. Introduction

“Once the rockets are up who cares where they come down”

“That’s not my department” said Wernher von Braun.

From a 1965 song by Tom Lehrer.

Modern organizations are characterized by knowledge-intensive activities and complex relationships among individuals and groups, both within and outside of the organization. Knowledge management is therefore a complex endeavor that may be understood from the perspective of organizational systems, and systems thinking. From a systems perspective, business organizations are seen as interlocking networks of complex, adaptive human activities. The properties of the system only emerge when discrete components of the system, such as humans, activities, structures, intentions and outcomes, interact with one another and with the environment. A study of systems is impossible without an appreciation of what might constitute knowledge, and some collective notion of the limits of practical knowledge. A critique of knowledge (and ignorance) requires the concept of a system (and boundary) so as to guide systemic learning and justify the resulting design.

Many authors have commented on the conceptual difficulties associated with managing knowledge across boundaries. While practical knowledge management approaches are necessarily selective, it is impossible for those concerned to “see” the universe (or multi-verse) of issues that they are selected from. It is therefore difficult to settle rival claims about holistic issues (i.e., those related to the whole of the system) without a normative scheme to support systemic inquiry.

A parallel difficulty confronts a knowledge management researcher in the face of a confusing variety of approaches to perspectives, paradigms and frameworks from which to identify constructs, build theories, and test them against empirical data. This difficulty is succinctly expressed by Kay and Goldspink "Knowledge management, as a field of study, has suffered from issues of definition since before the term caught the attention of practicing managers and IS professionals. Put simply, it is unclear what it is that everyone is trying so hard to manage." (Kay & Goldspink, 2005)

Judgments about the appropriate conceptualization of the boundary of the system become central to the design of knowledge management systems. In an age where major business organizations (Enron, Worldcom) are renowned for their cupidity it is relevant to ask what theories of knowledge management and inquiry are used in practise. Do those involved draw system boundaries narrowly, as in Lehrer's song about Wernher von Braun, the Nazi rocket scientist-turned-NASA star recruit? In designing knowledge management systems those involved are in the position of imposing order on the behavior of others. It would be inappropriate if those involved assumed that they were master, and those affected (but not involved) were slaves to their design. Natural justice suggests that any formulation of the problem must be open to critique by those affected. Problem formulation and system design in such a context therefore has at its core an ethical dimension.

This paper approaches knowledge management from the viewpoint of ethical inquiry based on an appreciation of the concepts of knowledge (and ignorance) provided by Kant, and three twentieth century authors - Churchman, Ulrich, and Habermas. The research seeks to illuminate those issues which constitute a necessary part of the critique of judgment about the proper boundary of a knowledge management system. The purpose of the proposed framework is to identify the knowledge concepts that must be addressed to enable those in a position of power (because they are involved with the knowledge management system) to impose order on the behavior of others (who are affected but not involved) by means of ethical inquiry.

2. Literature review and research objectives

The purpose of the literature review is to provide a brief indication the nature of the debt that current conceptions of ethical inquiry in knowledge management research owe to Kant, Churchman, Ulrich, and Habermas. Because the subject matter is rich and diverse the author's project overlaps the work of many others, the review is selective, and reflects the authors' training in information systems and group decision making and their experiences in facilitating strategic interventions in the New Zealand context. The section concludes with a statement of research objectives.

2.1 Kant

"Without sensibility no object would be given to us, without understanding no object would be thought. Thoughts without content are empty, intuition without concepts are blind. It is, therefore, just as necessary to make our concepts sensible, that is, to add the object to them in intuition, as to make our intuitions intelligible, that is, to bring them

under concepts. These two powers or capacities cannot exchange their functions. The understanding can intuit nothing, the senses can think nothing. Only through their union can knowledge arise” (Kant, 1787:93)

