A Critical Systems View of Power-Ethics Interactions in Information Systems Evaluation

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ABSTRACT

Current developments in information systems (IS) evaluation emphasise stakeholder participation in order to ensure adequate and beneficial IS investments. It is now common to consider evaluation as a subjective process of interpretation(s), in which people's appreciations are taken into account to guide evaluations. However, the context of power relations in which evaluation takes place, as well as their ethical implications, has not been given full attention. In this article, ideas of critical systems thinking and Michel Foucault's work on power and ethics are used to define a critical systems view of power to support IS evaluation. The article proposes a system of inquiry into power with two main areas: 1) Deployment of evaluation via power relations and 2) Dealing with ethics. The first element addresses how evaluation becomes possible. The second one goes in-depth into how evaluation can proceed as being informed by ethical reflection. The article suggests that inquiry into these relationships should contribute to extend current views on power in IS evaluation practice, and to reflect on the ethics of those involved in the process.

Keywords: *critical systems thinking; evaluation; ethics; Foucault; information systems; power*

INTRODUCTION

It has been argued extensively in the literature of information systems (IS) evaluation that failures in implementation of information systems occur due to lack of consideration of different (e.g., softer) aspects that influence information systems adoption (Hirschheim & Smithson, 1999; Irani, 2002; Irani & Fitzgerald, 2002; Irani, Love, Elliman, Jones, & Themistocleus, 2005; Serafeimidis & Smithson, 2003). Among these aspects, the issue of ethics also gains importance, yet few evaluation approaches consider it explicitly (Ballantine, Levy, Munro, & Powell, 2003). When evaluating the implementation of information systems, there is still a need to consider the *context* of human relations within which evaluation takes place (Walsham, 1999), and more specifically, the nature and impacts of *power relations* (Doolin, 2004; Gregory, 2000; Introna, 1997). This consideration has also been noticed in the realm of systems thinking, but there is a dearth of approaches to deal with the complexities of power (Gregory & Jackson, 1992; Jackson, 2000). In IS evaluation, power

has been mainly considered as a "contextual," "political," or "external" variable (Serafeimidis & Smithson, 1999), and its impacts in practice (for instance regarding the treatment of ethical issues) are far from clear. Power is often understood as "politics" (Bariff & Galbraith, 1978), "interests playing" or struggle between parties (Walsham, 1993), and is associated with the dynamics of organisational change that are said to be difficult to manage (Lyytinen & Hirschheim, 1987). These connotations could limit a better understanding of the nature of power in IS evaluation and how practitioners can act in relation to it.

Awareness of the nature of power for intervention has been a subject of discussion in *critical systems thinking*, a set of ideas and methodologies that aim to clarify stakeholders' understandings prior to the selection and implementation of intervention methods in situations of social design (Flood & Jackson, 1991b; Jackson, 2000; Midgley, 2000). Using the commitments of critical systems thinking to critical awareness, pluralism, and improvement as well as Michel Foucault's ideas on power and ethics, this article extends current understandings of power to inform IS evaluation. The article proposes a relational view of power that is dynamic, transient, and pervasive, and which influences, and is influenced by, individuals' ethics. With this view, the article defines a "system of inquiry" with two elements of analysis for IS evaluation: (1) Exploring the *deployment* of evaluation via power relations; and (2) Dealing with ethics. With these areas, different manifestations of power can be accounted for and related in evaluation interventions. In addition, inquiry into these areas enables people involved to reflect on the ethics of their own practices.

The article is structured as follows. Critical systems thinking is introduced in relation to three (3) commitments that can inform systems thinking and practice. Then, information systems (IS) evaluation as *interpretation(s)* is described and reviewed in relation to how the issue of power is currently being addressed. It is argued that a critical, pluralistic and ethically oriented view of power is needed. To build up this view, the paper presents the basic tenets of Michel Foucault's work on power and ethics, highlighting implications for IS evaluation. A system of inquiry into power for IS evaluation is defined, and its relevance for evaluation practice discussed.

