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# 1 Choosing critical IS research

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## **Introduction**

This handbook presents a collection of reflections on key themes and emergent issues in critical information systems (IS) research. Written by specialists in their respective fields, it draws together a variety of contributions to the study of information systems. Common to the contributions is a shared concern with challenging what is seen by some as the current orthodoxy about IS theory and research. Since the publication of the seminal paper by Orlikowski and Baroudi (1991) which noted the dearth of critical IS research, there has been a considerable shift in the research landscape. The last few years have witnessed a more explicit focus on such research, as evidenced in an increasing number of publications, conference streams, special issues and academic electronic networks concerned with discussing critical IS.<sup>1</sup> Continuing in that vein, this handbook adopts an inclusive approach to consider alternative insights that can arise from critical IS research. We do not attempt to cover all varieties of this research, but rather incorporate some of its most influential currents. In this introduction we begin by considering the motivation to engage in critical IS research. We then go on to describe the organization of the book. Included in this is a brief overview of each of the chapters.

## **The evolution of critical IS research**

Accompanying the development and diffusion of information technologies (IT) throughout organizations and society, comes the research challenge to examine the relationship between IS and the organizations/societies within which they are embedded. The social nature of activities associated with the development, implementation and use of IS, and the management of people who carry out these activities, naturally leads to considerations of social and political power. As the field of IS matures, it is fitting that consideration be given to the ways in which such an examination is carried out. Thus, there is a need to consider the research approaches that are used to carry out these assessments.<sup>2</sup>

It is worth noting that the meaning of the term 'critical' is not self-evident and is often subject to various interpretations. In the social sciences, the term is used to describe a range of related approaches, including critical theory

(Horkheimer 1976), critical operational research (Mingers 1992), critical accounting (Critical Perspectives on Accounting), critical ethnography (Forester 1992) and critical management studies (Alvesson and Willmott 1996). Each of these is subject to its own disciplinary connotations (Mingers 2000). However, a commonality across all of these various understandings of the term is that they are generally informed by the critical theory of the Frankfurt school (Hammersey 1995), for example, Theodor Adorno, Max Horkheimer, Herbert Marcuse and Jürgen Habermas.

Yet, despite such commonality, there are some fairly distinct styles in the way research is performed (geographically, institutionally and disciplinarily), resulting in a diversity of intellectual activity, some of which is indeed oppositional (for example, realism versus relativism,<sup>3</sup> class politics versus gender politics<sup>4</sup>). Hence, there exists a broad range of epistemological/ontological positions, which fall under the 'critical' umbrella and which draw upon a variety of social theories and social thinkers. These include, for example, the Frankfurt school of critical theory (Horkheimer 1976), actor-network theory (Latour 1991), Marxism (Marx [1867] 1974), feminist theory (Wajeman 1991), and the work of Bourdieu (1990), Dooyeweerd (1973), Foucault (1979) and Heidegger (1953).

In contrast to the diversity within the social sciences, critical IS research was initially guided by the Frankfurt school generally (Brooke 2002a), and more particularly, the work of Jürgen Habermas (Ngwenyama 1991; Doolin and Lowe 2002) with a core of authors committed to this area (Lyytinen and Klein 1985; Lyytinen and Hirschheim 1988, 1989; Ngwenyama 1991; Lyytinen 1992; Klein and Hirschheim 1993; Hirschheim and Klein 1994; Ngwenyama and Lee 1997; Cecez-Kecmanovic et al. 1999; Cecez-Kecmanovic 2001). As a result, some authors have argued that the relative dominance of the Habermasian approach is unnecessarily limiting (Doolin and Lowe 2002) and have called for enrolling other critical social theorists whose work could be of relevance to IS (Brooke 2002b).

In editing this handbook we are addressing this need. We do so, first and foremost, by producing a reference book in which insights into the conduct of critical IS research are provided by established scholars who write from a basis of experience with the theory and practice of critical research. We also address this need by the diversity of contributing chapters. This handbook reflects a broad range of critical approaches, thereby enriching our understanding of critical IS research.

