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CRITICAL RESEARCH IN INFORMATION SYSTEMS:

THE QUESTION OF METHODOLOGY

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Abstract

Considerable ambiguity surrounds the question of empirical research methodology in critical information systems (IS) research, as is the case with other critical social sciences. While some research methods and techniques are closely related to the positivist research approach (experiments, surveys, and statistical equation modelling) and others to the interpretivist approach (qualitative case study, ethnography, discourse analysis and action research), the critical approach is not identified with specific critical methods and typically relies on the appropriation of interpretivist methods (such as critical ethnography). The criticism of the critical research approach in IS, even among its followers, has often focused on the lack of distinctly critical research methods and even the neglect of methodological issues (Klein 1999, McGrath 2005). This paper questions the notion of and the arguments behind the quest for 'critical research methods' defined in opposition to positivist and interpretivist methods. Instead the paper argues that it is a critical research methodology – understood as an overall strategy of conceptualising and conducting an inquiry, engaging with studied phenomena and subjects (participants), as well as constructing valid knowledge – which clearly distinguishes critical from other research approaches. Starting from critical investigative concerns and specific requirements and challenges of critical empirical enquiry, the paper proposes a framework for a critical research methodology.

Keywords: IS research approaches, Critical IS research, Critical concerns in information systems, Critical research methodology.

1. INTRODUCTION

Critical Information Systems research denotes a wide range of diverse research endeavours aimed at revealing, criticizing and explaining technological developments and the use of information systems (IS) in organisations and society that, in the name of efficiency, rationalization and progress, increase control, domination, and oppression, and produce socially detrimental consequences. Following the script of critical social science, critical IS researchers investigate economic, historical, cultural, and political conditioning and shaping of the IS development and adoption in organisations, seeking to understand and explain various and complex human and social consequences. By revealing how information systems are embedded in organising processes and used by individuals and groups, by developing a situated understanding of positions and experiences of people affected by the systems, and by linking such understandings with broader conditions, power relations and social structures, critical researchers (co)create knowledge with transformative and emancipatory intent. In other words, through deeper understanding, that is both locally situated and structurally informed, critical researchers strive for changing consciousness and counteracting detrimental social consequences. It seeks to achieve

emancipatory social change by explaining ‘a social order in such a way that it becomes itself the catalyst which leads to the transformation of this social order’ (Fay 1987, p. 27).

The specific purpose of a critical IS research project therefore ranges from creating knowledge as a catalyst for change, to helping and giving voice to various marginalized groups and stakeholders in IS development, implementation and use, to playing an active role in transforming IS practices and IS-organization relationships, and assisting actors in emancipating themselves. This is based on the belief in the power of knowledge – ideally co-produced by researchers and participants in the study – to transform consciousness of actors about their position and ability to act thus engendering action. It is also based on the conviction that it is not only legitimate but that it is indeed an obligation for a researcher to actively engage in the transformation of IS practices that will contribute to more democratic organisations and workplaces with greater degree of autonomy and human agency, and ultimately lead to less repressive and more equitable social relations and organisational arrangements.

It has been claimed that much empirical critical research in IS – informed by critical theory and some critical poststructuralist theorizing – has adopted variants of interpretive or hermeneutic methods (McGrath 2005, Avgerou 2002, Walsham 2001, Klein 1999). While this is not without controversy and tension, critical researchers typically infuse critical theoretic concerns and intents into hermeneutic acts of interpretation thereby adapting and transforming interpretivist methods to serve critical ends. This is for instance the case with critical ethnography (Myers 1997, Thomas 1993) and critical discourse analysis (Alvarez 2005; Fairclough 1995). While they are considered distinctly critical, they just prove the point that the critical research approach relies on the appropriation of interpretivist (and perhaps some other) methods without having methods of its own. The charge is that the critical research approach does not have a clear methodological identity.

