



GUEST EDITORIAL

Critical research in information systems: looking forward, looking back

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Abstract

Purpose – The purpose of this article is to reflect on the development of critical research in information systems and give an overview of the papers chosen for this special issue.

Design/methodology/approach – To set the scene by discussing the origins and the developing field of critical research in information systems and to analyse each paper, suggesting ways in which it relates to the chosen themes.

Findings – The papers chosen address theoretical foundations, paradigmatic and methodological issues, empirical studies and praxis and reflexivity in critical information systems research.

Originality/value – Highlights the growing interest in critical research in the information systems discipline and enables reflection on the difficulties, barriers and opportunities for development.

Keywords Social theories, Information systems, Research

Paper type Viewpoint

Critical research in information systems (CRIS) is facing a crossroads in its historical development. During the 1990s, critical research entered an initial period of establishing legitimacy in information systems research through robust theoretical and philosophical analysis. Many of these important studies which form the basis of CRIS can be found on the References to Critical Social Theory webpage at ISWORLD (www.qual.auckland.ac.nz/critical.htm). Critical research in information systems (IS) enhanced understanding of particularly communication deficits in the design, use and implementation of information technologies and information systems. However, this emphasis was in danger of limiting application of critical social theory – other than that of Habermas – missing the rounded analysis of critique found in reference disciplines such as critical management studies and critical sociology.

The early twenty-first century offers clear indications of slow but sustained growth of interest in scholars taking a CRIS approach. Several conferences with a CRIS perspective (e.g. Critical Management Studies (Gilson *et al.*, 2001; Gilson *et al.*, 2003; Bridgman *et al.*, 2005); (Re-) Defining Critical Research in IS (Adam *et al.*, 2001); “Critical reflections on critical research in information systems” (Adam *et al.*, 2004); International Federation on Information Processing Working Group 8.2 (Trauth *et al.*, 2006); “Critical computing” (Bertelsen *et al.*, 2006) have been advanced partly



answering critics that CRIS is esoteric and lacking empirical studies. This growing interest in CRIS is further evidenced by the publication of an edited volume (Howcroft and Trauth, 2005, and special journal issues (*The DataBase on Advances in Information Systems* (Howcroft and Treux, 2001, 2002); *Information Systems Journal* (Brooke *et al.*, n.d.); *Social Science Computer Review* (Richardson *et al.*, 2006), including this special issue of *Information Technology and People*.

Still the field of CRIS remains largely indeterminate regardless of theoretical orientation informing the analysis. However, there are some central tenets of critical research such as advancing a political agenda, exhibiting an empirical sensitivity, and uncovering systems of institutional repression and human resistance. CRIS demands reflexivity, and draws attention to power relations in human contexts. Perhaps most importantly, critical research should be praxis oriented – combining theory and action (praxis) to create a scholarship which may lead to more equitable social change.

While CRIS is gaining in interest, several difficulties and barriers remain:

- *Establishing the legitimacy of critical study:* This includes finding supervisors, peer reviewers and journal editorial boards accepting of CRIS. In contrast to the experiences of critical researchers in other fields, there is the feeling of the need to constantly justify that which reference disciplines can perhaps take for granted, e.g. defending taking a CRIS approach, substantiation of particularised detail of chosen social theories, and constraints about using terms that “dare not speak their name” such as social class, inequality, discrimination, oppression and so on.
- *Actual and perceived barriers to publication in IS outlets:* This perpetuates limited publication of critical IS research in IS journals resulting in CRIS researchers finding other ways to publish – depriving the IS field of increasing knowledge of CRIS agendas.
- *Lack of a clear or agreed theoretical basis for CRIS research:* CRIS is thus as fragmented as IS as a whole. It is not clear what CRIS is, what emancipation is and what critical theories should and could be relevant to CRIS researchers. There are still limited exemplars for field researchers.
- *Dissonance between critical theory and practice:* Critical theory and practice are linked but practice is limited by the constraints of academia including what is valued as research as well as limits to possibilities within the broader organisational and social environment in which CRIS researchers operate.
- *Lack of clarity of the aims of CRIS:* Is CRIS advocating a more aware managerialism? Knowledge to aid emancipation? The CRIS field has yet to fully debate such issues.
- *The increasing popularity of CRIS posing a danger of co-option:* There is the possibility of CRIS losing its critical edge or as Grey (2005) suggests becoming a careerist “bandwagon” or “brand”.