An overview of knowledge management and systems thinking grounded in Kant’s knowledge concepts (or inquiry into the nature of knowledge) is provided by Lehane, Clarke, Coakes and Jack (2004). Kant’s *Transcendental Idealism* identifies the relative priority of subjective knowledge (e.g., of personal intentions and outcomes) and objective knowledge (e.g., of physical inputs and outputs); and the relative priority of concepts we are born with (what he calls *a priori* concepts) and those empirical observations that we access through our senses. The objectively real and our subjective understanding are interlaced, each providing the conditions for the other. (ibid, p. 95) Inquiry by Kant underpins theories of knowledge and organizational learning in which subjective and objective elements are tightly coupled – neither could be represented without the other. This suggests that knowledge management research based on a single perspective – values *or* facts – can provide only a partial truth. This has a leveling effect in that the practical consequences of belief – of scientist and citizen alike – are open to critique.

2.2 Churchman

C. West Churchman is part of the tradition of American Pragmatism, a school of thought associated with the names of C. S. Pierce, William James, John Dewey, and A. E. Singer Jr. This distinctively American school is marked by the doctrines that the meaning of conceptions is to be sought in their practical bearings, that the function of thought is to guide action, and that truth is pre-eminently to be tested by the practical consequences of belief. According to Matthews (2006:183) “pragmatism accepted the interplay of observation (empirical datum) and concepts (*a priori* thought), however, it gave neither an autonomous, fixed, or foundational character”. That is, the school follows Kant in asserting that no *a priori* worldview can be possibly sufficient (and thus fully justifiable) and the legitimacy of any social system designed from *any* pre-given or *a priori* worldview is subject to critique from other worldviews. Based on this premise, Churchman believes that it is impossible to apprehend the whole system. Instead, Churchman advocates a “sweep-in” approach by which the system designer collects as much information as possible about (conflicting) *a priori* worldviews.

Churchman (Churchman, 1971) draws upon Leibniz, Locke, Kant, Hegel, and Singer to show how complex human systems may be designed to support critique. These insights have major practical consequences for the design of knowledge management systems. For example, a purely objective or technical approach cannot by itself determine an appropriate system design because system goals must address intertwined *technical*, *organizational* and *personal* issues. (Mitroff & Linstone, 1993) Strategies must be adopted to avoid solving the wrong problem. (Chae, Paradise, Courtney, & Cagle, 2005) While complexity demands respect for role-specific perspectives, “progress can be measured in terms of the degree to which the *client*, *decision maker* and *designer* are the same.” (Richardson & Courtney, 2004)

It is clear that Churchman’s “sweep-in” approach is fundamentally distinct

from the positivist empirical approach. The positivist approach believes in the objectivity of a world “out there” and deploys scientific methods to represent this objective reality. While the positivists believe in absoluteness, Churchman acknowledges contingency and contextuality. System design must be approached from a holistic perspective that “sweeps in” the perspectives of those inside the system (and involved in system design) and those outside (and affected but not involved). That is, pragmatism accepts the need for a pluralism based to a significant degree on an ethical process for building – and critiquing – consensus about both facts and theories, and about facts and values. (Putnam 1995:14)

2.3 Ulrich

Ulrich draws upon Churchman (1971) and Kant to identify the normative issues underlying a critique of judgment about the proper boundary of complex human systems, including systems of knowledge management. A critique of knowledge (and ignorance) that focuses on the concept of a system (and boundary) tests the practical consequences of the existence or non-existence of the system (Pierce, 1877, 1878). Ulrich’s *critical system heuristics* (Ulrich, 1983, 1987, 1993, 2000, 2002a, 2002b, 2003, 2005) constitute a system for boundary critique. Boundary judgments about ‘facts’ (observations) and ‘values’ (evaluations) are analyzed, both from the perspective of what ‘is’ and what ‘ought to be’. Three basic boundary issues are identified for those *involved* in the system: Source of *motivation*, source of *power*, and source of *technical knowledge or expertise*. The basic boundary issue for those affected but not involved is source of *legitimacy*. Ulrich created a new system role – that of *witness* – to pursue legitimacy. Three questions are posed from the perspective of each of four system roles (*witness, client, decision maker, and designer or planner*), to produce 12 questions. Discourse on these questions is intended to render explicit the normative premises that inevitably flow into social system design. (Matthews, 2006)