This charge is particularly damaging for the critical project when it is contrasted with the other two established and credible research approaches in IS: positivism (most established and most credible) and interpretivism. For instance, the positivist research methodology is closely related to variable-based quantitative research methods using statistical modelling – with surveys research being the most popular in the IS discipline (Chen and Hirschheim, 2004). The interpretivist approach, on the other hand, is identified with qualitative research methods such as interpretive case study, ethnography, discourse analysis and action research. Such associations reflect distinct and mutually exclusive ontological and epistemological assumptions and philosophical foundations of these two approaches (see e.g. Cecez-Kecmanovic 2005). Following the same logic, it is expected that the critical research approach should also be closely associated with distinctly critical methods. If the critical approach – it is argued – is to be a viable and respectable option for empirical IS research, critical researchers should be much more concerned with methodological issues and distinctly critical research methods (Klein 1999, McGrath 2005). This would make it (the critical approach) a more attractive alternative to positivism and interpretivism and most importantly improve the legitimacy and credibility of critical research in the IS community.

In this paper I’d like to reconsider the methodology question in critical IS research by first questioning the conception of ‘critical research methods’ defined in opposition to positivist and interpretivist methods. I question the argument that a critical research enquiry should be distinguished from a positivist or interpretivist inquiry in the same way these two are distinguished among themselves. In other words, I would argue that the same argument behind the distinction between positivist and interpretivist research methods cannot be used to justify (the expectation for) distinctly critical research methods. Given the critical investigative concerns, democratic purpose and practical orientation of critical projects, their distinctness cannot be understood at the same level as the positivist vs. interpretivist dichotomy (e.g. nomothetic vs. ideographic explanations; quantitative vs. qualitative methods). Therefore I maintain the

question of critical research methodology cannot even be examined under the assumptions behind the prevailing methodological discourse in IS.

My objective in this paper is to present an argument for a distinctly critical research methodology understood as an overall strategy of conceptualising and conducting an inquiry, engaging with studied phenomena and subjects (participants) in their contexts, as well as constructing valid and socially relevant knowledge claims. A methodology links critical theoretic models and concerns with processes of selecting research sites, situations and subjects, modes of engagement and methods of empirical data collection and interpretation, as well as ways of co-producing knowledge and influence social change. I develop the argument by first exploring critical investigative concerns and purpose of critical IS projects (next section). Then I briefly revisit methodology issues in IS as seen from the positivist and interpretivist positions and how they reflect on the critical IS (in section 3). This then allows me to put forward a proposal for a critical research methodology that attends to specific requirements for critical empirical enquiry. The relevance and implications of such a critical research methodology for advancing critical research are discussed in the concluding section.

2. CRITICAL INVESTIGATIVE CONCERNS AND PURPOSE OF INFORMATION SYSTEMS RESEARCH

A core problem concerning critical researchers is the role of information systems in enabling and maintaining the economic-rationalist view of organisations that prioritizes interests of capital (i.e. of stockholders and managers) over all other interests (other stakeholders, community, society, environment, etc.). Given increasingly global market pressures and ever tougher economic and operating conditions, it has become vital for companies' survival to increase profitability and competitiveness. IS are seen as among major means for companies to cut costs, increase efficiency and profitability, as well as to operate globally. In this role IS are considered inevitable for company progress and survival. Similarly, in public sector organisations IS are seen as effective means for automating and improving services and achieving performance targets while cutting jobs. Such a view of IS role of necessity implies systems' justification based on instrumental rationality – as tools for achieving functional or performance improvements and financial gains. It also legitimates managers' key roles in determining system purpose and goals. Most of mainstream IS research have taken such a view of IS as given and have not questioned the instrumental rationality dominant in the IS practice. While some researchers may be critical of the ways IS are designed, implemented or used – addressing for instance insufficient attention to the users' needs and the lack of user involvement in IS development seen as causes of IS failure (Beath and Orlikowski 1994; Markus and Mao 2004) – the mainstream researchers assume, more or less overtly, a shared purpose of assisting managers in achieving their goals and realizing profit interests.