In order to help the reader make sense of this evolving and rich area of study we identify five key themes or foci which shape a critical epistemology. These themes emanate in part from the critical management studies (CMS) literature, an area of critical research that has resonance with the IS research community, and is well developed with an increasing proliferation of sources.

It is not our intention here to put forth an exhaustive, comprehensive, or definitive set of criteria for what constitutes critical IS research. Rather, we note these elements as a way of illustrating the breadth of definition that is possible, and to use this structure to explain our strategy of inclusion for the handbook.

The first theme – emancipation – is fundamental in a range of critical intellectual traditions be it Habermasian, feminist or Marxist research (Alvesson and Willmott 1992). A thread running through all of these perspectives is a commitment to freeing individuals from power relations around which social and organizational life are woven (Fournier and Grey 2000). Often portrayed as the central objective of critical research, the intention is to focus on 'the oppositions, conflicts and contradictions in contemporary society, and to be emancipatory in that it should help to eliminate the causes of alienation and domination' (Myers and Avison 2002: 7). Despite this common interest in emancipation, the ways in which power relations are theorized, resisted and overthrown are seriously contested within the various intellectual traditions. The emancipatory discourse has been described as merely another form of domination that is in itself totalizing (Wilson 1997). As noted by Land (2004), one person's emancipation could be another person's enslavement. To adopt unitary and simplistic views of emancipation is necessarily limiting and will do little to further the critical project. Thus, more research and reflection are needed to investigate this issue further.

The second theme, critique of tradition, seeks to disrupt rather than reproduce the status quo. Whereas mainstream accounts seek to justify organizational and technological imperatives as natural and/or unavoidable, critical research challenges rather than confirms that which is established, and encourages dissent rather than acceptance of surface consensus. This critique of tradition (Mingers 2000) endeavours to upset existing patterns of power and authority. Critical research questions and deconstructs the taken-for-granted assumptions inherent in the status quo, and interprets organizational activity (including information systems) by recourse to a wider social, political, historical, economic and ideological context (Doolin 1998). Described as the sharing among critical researchers of oppositional tendencies (Grey, Chapter 9 this volume) this manifests as 'oppositional to established power and ideology': to managerial privilege; to hierarchy and its abuse; to, to put it at its most generic, not only the established order but the proposition that the established order is immutable' (pp. 186–7). As IS researchers we could add opposition to the ideas of progress that are aligned with technological development. Although there are problems with building a research stream that is based only on oppositional tendencies and negation, this does not by implication deny our choice to suggest an

alternative and radically different view of the world, one which emphasizes change but in a more positive way. This highlights the areas of commonality that draw critical researchers together and underlines critical research as a political project.

The third theme, non-performative intent (Fournier and Grey 2000), concerns the rejection of the provision of tools to support and assist managerial efficiency through re-engineering minimum inputs for maximum outputs. It rejects a view of action that is guided only by economic efficiency as opposed to a concern for social relations and all that is associated with this. This notion of anti-performativity stands in contrast to non-critical research, which aims to develop knowledge that contributes to the production of maximum output for minimum input (means-ends calculation). Similar claims are made on behalf of technology in general and information systems in particular, which are seen as augmenting the power of managerial decision making.

The fourth theme, critique of technological determinism, challenges the discourse surrounding socio-economic change – be it post-industrial society, information society, or globalization – which assumes that technological development is autonomous and that societal development is determined by the technology (Bijker 1995). It disrupts the inner logic of technology as a given, something that is assumed to provide an effective and reliable vehicle for social and organizational change (Williams and Edge 1996). The concern of critical researchers is not with the effectiveness of information systems, nor are they motivated by a wish to improve practice. Rather, the critical literature seeks to conceptualize technology development, adoption and use within the context of broader social and economic changes. Critique of the technological determinist tradition highlights both its explanatory inadequacy and its ideological function of furthering the vested interests in technical change (Russell and Williams 2002).