There is alignment between three knowledge perspectives or bases for rationality (*technical, organizational or interpersonal, and personal*) employed by some of Churchman’s disciples (e.g., Chae, et al., 2005; Mitroff & Linstone, 1993) and the sources of boundary judgments (*technical knowledge or expertise, power, and motivation*) for those *involved* in the system. Ulrich sees these three knowledge perspectives as a staircase where the organizational or interpersonal level builds on the technical level, and the personal level builds on the organizational or interpersonal level. (Ulrich, 2001a, 2001b)

2.4 Habermas

Habermas has contributed many theories related to *technical, organizational or interpersonal* and *personal* perspectives on knowledge. In writings such as *Knowledge and Human Interests* (Habermas, 1968) these perspectives are the cognitive interests associated with technical, practical and emancipatory knowledge. Habermas’s treatment of these perspectives could be interpreted as arguing in part for a separate focus on each perspective as though it was independent of the others. This led some systems theorists in the context of the ‘paradigm wars’ of the 1990’s to argue that research paradigm and methodologies based on each knowledge perspective produced concepts that were incommensurate across paradigms. If this was the case,

no research paradigm exists to support Churchman's 'sweeping-in' process. Ethical concerns would be removed from the information systems discipline and removed to its own separate (bounded) discipline. If this were the case, no paradigm would exist to support the notion of making common sense via *consensual validation*, that is 'the things people agree upon because of their common sensual apparatus and deeply common interpersonal experiences make them seem objectively so.' (Weick, 1979)

In *The Theory of Communicative Action* (Habermas, 1984, 1987) Habermas argued that all knowledge is interdependent in that it is mediated by language. The human instinct for language provides the site of, and the precondition for, knowledge. Loosely speaking, Habermas locates Kant's *Transcendental Idealism* at the boundary of language (thought) and action (experienced through the senses) and grants it form via a theory of *Universal Pragmatics*. Critical discourse analysis based on a Habermas (Habermas, 1984, 1987) excavates 'meaning' via examining claims that technical knowledge is based on *objective truth*, examining claims that interpersonal knowledge is based on normative *rightness*, and examining claims that personal truth is based on *sincerity*. Knowledge management researchers currently apply Habermas's theory of communicative action to promote diversity under the banner of 'critical systems meta-methodology' (Jackson, 2000), methodological pluralism (Midgley, 2000; Mingers, 2001, 2005) and pragmatic pluralism. (Taket and White, 1996)

2.5 Research objectives

Midgley (2000: 171-216) interprets twentieth century debates on systemic interventions as occurring in three waves, linked respectively to Habermas's technical, interpersonal and personal worlds. Ulrich's critical system heuristics and Habermas's theory of communicative action are third wave theories that deal with power relations via dialogue. Yet in practice coercive situations are generally characterised by the closure of debate. (Midgley, 2000:208) A fourth wave theory may be characterized as one that is explicitly ethical in nature. It focuses on value clarification by both those involved (and included) in dialogue about the system and those that are affected (and excluded). (Bawden, 2005)

The aim of the research is to develop a fourth wave theoretical framework for ethical inquiry in Knowledge Management that builds upon two existing theories – a *Habermasian inquiring system* developed by Guo & Sheffield (2006a), and Ulrich's *critical systems heuristics* (Ulrich, 1983, 1987, 1993, 2000, 2003, 2005).