Critical IS researchers reject such a narrow view and purpose of IS as unwarranted, unjust and ultimately detrimental to many stakeholder groups. They question the design, deployment and use of IS that are motivated and guided by the interests of one stakeholder group only with a sole profit maximization goal. They draw attention to and criticise the neglect of interests and needs of other stakeholders: employees, customers, community groups, citizens, etc. It is of note that these concerns and the overall technology implications for the key social institutions – industrial democracy at the workplace, employees' rights, work satisfaction and self-realization – were on the research agenda at the early stages of computer technology applications, especially among the proponents of the socio-technical design approach (see e.g. Mumford and Sackman 1974). However, with changing economic conditions and global competition during the 1980s such orientation and humanistic ideals have been lost, with the dominant IS research adopting a functionalist, 'scientific' approach "aligned single-mindedly with the mission of business success in a competitive market regime" (Avgerou et al. 2004, p. 4). Not surprisingly critical IS

researchers became concerned not only about the human and social implications of IS practices absorbed by managerialist discourses but also about the IS research and the creation of knowledge that informs and sustains these discourses.

Critical researchers expose and deconstruct the dominant views and declared roles of IS in organisations and offer alternative, critical interpretations of IS practice and the ways information systems impact on and transform organisations. The concerns of the critical IS research, similar to CMS, include several key themes. First, it is the prevailing assumption of the social and political neutrality of IS, the assumption that underlines IS development methodologies and IS practices. The dominant (scientific) methods/techniques for business process analysis and information requirements engineering are believed to ensure an 'objective representation of reality' into an IS, thus enabling a transformation of processes and procedures to achieve efficiency gains. Such representations include identification and classification of 'objects' or 'entities' that exist out there, irrespective of the observer. These objects or entities are supposedly 'mapped' from a given reality into the system together with their attributes as well as relations with other objects (and behaviours). Critically based research reveals the problematic nature of such an 'objective representation' and points to the ways such analysis produces rather than identifies objects. Something in the reality "only becomes an object in specific relation to a being for whom it can be such an object. Linguistic and non-linguistic practices, thus, are central to object production. [As Saussure demonstrated] the point of view creates an object." (Alvesson and Willmott 1992, p. 100). In other words, analysis and representation of reality in IS are value laden and any information system inscribes the values and interests of the dominant groups. Based on the critique of the representational function of IS, critical researchers aim to unpack the 'objective' and 'politically neutral' methods and techniques and demonstrate how they reproduce and freeze the construction of social reality that privileges the interest of one group (owners of the capital and managers) over all others. They aim to show how under the disguise of the objective science (as methods are claimed to be) and neutrality, IS serve particular interests and support for managerialist ideology.

This brief overview of some major concerns in critical IS research suggests that conducting a critical inquiry poses some new methodological challenges, not experienced by positivist or interpretivist researchers, that we discuss next.

3. METHODOLOGY DISCOURSES IN IS

As 'different ways of viewing the world shape different ways of researching the world' (Crotty 1998, p. 66), assumptions about methodology in positivist, interpretivist and critical approaches are significantly different.

The positivist social science or positivism is used to denote the approach that assumes the unity of sciences – natural and social – believed to have the same essential features. Similar to natural science, the positivist social science assumes an objective reality that exists out there, that can be observed and accurately measured using scientific method, that is in a value-free and non-biased way. The purpose of a positivist IS research is to discover and test law-like theories and causal relations among constructs that explain and predict phenomena in IS development and IS use and impact in organisations. The key epistemological assumptions underlying positivist research methodology are empirical testability and replicability of causal relations and theories. Empirical inquiries are required to examine whether hypothesised causal relations are supported/confirmed or rejected by empirical evidence. Negative or disconfirming evidence eliminates, while supporting evidence strengthens a hypothesis of a causal relation. Theories are developed and refined over time through replicated hypothesis testing, elimination of those not supported or confirmed by empirical evidence, generation of new hypothesis and so on, thereby contributing to accumulation of scientific knowledge that leads to progress.