Despite these barriers, CRIS is increasingly relevant for several reasons. For instance, there are global issues such as digital inequality, social exclusion, and the strategic location of information technology enabled services by trans-national corporations exploiting low pay and poor conditions. Walsham (2005a, b) urges social engagement noting the asymmetry of wealth and power and the inadequacies of the current world social order, challenging the status quo and opposing vested interests, although he

observes that this can be a painful and dangerous process. There are also organisational issues such as the continued managerialism dominating IS research and practice which lacks consideration of “bit face” users. There is also the continuation of silencing voices often unheard – where are the critiques of technology and power in organisations, the studies of those on the sharp end of digital and other inequalities, and the analyses of the intersections of social class, gender, disability, age, sexual orientation, race and ethnicity which enhance our appreciation of the social shaping of technologies and design and use of IS?

In our call for this *Information Technology and People* publication, we attempted to address some of these issues of definition and direction of CRIS research. We welcomed scholarly inquiry, which was informed by critical social theories, and examined the complex relationships between information systems and their cultural, national, organisational, political and social context of use. We called for manuscripts that addressed topics that advance the critical agenda in IS research within the following four areas:

- (1) *Theoretical foundations*: the ontological and epistemological assumptions of a critical theory and how these assumptions can inform emancipatory IS research; the use of feminist theories, postcolonial theories and other critical social theories as foundations for IS research; post-modern notions of identity and representation in cyberspace; building critical theory in IS research.
- (2) *Paradigmatic and methodological issues*: methodological strategies appropriate for a critical IS research agenda; critique of research methods from a critical perspective; guidelines for assessing and conducting critical IS research; future directions for critical IS research; linkage between theory and practice in critical IS research; problems and challenges in conducting critical IS research.
- (3) *Empirical studies*: the impacts of information technologies on increased surveillance, domination, control, and alienation in organisations and public spaces; uses of information technologies to support emancipatory projects; human agency and resistance to domination; hidden agendas and underlying assumptions in information systems development projects; under-representation of women and minorities in technology-related disciplines in the academy, the information technology (IT) workforce and society; imperialist assumptions and practices in IT and economic development projects in developing countries; the exercise of managerial power and control through organisational information systems; deconstruction of IT policy documents.
- (4) *Praxis and reflexivity*: self-reflexivity and the researchers’ relationship with the context and subjects of research; mechanisms for achieving emancipation in organisations and the academy.

The papers we have chosen for this special issue embrace these four areas in various ways. The first paper, “Enabling or disabling technologies? A critical approach to web accessibility” by Alison Adam and David Kreps, considers web accessibility for disabled people as a critical IS issue. This paper is situated in the praxis and reflexivity domain, focusing on web accessibility as “a concrete example of a structural inequality where critical theory could be used to argue for a material difference in relation to the

use of ICT". Disabled people are identifying themselves as an oppressed group with a set of rights, who wish to pursue their rights to full access to ICT. Legal requirements that web sites be accessible suggests that online services, in general, and, more particularly, for disabled people, are now being viewed as a central component in the provision of a range of services rather than on optional extra. The rise of the web accessibility movement for the social inclusion of disabled people signals that the law may be pressed into service in the critical project.

However, technological design may be implicated in the construction and maintenance of disability. This can occur in two ways. First, disability is often created by designing technology in such a way that groups of disabled people cannot use it as in the example of website accessibility. Second, disability is created in a less obvious way by a society that insists on a particular norm for full societal membership with its accompanying medical and technological procedures to attain that norm. The authors argue that critical disability theory may provide useful guidance for the construction of technologies that consider both the barriers in the bodily impairment and the societal context.

The second paper, "Critical empirical research in is: an example of gender and the it workforce" by Eileen Trauth and Debra Howcroft, takes on paradigmatic and methodology issues, as well as reflexivity and praxis through the use of empirical examples extracted from a multi-year field study of women in the American IT labor force. The authors consider how alternative insights can arise from a critical IS research perspective. Two theoretical positions are used to inform this study: Lukes' framework on power which highlights both overt and covert power issues in the workforce; and Trauth's individual differences theory of gender and IT which challenges gender dichotomizing by shifting the focus to the variation amongst women themselves.

Over 100 female practitioners and academics in the American IT workforce were interviewed, and asked to describe their introduction to information technology, educational experiences, her decision to enter the IT field, experiences as a woman working in a male-dominated profession, and people and events who influenced their personal and career development. In applying a critical epistemology in the conduct of fieldwork, the authors describe how the focus of the interviews shifted from exclusive emphasis on eliciting the participant's subjective representation of her career history to encouraging reflexive accounts of her experiences. The authors include many detailed conversations that took place during the interviews to demonstrate how this reflexive interview process was conducted in practice. This resulted in deeper understanding of the under-representation of women in the IT workforce, as well as rich insights into the actual conduct of critical research. The authors also offer their reflections on the ethical and epistemological issues that arise when conducting critical empirical fieldwork.