The final theme, reflexivity, highlights a methodological distinction between critical and more mainstream IS research. Whereas IS studies have traditionally been positivist, critical research engages in a critique of objectivity (Mingers 2000). In doing so it questions the validity of objective, value-free knowledge and information that is available, noting how this is often shaped by structures of power and interests. Like interpretive research, critical research engages in philosophical and methodological reflexivity (Fournier and Grey 2000). It provides reflections on the role of the researcher as a producer of knowledge and the mediations and negotiations that are associated with this role. In this respect, critical research is reflexive about the choice of research topic and the manner in which the research is conducted. As Kvasny (2004) has pointed out, we need to consider the extent to which we – as researchers – are implicated in mechanisms that promote

suffering. The way that we select research topics for investigation and how we choose to conduct the research contains consequences. We argue that it is not a neutral process. These consequences have the potential to perpetuate global inequalities and existing power bases within society. Further, we assert that denial or ignorance of these effects does not constitute objectivity and neutrality.

Throughout the course of this book project, our guiding principle has been the desire to complement and critique mainstream IS research, not to supplant it. Thus, it is possible to take some of the ideas and theories that have emerged from for-profit research and apply these insights in the not-for-profit context (Kvasny 2004). Our goal is to encourage research that builds upon and extends the positivist and interpretive research traditions so that new avenues of research opportunity are opened up to the IS scholar.

#### **Organization of the book**

The objective of this book is to consider the enactment of the critical tradition in IS research and the possibilities for new insights that can arise from shifting the lens from positivist or interpretive to critical. We achieve this objective in the following way. This book is divided into two parts which broadly reflect theoretical or conceptual themes, and also the application of these theories (although these are inevitably intertwined). If read sequentially, the chapters take the reader on a journey from consideration of the nature of critical IS research to issues for reflection with respect to the future conduct of critical IS research to specific examples of the application of a critical epistemology.

#### *The nature of critical IS research*

Part I sets the scene by considering the nature of critical IS research. The chapters consider the origins of critical IS research, the ways in which such research differs from positivist and interpretive research, and the implications of choosing the critical epistemology.

In Chapter 2, Dubravka Ceez-Keemanovic provides an introduction to understanding what is meant by critical enquiry. Ceez-Keemanovic achieves this by reflecting on the fundamental assumptions and concepts that guide critical research as compared to other epistemological choices, such as positivism or interpretivism. The issues covered include the purpose and motivation of research; the role of values in research; the nature of organizations, information systems, and their relationship; and assumptions about methodology. It is intended that this chapter is part of an ongoing project to provide greater understanding and appreciation of the nature of critical research. One anticipated outcome is that this process will alert readers who are editors and reviewers to the legitimacy of this type of

research. A second objective is to encourage critical IS researchers to reflect on their own assumptions and beliefs, thus continually developing and refining the critical project.

Leiser Silva, in Chapter 3, focuses on information systems and power. He considers the various theoretical approaches for studying power and discusses the challenges posed, given the technological and social aspects of information systems and the unobtrusive nature of power itself. Silva argues that theoretical frameworks with a Machiavellian view, whereby power is conceptualized in a strategic way, will enrich our understanding of the relationship between IT and organizations. He develops an integrative theoretical framework for such studies, by drawing specifically on Clegg's circuits of power and actor-network theory.

In attending to the multiple perspectives that can inform critical IS research, Nathalie Mitev, in Chapter 4, explores the issue of social constructivism and its potential contribution to the critical agenda. Constructivism, with its rejection of technological determinism and positivism, seems to have some areas of commonality with critical research. These issues are explored in the context of IS failures, which is used to highlight the differences between functionalist, interpretivist, constructivist and critical perspectives. This chapter, with recourse to an application (IS failure), advances our understanding of theory and how it can be used to inform the critical research agenda. The value of constructivism in supporting criticality is outlined, along with suggestions as to how some of the limitations of constructivism may be overcome. A case is presented that constructivist approaches, when used in such a way, have much to offer critical IS research.