CRITICAL SYSTEMS THINKING

This paper stems from the UK-based systems research and practice, in which there is a variety of systems methodologies that contain principles, ideas, and methods to facilitate intervention for social improvement (Checkland, 1981; Flood & Jackson, 1991b; Flood & Romm, 1996; Jackson, 2000, 2003; Midgley, 2000; Stowell, 1995). The use of systems ideas has also pervaded the information systems (IS) field. Currently, it has been accepted that a *systemic* view of IS practice, one that looks at different elements of activity in organisational, social, and technical domains, can contribute to make sense of a variety of efforts in the IS field (Avison, Wood-Harper, Vidgen, & Wood, 1998; Checkland, 1990; Checkland & Holwell, 1998). This view also shares a common idea with other systems research movements elsewhere that conceive of an information system as part of an organisational system (Mora, Gelman, Cervantes, Mejia, & Weitzenfeld, 2003).

In the UK, the popularity of systems thinking can also be reflected through the use of soft systems methodology (SSM) as a learning tool (Checkland, 1981) and its applications in several areas in information systems. These include information requirements definition (Checkland, 1990; Checkland & Scholes, 1990; Lewis, 1994; Wilson, 1984, 2002), systems development (Avison & Wood-Harper, 1990), intervention methodology (Clarke, 2001; Clarke & Lehaney, 2000; Midgley, 2000; Ormerod, 1996, 2005), and professional practice (Avison et al., 1998; Checkland & Holwell, 1998).

To this popularity, however, it has also been argued that the use of some methodologies like SSM can help in reinforceing the 'status quo' in a situation if it is not used in a more

critical and informed manner (Jackson, 1982; Mingers, 1984). Jackson (1992) argues that the practice of information systems can be further developed if systems-based interventions are not only guided by one type of rationality, methodology, or research paradigm, and if assumptions about the 'status quo' in a situation of social design are critically reviewed. Using systems ideas, practitioners should be able to foster creativity, complementarity and social responsibility.

Jackson and others have developed a collection of ideas, methodologies, and approaches under the name of "critical systems thinking" (Flood & Jackson, 1991b; Flood & Romm, 1996; Gregory, 1992; Jackson, 2000, 2003; Midgley, 2000; Mingers, 1992, 2005; Mingers & Gill, 1997; Ulrich, 1983). Critical systems thinking (CST) has been defined as a continuous dialogue between systems practitioners who are concerned with the issue of improvement (Midgley, 1996). As an evolving set of ideas, it contains a variety of notions that aim to foster continuous stakeholders' reflection prior to the selection and implementation of planning and design methods.

In critical systems thinking, Midgley (1996) distinguishes three common and interrelated commitments to guide the efforts of researchers and practitioners. These commitments are: (1) *Critical awareness*, continuous reexamining of taken-for-granted assumptions in a situation (including those inherent to systems methodologies); (2) *Pluralism* (or complementarism), using a variety of ideas and approaches in a coherent manner to tackle the complexity of the situation; and (3) *Improvement*, ensuring that people advance in developing their full potential by freeing them of potential constraints like the operation of power.

The commitments of critical systems thinking have been put into practice in different ways. For instance, there is a system of systems methodologies (Jackson & Keys, 1984) to help those involved in an intervention choose the most adequate system methodologies to tackle a problem situation according to methodologies' own strengths and weaknesses. In addition to methodology choice, creativity can also be fostered when thinking about problem situation with the use of metaphors, and reflection is included to enable learning and understanding through the use of methodologies (Flood & Jackson, 1991a; Flood & Romm, 1996). Recently, systems practice has also been enriched with generic principles to ensure that intervention is guided by continuous critique, the use of different methods and definition of local and temporary improvements (Jackson, 1999, 2003; Midgley, 2000).