It is assumed that to achieve valid and generalizable hypothesis testing a researcher needs to apply appropriate scientific methods, to create valid samples of organisations, of IS projects, IS developers and users, etc., then design and administer surveys or design and execute controlled experiments. Faithfully following of these sanctioned research methods, including the rules and norms for research design, empirical data collection, statistical data processing and interpretation of findings, positivist researchers believe 'is the only way in which valid knowledge can be obtained (Orlikowski and Baroudi 1991, p. 10).

Research methods privileged by positivist research are based on the assumption that the measurements of empirical phenomena can be accurate and precise. It is assumed that good empirical evidence consists of objective facts that reflect reality and exist independently of personal values and biases. Objective facts are also independent of the researcher or the method used to capture or measure them. Sophisticated statistical models and techniques are developed and norms and due processes carefully applied and checked by the IS community in order to guard against value biases and guarantee a desired level of scientific rigor. Furthermore, the creation of factual knowledge results from many researchers and research studies, replicating hypothesis testing, and communicating findings. This is based on the assumption that researchers, as rational individuals, assign same (or similar) meanings to independently observable facts, that is, develop shared acknowledgment of the facts.

In contrast in the interpretivist IS research evidence cannot be separated from the context and facts are not value-free and objective, IS research is inevitably situated in social practice of IS development and use (Orlikowski 1993, Walsham 1993, 2001, Klein and Myers 1999). Interpretive IS researchers believe that everyday social practices cannot be disconnected from and studied independently of socially created meaning systems and the language that actors use to describe and make sense of these practices. Interpretive researchers therefore use particular research methods, such as field studies, ethnographies, action research, discourse analysis, etc., to get inside the worlds and meaning systems of those being studied and obtain an in-depth understanding of their subjective beliefs, experiences, feelings and values. Instead of producing research findings as established facts, interpretivist researchers are offering findings as interpretations. Research findings as interpretations are judged based on credibility of the research process, trustworthiness (as a parallel to objectivity) in the research design and the ways concrete empirical material (observations, interviews, events) are analyzed and interpreted. A new understanding or explanation of the phenomena studied is judged based on the richness of descriptions, internal coherence, depth and insightfulness of interpretations and plausibility of results to a reader.

As to the links between a method and a theory, interpretive researchers generally assume that the people's subjective views and beliefs have primacy over the theories that may be 'imposed' on them. Interpretive researchers however differ in the way they interpret empirical data and derive explanations and theories. For instance, those applying grounded theory (first described by Glaser and Strauss 1967) approach a field study without a theoretical model or a priori concepts and derive theory inductively from data, that is, ground a theory in the data (see e.g. Orlikowski 1993). On the other hand, an action researcher may start with and apply a theoretical model (e.g. an IS evaluation model) and through action and learning cycles revise the model and produce empirical evidence to support it. Similarly, empirical material from ethnography can be analyzed from a particular theory perspective, thus resulting in theory-informed interpretations.

However, there is a renewed interest among contemporary critical researchers from different disciplines in the empirical dimension of critical research and the development of critical research methodology (Crotty 1998, Klein 1999, Kincheloe and McLaren 2000). These developments seem to emerge in two major directions simultaneously.