The two remaining papers are empirical studies that employ critical theory in the study of information systems in organisations. In the first paper, "Combining social shaping of technology and communicative action theory for understanding rhetorical closure" by Marlei Pozzebon, Ryad Titah and Alain Pinsonneault, the authors observe that there have been mixed results from ERP installations. Yet firms continue to invest in new "fashions" of ERP and its logical extensions such as knowledge management, customer relationship management, and supply chain management systems. In view of these mixed results, they raise the evocative question – how can we explain the

pervasiveness of these new fashions when proof or evidence of benefits from those already implemented is so weak? To gain an empirically informed understanding of this phenomenon, a critical-interpretive case study of an ERP implementation was conducted. The purpose of this study was to explore the outcomes that rhetorical closure is likely to produce regarding IT adoption and implementation, the extent to which rhetoric of closure helps to explain the pervasiveness of new IT fashions, and the benefits of a better understanding of mechanisms of rhetorical closure for research and practice.

Bijker's notion of rhetorical closure and Habermas' theory of communicative action were used to inform this study. Rhetorical closure suggests that new IT fashions are not simply imposed by suppliers on passive buyers. Rather, the adoption of new IT fashions is the result of an interactive relationship between suppliers, consultants and managers, which is articulated around IT as solving key managerial problems. Rhetorical closure is one such mechanism used by relevant groups to justify that the managerial problem has disappeared precisely because it has been fixed by the IT solution which they put forward. Thus, rhetorical closure helps us to understand the mechanisms by which a particular solution (e.g. ERP and its logical extensions) comes to be seen as successful or dominant for a certain period of time in certain contexts. Habermas' theory of communicative action provides further insights into the links amongst rhetorical arguments, the justification process (i.e. the type of rationality and the validity claims which are called upon), and the type of closure that constitutes the outcome of these processes.

In the final paper, "Technologies of the self: virtual work and the inner panopticon" by Paul Jackson, Hosein Gharavi, and Jane Klobas, the authors examine how the modes of influence on knowledge worker productivity come into being and operate across boundaries of time, space and organisational structure. The motivation for this study developed during a longitudinal study of an organisation executing a strategy they called "virtualisation". Although the organisation was already highly distributed, the Director wished to implement technologies and ways of working which reduced the reliance upon face-to-face meetings and minimised a "head office" mindset. After initial data collection from a wide range of local and remote staff, the authors noticed how hard the remote staff worked, under difficult conditions and over long periods of time. Why do these workers subject themselves to these demands, conform to strict standards of quality and high-performance and continue to generate company value, much of it in the absence of managerial control or monitoring?

The authors conducted an interpretive case study of the development planning division of an international engineering consulting company based in Scandinavia. Using the concepts of the institutionalization of the self and of corporate culture, the authors examine the development of durable social habits that are routinely used for overcoming day-to-day problems, and how these social habits are repeatedly observed by others and ultimately become internalized by others and the self. While traditional forms of management have emphasized command and control using procedures, measurement and standardisation, managers of knowledge workers in virtual organisations have tended to employ new forms of management. Managers in these virtual organisations seek to build a culture in which the worker independently performs tasks to the required level of quality and completeness. In this situation, knowledge workers tend to provide self-imposed surveillance of norms of productivity,

commitment and quality. It is an internalised panopticon, by which, members of organisations watch themselves for indications of deviance or under-performance and hold themselves accountable to the values generated and maintained by organisations and professions. In considering the institutionalisation of the self, the authors conclude that the issues are not as simple as considering the core logic of disempowerment through corporate culture. Their research uncovered the primacy of internalised forms of control. Yet, at the same time, power and control remained complex, diverse and fluid within the virtual organisational context. Critical research therefore enables critical awareness of various forms of domination and control, and demands a radicalised view of power, developed with an emancipatory interest.

In closing, we would like to thank those reviewers who took the time and care to provide detailed and constructive feedback to the authors. We would also like to thank all of the authors who crafted the 17 manuscripts that we received in response to this call. In looking forward to further development of CRIS, we call on critical IS researchers to continue to pose challenges within the IS discipline through their important and reflexive empirical work. Finally, we would like to thank the editorial board of *Information Technology and People* for the opportunity to guest edit this special issue, and hope the readership enjoy the papers.

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