An emerging (UK- and non-UK-based) slant on critical systems thinking is that developed by Ulrich (1983; 2003) and Midgley (2000) on boundary critique. According to them, our processes of producing knowledge about a situation are *bounded* by a number of assumptions about purpose(s), clients, theories, methodologies, methods, and other aspects related to an intervention. These assumptions are intimately linked to systems boundaries. Here the idea of a system is that of an intellectual construction that guides analysis and decision-making (Churchman, 1970, 1979). According to Ulrich and Midgley, such boundaries and their underpinning assumptions need to be identified, analysed and debated with people involved in relation to their value content, so that individuals can make more informed decisions regarding the implications of privileging some boundaries at the expense of others.

In line with the above, in critical systems thinking, the issue of *power* has been discussed at length, and it has been argued that power can inhibit individuals' own reflection about the conditions that influence their own improvement (Flood, 1990; Flood & Romm, 1996; Valero-Silva, 1996; Vega-Romero, 1999). Power has not been defined in a unique way. It has been associated with phenomena of coercion, which affects relationships between stakeholders (Gregory & Jackson, 1992; Jackson, 2000). Critique on systems boundaries adopted for analysis and decision making in a social situation has been enhanced with the idea that such boundaries are the result of the operation of *powe*r and its manifold manifestations (Flood,

1990; Midgley, 1997; Vega-Romero, 1999). Despite acknowledging the importance of power for systems practice, in critical systems thinking there is little about how practitioners can identify and act in relation to power issues in intervention. Although this could be attributed to the diversity of meanings of power (and hence an interpretation of a commitment to pluralism), there is a need to provide further insights into the nature of power and how reflection about it can be developed in practice, if a commitment to improvement in social situations is to be honoured.

In this article, we use the above commitments in critical systems thinking to develop a view of power for intervention. With this view, we generate a "system" (e.g. a "whole") of inquiry into power that aims to follow these commitments. We apply our view and system to the domain of information systems (IS) evaluation in order to provide guidance to practitioners on how to identify and manage power in evaluation practice. In the next section we review the practice of IS evaluation in relation to power.

INFORMATION SYSTEMS EVALUATION

In general terms, information systems (IS) evaluation is about assessing the continuous *value* that systems and communication technologies give to organisations and individuals (Irani & Love, 2001; Parker, Benson, & Trainor, 1988; Piccoli & Ives, 2005; Remenyi & Sherwood-Smith, 1999). IS evaluation is still considered a "wicked" phenomenon (Farbey, Land, & Targett, 1999), a "thorny" and complex process (Irani, 2002; Serafeimidis & Smithson, 2003) that is difficult to carry out given different aspects that affect its outcomes. To date, there are a number of approaches and techniques that are used to support successful evaluation of IS and technology investments prior to, during, or after their implementation, although a strong focus on financial techniques still remains (Irani, 2002; Parker et al., 1988; Serafeimidis & Smithson, 1999).

In IS evaluation, it has also been argued that success depends on the usefulness of evaluation processes and outcomes to inform managerial decision-making. This usefulness has been related to the identification of different issues (i.e., financial, ethical, organisational, and cultural) that affect IS implementation so that these are promptly and adequately addressed (Avison & Horton, 1992; Ballantine et al., 2003; Doherty & King, 2001; Hirschheim & Smithson, 1999; Irani, 2002; Irani & Love, 2001; Symons & Walsham, 1988). With the inclusion of a variety of issues in IS evaluation, a growing concern is the usefulness that evaluation will have for those individuals involved and affected by it (Irani, 2002; Irani & Love, 2001; Serafeimidis & Smithson, 1999). People would like to benefit from being involved in an evaluation or using evaluation outcomes.