In Guo & Sheffield's (2006a) Habermasian inquiring system, the key architectural element is Habermas's knowledge constitutive interests. (Habermas, 1968) Habermas's three knowledge interests (technical, practical, and emancipatory) form a three-wave or three-level integrating structure. The development of the Habermasian inquiring system consists of describing how four other design elements (Habermas' three rationalities, Churchman's roles, knowledge dynamics, and research paradigms) are positioned within this integrating structure. (Figure 1)

The Habermasian inquiring system was applied by the authors to critique the paradigms and methodologies used in the knowledge management literature. (Guo & Sheffield, 2006b) The key finding is that inquiry in Knowledge Manage-

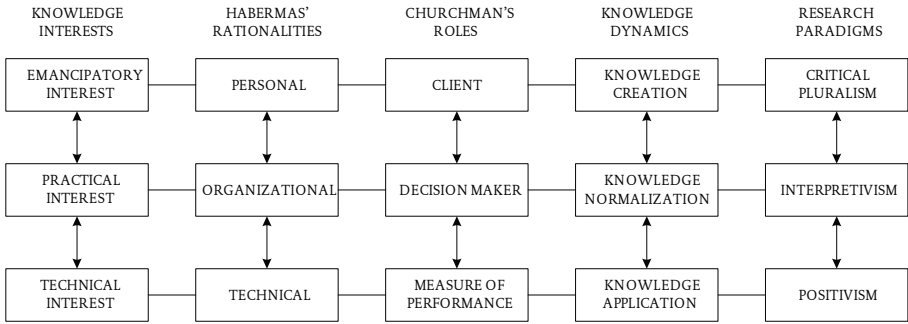


Figure 1 Habermasian inquiring system (Guo & Sheffield, 2006a)

ment is starkly unbalanced. Overuse of the positivist paradigm and its dominant research method (sample survey) prevents the exploitation of the highly relevant insights available via the interpretive and critical pluralist paradigms and the field study method. Because, as is argued above, neither the subjective nor the objective aspects of knowledge can be represented without the other, the knowledge management literature is seen as reframing issues of rightness and sincerity as issues of objective truth. This focus on facts rather than values obscures the need for critique, and makes those affected by the ‘system’ vulnerable to those who are involved in its design and maintenance.

In the section devoted to Ulrich’s critical systems heuristics it was noted that there is alignment between three knowledge perspectives (*technical, organizational or interpersonal, and personal*) employed by some of Churchman’s disciples (e.g., Chae et al., 2005; Mitroff & Linstone, 1993) and the sources of boundary judgments (*technical knowledge or expertise, power, and motivation*) for those involved in the system. The basic boundary issue for those affected but not involved (a system role that Ulrich called *witness*) is source of *legitimacy*. This suggests that the power of Habermasian discourse by those involved in the system to ‘sweep in’ the interests of those affected but not involved may be strengthened by directly addressing the system role of witness.

In summary, the proposed framework is a fourth wave theory that identifies the knowledge concepts that must be addressed to enable those in a position of power (because they are involved with the knowledge management system) to impose order on the behavior of others (who are affected but not involved) by means of ethical inquiry. Elements of the proposed framework are selected from the Habermasian model illustrated in Figure 1 and Ulrich’s critical systems heuristics to meet two objectives. Firstly the framework must identify the elements involved in the sweeping in of those affected (but excluded) from the system. Secondly the framework must identify the architectural elements that link those inside the system (involved) and those outside the system (affected).

3. The proposed framework

The proposed framework is illustrated in Figure 2. (The development process has been omitted due to space restrictions.) Normative theory to support boundary analysis and the surfacing of the interests of those affected (but

otherwise excluded) is provided via the knowledge creation aspect of knowledge dynamics, and three concepts from Ulrich’s critical systems heuristics: an *ethical* perspective on knowledge interests and rationalities; source of *legitimation* of boundary judgment; and the system role of *witness*. (Research objective 1) Four architectural elements link those inside the system (involved) and those outside the system (affected): Knowledge perspectives, sources of boundary judgment, system roles and knowledge dynamics constitute. (Research objective 2) The proposed framework is seen as a fourth wave normative theory that identifies the knowledge concepts that must be addressed to enable those in a position of power (because they are involved with the knowledge management system) to impose order on the behavior of others (who are affected but not involved) by means of ethical inquiry.