The first direction follows the model of positivist and interpretivist research approaches and assumes that a distinctly critical research approach needs to employ distinctly critical research methods. Methods, such

as *critical ethnography* (Myers 1997, Thomas 1993), *participatory action research* (Baskerville 1999) and *critical discourse analysis* (Fairclough 1995) are proposed as distinctly ‘critical’. By going beyond cultural description and explanation, critical ethnography is concerned with “*cultural critique as defamiliarization and cultural critique as ideology critique*” (Morrow and Brown 1994, p. 255, emphasis in the original). This is achieved by grounding ethnographic work in critical hermeneutics (Thompson 1981, Vatimo 1994) and by infusing critical social theoretic concerns into hermeneutic acts of interpretation. Participatory action research can be also seen as a distinctly critical method to the degree to which it identifies specific critical concerns and focuses on practical intervention to address these concerns and transform practice (such as IS development).

The second direction of critical methodological developments and debate is more concerned with methodological choices and social and political contexts in which these choices are made. A critical research program sets an agenda and the types of explanatory substantive problems for which some methods are more appropriate than others, but the relationship is not deterministic. Critical research methodology is explicitly concerned with the choices about linking theories and research methods in any given research context. Despite attempts to develop distinctly critical research methods, mentioned above, critical research is by no means limited to those methods perceived as critical. Critical approach to the question of research methodology – Morrow and Brown (1994) – explain “directs attention not only to how the type of theoretical problems shapes the choices of methods but also to the political and ideological contexts of methodological choices as part of the process of non–empirical argumentation” (p. 200). Galtung (1977) in particular points to the political and ideological aspect of methodological choices:

To work with any methodology ... is a political act... the choice of a methodology is implicitly the choice of an ideology, including the mystifying, monotheistic ideology that there is but one methodology—the universal one. To the extent that we are conscious the choice is for us to make, not to be made for us, and to the extent that we are free for us to enact (p. 40, emphasis in the original).

From this perspective critical IS researchers should be even more vitally interested in the methodological question. It is not so much the issue of distinctly critical methods (although it is also of interest) as it is the issue of a conscious methodological choice and freedom of making them. Furthermore, given critical researchers’ belief that all research is part of the process of social (re)production, the uniqueness of critical methodology is associated with reflexivity (and especially self-reflection) and the dialectic relation between research and practice (Cecez-Kecmanovic 2001, Cecez-Kecmanovic et al., 2002).

4. TOWARDS A CRITICAL RESEARCH METHODOLOGY

To achieve their purpose critical IS researchers face considerable challenges. They arise from the socially and politically sensitive nature of both research and the relationship between research and practice. This has implications for researchers and their role and position in a research site and community. To achieve research objectives critical researcher confronts complex tasks such as a) comprehending personal experiences and local practices of IS development, adoption, implementation and use, b) explanation of both conditions of IS development and consequences of IS use that require linking local experiences and practices with underlying social relations and structures, historical and cultural contexts, and c) co-creating knowledge that serves as a catalyst for change and assists actors in transforming practices and counteracting detrimental consequences. Each of these tasks poses particular requirements for a critical research methodology. First of all, a critical research methodology needs to enable both interpretive and structural explanations. Critical researchers require but cannot be content with the in-depth, rich descriptions and ideographic interpretations only. They also need to provide an explanation of historical, socio-cultural, political and economic conditions and structural sources of identified ailments, such as

increasing control, domination and alienation due to IS implementation. But again, the rich descriptions and critical structural explanations may not be enough for engendering change, transforming practice and counteracting these ailments.

All these requirements and demands can hardly be met by a single method which led some to argue for a multi-method as an essential feature of the critical research approach. While multi-method may be an answer, it does not resolve fundamental problems with critical research methodology, discussed above. I propose here that critical research methodology should include multiple components to be able to deal with sensitive, multiple and complex tasks:

1. Intensive or in-depth examination of local situations and issues affecting real people, their working conditions and their organisations
2. Critical explanation and comparative structural generalisation
3. Open discourse and transformative redefinition or action
4. Reflexive-dialectic orientation that underpins all other components

These components are mutually dependent and iterative in nature (see Figure 1).