In Chapter 5, Rosio Alvarez presents critical discourse analysis as an approach for understanding information systems as discursively constructed phenomena embedded within social structures. The case is made for the high proportion of IS work that entails interactional talk, thereby emphasizing the relevance of discourse analysis for IS research. This interactional talk creates and reproduces relationships of dominance, power, inequality and control. Critical discourse analysis provides IS researchers with an opportunity to examine power relations by deconstructing the language used and by giving consideration to how power is mobilized through language. Alvarez argues that this understanding paves the way towards emancipatory possibilities by 'denaturalizing' the existing social conditions and revealing alternative ways of being, explains the key elements of critical discourse analysis and provides an overview of analytical strategies that can be applied in practice. She concludes by encouraging researchers to critically examine language and consider how this level of understanding has the potential to assist both themselves as researchers and also to provide support to workers in organizations.

Alison Adam in Chapter 6 considers how ethics could be more effectively integrated into the critical wing of IS. She begins by looking to the field of computer ethics, which has some areas of commonality with critical IS, yet there is a notable absence of connection or integration. When moving on to consider the area of critical IS, Adam finds it surprising that the ethical foundations of Habermas's critical social theory has had such limited impact, especially since the focus on emancipation can be clearly cast as an ethical issue. There is much potential for further work in this area and a key question concerns how we may criticize the project of ethics yet retain and integrate it more effectively into IS. Adam argues against principles and rules of ethics and instead argues for a phenomenological, embedded nature of moral behaviour in the IS field.

In Chapter 7, Chris Westrup argues that a critical engagement with the concept of management fashions can help illuminate issues concerning similar trends within the IS field. Beginning with a thorough overview of the literature on developments in management fashions, Westrup argues that parallels can be drawn with the IS field. Some key trends are in evidence, which can be seen as waves of management fashion, as each fashion seemingly offers management new means for extracting surplus from labour. Initially, IS played a crucial role in fashions such as outsourcing, downsizing and business process re-engineering. More recently (post-1997), fashionable developments and interventions such as customer relationship management systems, e-business, and enterprise systems, are much more closely aligned with specific technologies. The chapter argues that a key difference is that IS fashions are linked to more durable technologies, rather than techniques, such as quality circles or total quality management, which can be relatively ephemeral. The rhetorics of information systems play an important role in giving different groupings (such as management, IT vendors, consultants and the business press) various ways to realign themselves. Developing and applying this argument further, Westrup then considers enterprise resource planning (ERP) systems as an example of IS-predicated management fashion.

Chapter 8 considers the issues which arise from the different critical approaches which stem from Marxism and feminism in the context of gender and information systems. Anita Greenhill and Melanie Wilson contrast the Marxist view of emancipation with that of feminists who seek reform within the existing capitalist system, and argue that the theoretical position of Marxism assists us in our understanding of both technology and women's oppression. They focus on the issue of at-home telework and present a Marxist critique of espoused benefits for women teleworkers within the traditional family. This critique questions the extent to which telework offers so-called 'liberation', given the context of home and family

responsibilities, isolation and powerlessness that is often associated with most teleworking practices. The authors go on to argue that not only are these espoused benefits highly questionable, but that telework presents a regressive step for the emancipatory project. Rather than situate women in the workplace where they are arguably the strongest, telework places women back into the home where they are faced with limited opportunities for collective organizing and resistance, something that could ultimately lead to a radical change to existing society.

The last two chapters in Part I open up the focus and go beyond the realm of the IS field to consider developments within related disciplines that have had an influence on the critical IS tradition. Chapter 9 looks towards the more expansive area of critical management studies, which – arguably – is an area from which many critical IS researchers have drawn inspiration and insight. Chris Grey reflects upon the achievements and influence of CMS on mainstream business institutions and management in wider society. He discusses the limited inroads by CMS into management to date, then notes evidence of a growing authority and with it a volume of work that has increasing prominence. However, Grey argues that the development of CMS needs to be nurtured and is in jeopardy if internal debates and controversies continue at the expense of a more ‘mature politics’. He suggests that CMS has the option of either developing a common front against managerialism and its related assumptions while tolerating internal differences, or engaging in endless debate about how this confrontation is to materialize. He argues that the differences among the various critical positions are less significant than the differences between critical and managerial positions. He also advocates for tolerance of internal differences while remaining uncompromising with our opponents. Within the argument that is being presented, Grey provides an overview of the context and historical development of CMS, its nature and its core propositions, a summary of the key debates that have raged within CMS and some suggestions as to how we can embark on a political project of influence.