4. Discussion and conclusion

The development of a framework for ethical inquiry in knowledge management was motivated by the conceptual difficulties associated with managing knowledge across boundaries. The framework illuminates issues which constitute a necessary part of the critique of judgment about the proper boundary of a knowledge management system. To achieve this purpose the framework drew on concepts of knowledge (and ignorance) provided by Kant, and three twentieth century authors - Churchman, Ulrich, and Habermas. Key concepts and linkages are as follows:

Kant’s *Transcendental Idealism* identified that the objectively real and our subjective understanding are interlaced, each providing the conditions for the other. Knowledge management research based on a single perspective – values *or* facts – will therefore provide only a partial truth. Churchman identified that the whole system cannot be apprehended and that system design must therefore be approached from a holistic perspective that “sweeps in” the perspectives of those inside the system (and involved in system design) and those outside (and affected but not involved). Ulrich identified a systematic set of issues that support the sweeping in process. Habermas identified the cognitive interests associated with technical, practical and

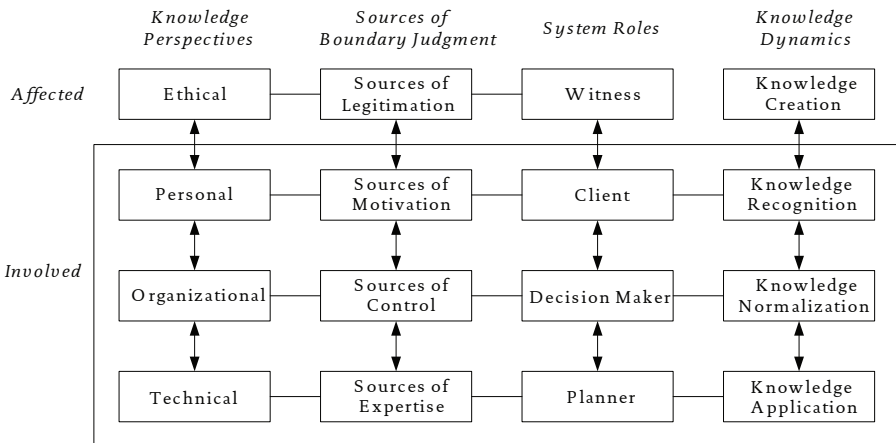


Figure 2 Framework proposed for ethical inquiry in knowledge management

emancipatory knowledge, and the nature of the communicative process that gives rise to each.

The framework was designed to ‘sweep-in’ to the system the interests of those *affected* (but not involved). It was developed from two existing theories - a Habermasian inquiring system (Guo & Sheffield, 2006a, 2006b) and Ulrich’s critical systems heuristics. The former is seen as identifying the knowledge perspectives, sources of boundary judgments, system roles, and knowledge dynamics of those *involved* in the system. The latter is seen as identifying the knowledge perspectives, sources of boundary judgments, system roles, and knowledge dynamics of those *affected* (but not involved).

The value of the framework, and its Churchmanian and Habermasian roots, are reflected in the categories of knowledge dynamics – *knowledge creation* is seen as that ethical awareness that secures legitimation by virtue of the communicative action of a witness who “sweeps in” the voice to those affected (but not involved); *knowledge recognition*, *knowledge normalization* and *knowledge application* are the communicative actions that constitute systemic learning and design justification by those already involved.

Movement from the first to the fourth levels of the proposed framework represents “stages” or “waves” of intellectual and moral development. At the first level knowledge is applied when planners set system boundaries (narrowly) to source the expertise that solves technical problems. At the second level knowledge is normalized when the collective decision maker sets system boundaries (less narrowly) to obtain control of organizational activities. At the third level knowledge that is recognized by those inside the system informs the wishes of the client and system boundaries are set (broadly) motivated by an exploration of some of the more personal issues in the life-world of the client. At the fourth level the creation of knowledge about those affected (but not involved) by the act of witnessing sets systems boundary (even more broadly) so as to seek the sources of legitimation required to address ethical issues.

The framework thus provides a fourth wave theory describing the knowledge concepts that must be addressed to enable those in a position of power (because they are involved with the knowledge management system) to impose order on the behavior of others (who are affected but not involved) *by means of ethical inquiry*.

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