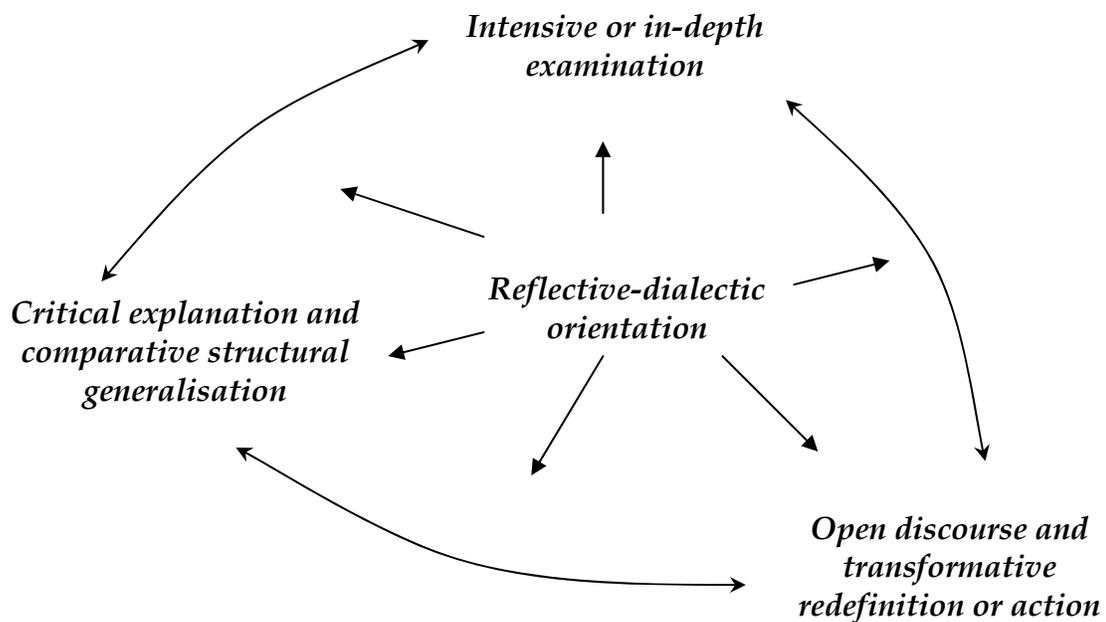


Figure 1 A critical research methodology framework

4.1 Intensive or In-depth Examination

Critical researchers are primarily interested in understanding local situations and issues affecting real people, their working conditions and their participation in and contribution to IS developments and implementation. They also aim to understand the implications and social and economic consequences of IS use. They focus on how the information system intervenes in and reconstructs social reality and who benefits and who suffers from it. Similar to interpretivist researchers, critical researchers achieve such

understanding through in-depth studies of these phenomena within the wider social, economic, cultural, historical and political contexts by assuming a close relationship with actors and their situations. For instance, critical researchers are interested in the ways dominant discourses of 'best practice' and streamlining business processes enable managers to use ERP systems to strengthen their control and dominant power position in the organisation. While disjointed business processes and related inefficiencies provide a valuable argument for their re-design, the rhetoric of best practices and an unquestioned, single way of defining business processes and their interrelatedness is unjustifiably narrow. Such an approach not only deprives employees of their participation in the design of their own work processes, but also discourages local innovation and lowers the potential benefits of ERP to the organisation.

Alvesson and Deetz (2000) refer to this component of critical methodology as *insight* defined 'as a type of practical knowing' that reflects importance to people studied. Insight or deep interpretation "addresses something non-obvious, (b) makes sense of something, and (c) is perceived as enriching understanding." (Alvesson and Deetz 2000, p. 141). It may involve hermeneutic understanding infused with the critical tradition and the archaeology of knowledge in a Foucaultian sense.