Chapter 10, the final chapter in this part, is authored by James Stewart and Robin Williams, who challenge current thinking and common presumptions about the systems design process. Building on insights derived from the social shaping of technology perspective, Stewart and Williams propose a rich view of design processes, which has an evolutionary understanding of systems design and development, paying particular attention to social learning. They critique the conceptualization of design from early technology studies and the ‘user-oriented’ wing of computer science. Specifically, they argue against what they have termed ‘the design fallacy’ whereby it is assumed that the solution to addressing user needs lies in the collection of ever-extensive knowledge of the context and purposes

of various users in the technology design process. Instead, they propose a constructivist theorization of design, which argues against the Woolgarian notion ‘configuring the user’, and is concerned with domestication and consumption and the ways in which users appropriate the technology. Social learning refers to the way in which properties of the technology may not be immediately apparent, but are discovered as users try to make the artefact work. This entails a collective learning process to include the interactions between actors and the processes of negotiation and struggle. The social learning framework has been elaborated and tested through a series of multiple case studies of digital experiments and trials, conducted under the European Commission’s Social Learning in Multimedia (SLIM) project. A number of salient points emerged from the SLIM project, which have implications for our understanding of information and communication technology (ICT) applications as configurational technology.

#### *The theory and application of critical IS research*

One of the criticisms that has been levelled at critical IS research is that the theoretical ideas often fail to translate into a set of empirical studies. However, as the empirical side of critical IS research evolves and develops, this criticism is increasingly being eroded. Critical theory’s strong critique of empiricism does not mean that reflective empirical work is not a worthwhile activity. To ground theories of technological determinism, bureaucracy, capitalism and managerialism in organizational contexts can only aid our understanding of these issues. Thus, Part II of the handbook provides examples of the application of critical IS research. In these chapters we can see the ways in which the research agenda, the theories guiding it, and the findings are affected by the choice of a critical approach to the topic. Closely associated with critical IS research is the ideal of representing interests and perspectives that differ from those traditionally associated with managerial power and privilege, often based within modern corporations. What can be seen in these chapters are the voices of a range of diverse groups that are often marginalized in IS studies, yet have a legitimate interest in being represented. These voices are often silenced or cannot be heard, as critical researchers we face the important task of bringing them to the fore. The chapters that follow focus attention on groups that are usually at the margin and give them prominence.

Chapter 11, by Geoff Walsham, builds on Orlikowski and Baroudi’s (1991) understanding of critical research and develops this further by adding the concept of critical engagement. This is described as undertaking prolonged commitment, especially given the complexity and embeddedness of these issues within the wider society. It involves both the struggle (or battle) against the status quo and a moral duty or commitment to engage.

The notion of critical engagement is discussed in relation to the *why*, *what* and *how* of critical engagement. The 'why' is discussed in the context of the huge asymmetries of wealth and power that continue to exist. The 'what' is illustrated with an analysis of three different case studies, which concern health information systems in Africa, geographical information systems for land management in India, and digital inclusion projects in Brazil. The 'how' considers reflections on field research, publications, teaching and influence in the IS field.

Based on a critique of interpretivism, Chapter 12 by Bill Doolin and Laurie McLeod outlines how interpretivist research could add a critical edge in the form of critical interpretivism. Such an approach would draw upon the empirical richness of interpretivist research and supplement this with a reflective approach that questions and disrupts the status quo, and entertains broader considerations of power and control. Critical interpretivism is then applied to three case studies, each of which draws upon a theoretical perspective from a particular social theorist (Michel Foucault, Bruno Latour and Anthony Giddens). These multiple conceptual lenses highlight the plurality of critical approaches that are possible within critical interpretivism and also show the mutually enriching insights that emerge. This chapter shows the value of the application of appropriate critical social theories to detailed, local, situated empirical studies and reveals how this can further inform our understanding of IS research.