Therefore, individual perceptions have become relevant, and researchers have suggested that IS evaluation can be better understood as a continuous and *subjective process of interpretation(s)* (Hirschheim & Smithson, 1999; Smithson & Tsiavos, 2004; Walsham, 1999). In other words, evaluation is a process of "experiential and subjective judgement, which is grounded in opinion and world views, and therefore challenges the predictive value of traditional [IS] investment methods" (Irani et al., 2005, p. 65) (brackets added). For Walsham (1999), IS evaluation processes are about understanding and learning through stakeholders' perspectives and actions; stakeholder participation can contribute to minimise resistance IS to implementation (Walsham, 1993). The idea of IS evaluation being a subjective process is expanded by Serafeimidis and Smithson (2003) who argue that IS evaluation "is a socially embedded process in which formal procedures entwine with the informal assessments by which actors *make sense* of their situation" (p.253, emphasis added). They provide the following roles of IS evaluation as:

1. *Control*, meaning that evaluation is and becomes embedded in traditional procedures of organisational appraisal. IS

evaluation processes adhere to existing hierarchies and accepted ways of assessing and monitoring investments. The aim of IS evaluation is to deliver value to the business. Financial techniques that appraise the contribution of information systems and technologies to business strategies are preferred to any other type of evaluation approach (Serafeimidis & Smithson, 1999). In control-evaluation, traditional channels of communication are used. Participation of stakeholders contributes to minimise the risks related to investments and to ensure commitment. However, those people who benefit from controlling other individuals can use evaluation to advance their own interests.

2. *Sense making*, or clarifying any implications that IS investments and projects could have to stakeholders. Informal communication complements formal communication. In sense-making evaluation, establishing a common language helps those leading the evaluation (evaluators) and those taking part (evaluands) to share their expectations and concerns about IS investments or projects. Sense-making evaluation, though, does not exclude the possibility that the revealing of meanings can be used for political purposes or to advance the evaluators' own interests (Legge, 1984; Weiss, 1970).
3. *Social learning*, or fostering the creation, storing, and exchange of knowledge. Stakeholders can take part in this exchange and contribute so that they reduce any uncertainty about the implementation and success of information systems. In social learning, evaluators facilitate the exchange of knowledge through interactions with stakeholders (for example by promoting conversations about how systems will address people or business-related expectations). The selection of what type of knowledge is relevant for evaluation can become an instrument of political influence (e.g. directed to achieve particular objectives), as well as the ways in which this knowledge can be disseminated or exchanged.
4. An *exploratory* exercise, to help organisations to clarify their strategic direction and promote change. Those involved in IS evaluation develop new ways of appraising and monitoring the value that systems have to organisations. This requires thinking creatively. In doing so, people involved in evaluation can contribute to shift the existing balance of *power*: They can challenge those who advocate evaluation techniques based solely on financial benefits or traditional accounting and reporting techniques.

In each of the above orientations on IS evaluation, the perceptions and actions of stakeholders can be used to reinforce or shift the balances of power, but power has not been defined yet. The wider (non-IS) literature on evaluation suggests situations of disadvantage or conflict can be addressed via more participation or empowerment (Guba & Lincoln, 1989; Mertens, 1999; O'Neill, 1995; Weiss, 1970, 1998). Moreover, it is suggested that evaluators should "sign in" with disadvantaged groups and ensure that their concerns, claims and issues are adequately considered and listened to in the evaluation process (Guba & Lincoln, 1989). However, as Gregory (2000) contends, participative evaluation approaches can easily overlook the operation of power and how it can contribute to generate and maintain the very same conditions that enable or inhibit participation to occur. By trying to address imbalances in participation, evaluators may well be privileging their own power as experts or facilitators, or inadvertently reinforcing the power of those who are in managerial control in a situation (Wray-Bliss, 2003). For Gregory (2000), the problem of participation in evaluation can only be approached through a wider understanding of *power* and its *operation* in practices that prohibit or promote such participation. There

needs to be considerations about the context of power in which evaluation is taking place, as well as the role of those being involved in it as part of evaluation practice.