4.2 Critical Explanation and Comparative Structural Generalization

Complementary to intensive or in-depth examination is critical explanation and comparative structural generalization across one case or several case studies – historically or spatially comparable. Critical explanation is derived from interpretations of local meanings and phenomena informed by critical theorizing and then re-contextualized within the social and power relations that constructed them. Critical explanation seeks to reveal generative mechanisms underlying the social production of meanings, structures, and people, especially the role of IS in these mechanisms.

Comparative generalization aims to identify patterns, structures and mechanisms underlying social and technological phenomena across cases and not to find universally valid laws. Unlike statistical modelling that deals with decontextualized variables across large aggregates that remains on the surface of social phenomena, critical explanation and structural generalization digs deeper beneath the surface in search for underlying, often hidden mechanisms that can explain some observed phenomena. In such a way critical explanation and structural generalization add another layer of intelligibility to critical social analysis.

Open Discourse and Transformative Redefinition or Action

Open discourse is both the pre-condition of critical research and transformative redefinition and the outcome in the context studied and beyond. Non-distorted communication that allow questioning, criticising and problematizing taken-for-granted meanings and assumptions e.g. in IS development, opens a possibility of different views, different perceptions and different explanations. Open discourse may be nurtured to lead to transformative redefinition of IS practices and processes. More generally:

To transform means to change fundamentally, to recognise basic structures and to breach current limits. The perspective goes beyond a surface level of reality to realign subjective understandings with external reality, and then uses renewed consciousness as a basis for engaging in actions that have the potential to modify external conditions and future consciousness. The relevance of knowledge is its ability to connect consciousness with people engaging in concrete actions, reflecting on the consequences of those actions, then advancing consciousness to a new level in an ongoing cycle. (Neuman 2006, p. 100)

For instance, of particular concerns for critical IS researchers are increasing control, power centralization and managerial domination over employees, enabled and supported by IS. By being focused on functional and technical issues, or more precisely, by being made to believe that this is what IS are all about and what they should be concerned with, employees assist in and contribute to the design and implementation

of IS that work against their own interests. Employees seem to wilfully consent to increased control, domination and loss of autonomy. They are, critical researchers claim, socialized into organizational culture, subjected to managerialist ideology and technological determinism that together impose particular social meanings, representations, and rituals (including IS development methodology) that produce consent to increased control and domination. Employees are thereby misled and exploited, made to act against their own interests.

How is it then at all possible to make changes? How can employees change the very conditions that shaped them and undertake actions to realize their potential? Critical researchers believe that change is possible if employees can be engaged in an open dialogue designed to reveal illusions and more broadly view causes and consequences of their conditions. By engaging with others in a collective dialogue critical IS researchers aim to create conditions for liberating actions (for instance by taking part in IS development and critically assessing its implications may lead to more active engagement of stakeholders in the development process). This is where critical IS researchers see their role and the purpose of their engagement. By stimulating open discourse they assist actors in exposing assumptions and beliefs behind an IS implementation. By revealing how power structures and dominant discourses shape consciousness and thereby produce employees' subjective experiences and acculturate them to feel comfortable in relations of domination and subordination, critical researchers motivate them to (at least) question their position and assist them in undertaking transformative, liberating actions.

4.3 Reflexive-dialectic orientation

Intensive and in-depth examination, critical explanation, including comparative structural generalization, and transformative redefinition or action, are proposed as the three essential components of critical research methodology. These components, while feeding off and impact on each other, are glued together by reflexive-dialectic orientation of researchers (see Figure 1). As a unique feature of critical research reflexive-dialectic attitude, that infuses all components and their relations, is

[A]n orientation toward social knowledge used in critical social science in which subjective and objective sides are blended together to provide insights in combination unavailable from either side alone. The value of knowledge is as a process that integrates making observations, reflecting on them, and taking action. (Neuman 2006, p. 100)

Reflexive and dialogical orientation involves forms of self-conscious criticism as part of a strategy to conduct critical empirical research. Researchers explore their own ontological and epistemological assumptions and preferences that inform their research and influence their engagement with a study. By intentionally expressing, questioning, and reflecting upon their subjective experiences, beliefs, and values, critical researchers expose their ideological and political agendas. Thus, as Kincheloe and McLaren imply, "critical researchers enter into investigation with their assumptions on the table, so no one is confused concerning the epistemological and political baggage they bring with them to the research site" (2000, p. 292).