Chapter 13 by Helen Richardson is an ambitious endeavour that aims to deconstruct the 'post-industrial project' by its examination of the historic, political, economic and social context that frames the empirical studies. This is in the context of the relationship of technology to culture, and in particular the culture of consumption. The first illustrative case tells the stories of workers at the front line of call-centre work and draws upon the work of Pierre Bourdieu whose conceptual tools help us to understand the historical and cultural forces involved in the social relations of IS use. The second case considers home e-shopping and the domestication and consumption of ICTs within the context of the family and households, with particular consideration given to gender issues. These studies illustrate how consideration of the broader setting of history and political economy can help explain everyday life and also how technological determinism underpins the drive that persuades individuals to consume 'with a passion'. The chapter concludes with some reflections on the role of critical research in promoting radical social change.

In contrast to much of the IS literature which assumes that innovation is driven by an instrumental, universal concept of rationality, Chapter 14 argues for a recognition of multiple alternative rationalities. Chrisanthi Avgerou and Kathy McGrath draw upon Foucault's analytical perspective

on power, knowledge and morality to develop an understanding of multiple rationalities and also the largely underrepresented (in the IS field) concept of emotions in IS innovation. This perspective is then used to reinterpret the example of the failed London Ambulance Service within the British National Health Service. The critical approach that they develop is informed by alternative substantive rationalities and emotions and also by the need to develop explanations interrelationally, rather than treat reason and emotion as separate entities or try to understand phenomena at different levels of analysis. They argue that this level of understanding provides a pertinent critical perspective on IS knowledge and practice. It enables the revelation of insights from the case study that are missing from previous accounts in the IS literature and, in addition, it reveals the inadequacies of the explanations provided by the predominant techno-managerial regime of truth.

Shirin Madon then considers, in Chapter 15, how to evaluate e-governance projects in India. In contrast to the majority of such projects, which measure the provision of resources and infrastructure, this chapter argues that the concepts of *value* and *process* of e-governance deserve attention. This can only be achieved by considering projects as they unfold at the micro level. In order to understand this, Madon conducted a longitudinal study in the south Indian state of Kerala with the aim of appreciating the implementations of various e-governance initiatives. This is aided by the development of a conceptual framework that is informed by the evaluation, public sector, governance and development literature, along with Amartya Sen's notion of capabilities. Accordingly, the framework evaluates e-governance projects by giving consideration to administrative and governance reform, and project effects and outcomes (in the sense of improvements in social well-being). By explication of the projects in the field, the chapter shows how evaluation should be viewed as a process with changes that occur subtly and incrementally, as opposed to a discrete activity that follows implementation. The framework has implications for future e-governance evaluation in that it encourages consideration of the three activities over time and how they can potentially support socio-economic development. Consequently, this study stands in sharp contrast to most studies, which focus primarily on return-on-investment of individual projects. Such a narrow view of these developments is necessarily limiting. When developing countries, such as India, embark on e-governance projects in the hope of promoting socio-economic development, it is crucial that we – as researchers – are able to offer a relevant contribution to understanding how these projects may be assessed and thus provide recommendations for the future. The chapter by Madon provides this level of understanding.

Chapter 16, by Lynette Kvasny and Lakshman Yapa, focuses on an area that is often neglected in much of the IS literature – that of urban

poverty. The 'solution' to poverty that is often posed is one of increased investment, job creation and workforce training, which is primarily an economic discourse that sees economic investment as the answer. However, investment in areas of urban poverty is in short supply and remains so for the foreseeable future. In contrast to this economic 'solution', the authors reflect positively on the wealth of resources that exist within inner-city communities, and illustrate how these can be harnessed to improve the quality of life for citizens. They advocate an approach that goes beyond the assumption that urban poverty can be ameliorated only through jobs and higher incomes. Drawing on the work of Bourdieu they consider other forms of capital, such as social and cultural capital. This is used to analyse a case study of IT and enterprise development that involves a partnership between a university and community-based groups. The chapter provides an excellent example of how theory can be applied to practical projects. Here, academics work alongside local community groups in an attempt to alleviate some of the injustices experienced by residents in the inner-city environment and hopefully improve their quality of life.