Table 1 contains a summary of four different notions of power that can be related to the IS evaluation roles discussed before. These notions are drawn from existing classifications in the IS literature (Dhillon, 2004; Horton, 2000; Jasperson et al., 2002) and elsewhere (Lukes, 1974; Oliga, 1996). As seen in the table, it can be common to associate power with tangible or distinguishable resources (i.e., information), skills or authority that some people have and use to control others (Bariff & Galbraith, 1978; Horton, 2000). Power can be also associated with institutional structures, so that its use can reinforce, perpetuate, or resist existing organisational hierarchies and "games" (Bloomfield & Coombs, 1992; Dhillon, 2004; Markus, 2002). Or power can be seen as the *influence* that any action of particular individuals have in the behaviour of others (Handy, 1976; Walsham & Waema, 1994). This includes, for instance, the influence that IS experts have over systems users (Horton, 2000), the political skills (Checkland & Scholes, 1990), or the style that managers have to define, implement, and evaluate IS plans (Walsham & Waema, 1994).

The above views presented about power show individual notions, as if power had different but not intersecting manifestations. Nevertheless, power could be an intertwining of capacities, influences, or resources. These views describe very little about how power comes to be considered as such, in other words, how power is *deployed* as such in a situation. In IS practice, it has been acknowledged that explicit exercise of power can contribute to systems implementation (Markus, 2002; Serafeimidis & Smithson, 2003; Walsham & Waema, 1994). However, this does not fully consider the often indistinguishable, unintended, contradictory, and complex consequences of power in IS/IT implementations in a context of intervention (Jasperson et al., 2002; Robey & Boudreau, 1999).

Therefore, it can be argued that IS evaluation faces a similar problem to critical systems thinking, that of not providing enough guidance to practitioners on how to identify and act in relation to power as a multifarious and complex

Table 1. power in orientations for is evaluation

IS Evaluation as (Serafeimidis & Smithson, 2003)	Power as	Manifestations
Control	Resources (Bariff & Galbraith, 1978)	Authority, skills, information, use of technology.
Sense-making	Capacity (Markus, 2002)	Structures that facilitate (or inhibit) communication
Social-learning, exploratory	Influence (Checkland & Scholes, 1990; Handy, 1976; Walsham & Waema, 1994)	Expertise and styles used to facilitate (or inhibit) knowledge exchange and change
Relational	All of the above	In the relations between people (Foucault, 1984a), as a backdrop (Horton, 2000) and in the conditions that make evaluation possible.

issue that affects any action for improvement. It is necessary to consider a *critical* view on power in which power is studied in its deployment (how, why), and not only taking power as a *given*. The view also needs to be *pluralistic* in order to include different manifestations and forms of power, as well as the relationships between them. Moreover, an alternative view of power should help practitioners to explore possibilities for *improvement* in action in relation to power relations. To develop this view in line with the commitments of critical systems thinking, Michel Foucault's ideas on power and ethics are now presented.

Foucault on Power

Michel Foucault's work on the history of Western civilisation provides relevant insights into the problem of the human *subject*, be it individual or collective. For Foucault, the main question in modern society is how human beings are constituted as subjects (Foucault, 1982a, 1982b). His aim is to show connections between what counts as knowledge, the power relations used to make it valid, and the ethical forms that support its deployment. This for Foucault is a way of developing critique in contemporary society (Foucault, 1980b). For Foucault, the meaning of a "subject" is twofold: "someone subject to someone else by control and dependence, and tied to his own identity by a conscience or self-knowledge" (Foucault, 1982a, p.212). Both meanings in the above definition suggest a form of *power,* which subjugates and makes one subject to it (Foucault, 1982a). This suggests that power operates in different ways (targeting individuals and/or groups), influencing the ways in which people relate to themselves and each other.