Reflexive and dialectic component underpins all other components of critical research methodology. Reflective practice and dialogical examination and interpretation are relevant in many ways. Firstly, they help researchers understand their own engagement with subjects in a field, identify sources of different/conflicting views and beliefs, and potentially change their own. Secondly, they help researchers make explicit connections and comparisons with relevant actors, circumstances and experiences in the past (in the same or different organisation). Thirdly, it enables a team of researchers and practitioners to develop mutual understanding and explore differences in interpretation and explanation of empirical material.

The iterative journey from intensive or in-depth examination through critical explanation, to transformative redefinition and action can be seen as a progression of understanding as described by Schutz (1979). He describes three stages of understanding as: superficial simplicity, confused complexity and profound simplicity. In critical studies we aim to achieve transformative redefinition whose profound simplicity inspires actors and engender action. Profound simplicity that ideally characterises transformative redefinition may result from doubting superficial simplicity of telling observations and obvious explanations and questioning the assumptions behind them. Through in-depth examination, probing and experimentation we tend to probe beyond experiences and reveal conditions, forces, power relations, anxieties and uncertainties (more or less hidden) that typically produce confused complexity. Confusion increases as we discover and reflect on our own preconceptions, assumptions and superficial explanations. If we manage to engage participants into the dialogue and self-reflective investigation they themselves may start questioning some individual or collective beliefs and taken-for-granted explanations which can increase confusion and complexity. However, confusion and complexity in turn motivate further exploration and explanation. While confused we sense deeper understanding, closer to reaching profound simplifications. By waiving between intensive/in-depth examination and critical explanation we often go through a spiral of superficial simplicity and confused complexity until the emergence of a transformative redefinition shining with profound simplicity.

5. CONCLUDING REMARKS

In this paper I argued that the question of methodology in critical IS research cannot be reduced to the 'problem' of the lack of 'critical empirical methods'. Methodology, understood as an overall strategy of conceptualising and conducting research, is concerned with choices about linking critical theory, research questions and empirical methods in specific IS research situations. First, a choice of a critical theory sets a research agenda and poses specific research questions. Second, appropriateness of methods and their application need to be assessed based on the epistemological assumptions and the kind of critical questions investigated. The choice of methods cannot be separated from the theory informing the inquiry and the problems investigated. Third, methodology is concerned with principles and processes of constructing scientific knowledge and making changes in social IS practice. Methodological debate, therefore, needs to address a much broader range of issues beyond the narrow view of specifically critical empirical methods.

In examining the question of critical IS research methodology the paper first discussed specific methodology requirements drawn from critical investigative concerns, motivations and purpose of critical IS projects, and then proposed a framework for a distinctly critical research methodology that attends to these requirements. The proposed framework for a critical research methodology includes four distinct but intertwined components: a) intensive or in-depth examination of local situations and issues affecting real people, their working conditions and their organisations, b) critical explanation and comparative structural generalisation, c) open discourse and transformative redefinition or action, and d) reflexive-dialectic orientation. The paper argues that these components – each depending on and entangled with the others –, express the key features of critical research methodology.

It is important to note here that being 'critical' in IS research also means having a much broader historical, social, and political view of the IS discipline and seeing how economic and managerial interests, ideologies and discourses, assisted by educational and research funding institutions, shape and construct IS research. Critical IS researchers are concerned with the purpose, use and misuse of IS research outcomes in organizations and society. Future critical studies are called for to investigate IS research itself as a social activity – its practice, purpose and implications – from a critical theory perspective.

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