Daginn Hertzberg and Eric Monteiro, in Chapter 17, explore some of the dilemmas and contradictions that face global service work, as organizations attempt to achieve economies of scale while nurturing authentic and socially embedded interactions with customers. This 'global but local' strategy is dissected in a detailed empirical study that concerns the mediated social relationships within the global organization, Rolls-Royce Marine, which spans 33 countries. During the three-year study, the disembodied nature of the relationship between the sites and the actors involved is examined. Hertzberg and Monteiro also analyse how the re-embedding actions of relationships hinges on the construction of abstract trust through processes characterized as provisional, fragile and emotional. ICT-mediated communication is deeply implicated within this process.

Chapter 18, by Ela Klecun, continues with some of the themes discussed earlier in Chapter 14, with her consideration of multiple and competing rationalities, in the context of her study of the nature and role of telehealth within the UK. Klecun argues that many of the existing studies of telehealth focus primarily on technological performance, often at the individual project level, or alternatively they fall into the hands of the futurologists who make sweeping visionary predictions regarding the transformative potential of these systems. By contrast, her study examines key rationalities as a means of understanding the social, organizational and technological changes that are taking place within healthcare systems. This is carried out over a five-year period, whereby research reveals the underpinning rationalities in the context of national (policy), local and project levels. Consideration of the issues at the macro level necessitated an analysis

of the broader, political context of UK government health policy and IS management strategy. At the mezzo level, local health authority strategies and organizations were investigated. For the micro-level analysis, a number of projects were studied over time. This layered approach illustrates how different rationalities are constructed within wider discourses and shows that, despite the predominance of a technological rationality, the presence of other rationalities are intertwined, reconstituted at different levels, and pose a serious challenge to the predominant rationality. This critical study seriously questions the construction of telehealth as the solution to all the problems associated with healthcare, and inspires us to consider alternatives to health, well-being and how technology may (or may not) support us in the pursuit of improved healthcare provision.

### Conclusion

The commissioned chapters in this handbook speak to a number of audiences. For researchers committed to studying information systems critically, it provides an overview of research from a variety of perspectives and across a range of topics and emerging themes. For those who wish to learn more about this area, the handbook provides an accessible point of entry into a wide range of areas so that it is possible to identify what is distinctive about critical IS research. For lecturers, it provides resources concerning theory and applications of critical research that could be used to supplement more mainstream approaches to certain topics. It could also be drawn upon as a basis for advanced undergraduate and postgraduate courses in critical IS research. For practitioners, the handbook offers access to a range of perspectives and ideas that stand in contrast to the predominantly managerialist and technicist frameworks of understanding, yet offer compelling insights into current issues with IS development and use. This can provide explanatory power to aid understanding of their experiences in the field.

### Notes

1. Examples of special issues of journals devoted to critical research include *Data Base* (2001/2002), *Journal of Information Technology* (2002) and *Information Technology and People* (forthcoming). Examples of conferences with a critical IS stream include the Critical Management Studies (CMS) conference (1999 and 2003), a Critical Research in IS (CRIS) Workshop preceding the 2001 CMS conference, and a critical stream at the Americas Conference on IS (AMCIS) since 2001.
2. See Howcroft and Trauth (2004) for an extended discussion of the choice of critical IS research.
3. Based on fundamental ontological and epistemological differences, arguments have ranged between Marxists and postmodernists. Neo-Marxists have criticized relativism (postmodernism) as being politically inept, irresponsible and dangerous. For example, Parker (1992: 11) characterized postmodern writings as: 'The problems of (fictional) individuals in (mythical) organizations are safely placed behind philosophical double-

glazing and their cries are treated as interesting examples of discourse'. On the other hand, authors sympathetic to postmodernism have critiqued realism for its totalizing meta-narratives and absolutist position.

4. Vociferous debates have taken place between those who view the primacy of class politics over gender politics, with some attaching greater significance to the removal of class distinctions as opposed to gender distinctions.

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