According to Foucault, the end result of processes of production of knowledge is the potential operation of forms of "normalisation" in society which constrain our behaviour and limit our freedom as individuals. The set of analyses on how people become normalised is called by Foucault "subjectivity" (Foucault, 1977). With his historical analyses, Foucault also shows that the ways individuals define themselves and relate to others have been contingently defined, contested and deployed via *power* relations as "the ways we fashion our subjectivity" (Bernhauer & Mahon, 1994, p. 143). Subjectivity refers to the practices we perform on ourselves, and this includes what we consider ethical, as will be shown later.

In Foucault's analyses, one can find different definitions of power that also show power's dynamic nature in society (Foucault, 1980b). Power can be identified in the relations between people, between actions influencing other actions. Power means *power strategies* through which individual try to define, determine, or guide the conduct of others (Foucault, 1984a). Power also helps deploying some forms of knowledge at a particular moment in time whilst obscuring others, so that certain practices prevail as the valid ones. Power can be seen as a "total structure of actions brought to bear upon possible actions: in incites, it induces, it seduces, it makes easier or difficult" (Foucault, 1982a, p. 220).

For Foucault (1980b, 1984b), power is not an objective issue; it can only be identified in its operation through the relations that it establishes, maintains (including resisting), or creates between individuals. Power is an analytical device that helps us to understand how we have been constituted as the subjects we currently are in the relations with ourselves and others. Such relations are mobile, transient, and dynamic; they target single individuals or entire populations; their operation occurs across institutions and at different levels (micro, macro) in society. New forms of power emerge that reinforce, support, undermine, or resist previous ones, and this happens at any level (e.g., individual, micro and macro). In Foucault's work, power is present where there is freedom and is essential to regulate relations between individuals in society (Foucault, 1984a). Power can be used intentionally, but the consequences of doing so cannot be fully determined (Foucault, 1984a, 1984b).

Foucault's work has been used in the realm of information systems to understand the effects of information systems planning and implemen-

tation in managerial practices (Ball & Wilson, 2000; Córdoba & Robson, 2003; Doolin, 2004; Horton, 2000; Introna, 1997). For instance, Introna (1997) suggests that Foucaultivan notions of power helps to identify some "obligatory passage points" in the design and implementation of information systems as sets of relations that determine what types of information and the practices associated with its management count as organisationally accepted. According to Bloomfield and Coombs (1992), such awareness can also help IS practitioners to map and better understand the conditions that enable the implementation of systems in an organisation. For Doolin (2004), the Foucaultvian concept of power can help explain how people can resist or react to existing implementation practices and how implementation is the by-product of many different organisational factors, some of which emerge in opposition to the implementation itself. In these accounts, the issue of ethics has not been explicitly addressed using Foucault's ideas (Burrell, 1988), and this will be revisited later in the article.

From the above discussion, we elaborate a fourth notion of power to support IS evaluation (see last row of Table 1). In this notion, power operates in the *relations* between individuals. It includes different manifestations *as well* as the conditions and relations that make possible the existence and use of power as a resource, structure, or influence in evaluation as previously discussed. These different manifestations of power not only generate potential constraints that inhibit action (including the evaluation itself), but also opportunities that will make action feasible according to the "landscape" of possibilities that individuals are part of (Brocklesby & Cummings, 1996; Foucault, 1980b). As will be seen in the next section, these possibilities can be better defined in relation to the ethics of individuals.

ETHICS

According to Brooke (2002), some authors see Foucault as failing to provide a concrete space within which debate can take place given the ever presence of power even as resistance to it. In particular, Foucault's acceptance of the idea that "Yesterday's resistance can become today's normalisation… which in turn can become the conditions for tomorrow's resistance and/or normalisation" (Darier, 1999, p. 18) is lacking any normative content and thus generates ambiguity or confusion (Rowlinson & Carter, 2002; Taylor, 1984). A question arises about how one can then discern and decide on ethical issues in evaluation (Ballantine et al., 2003). This question gains importance in light of a critical systems-based commitment with *improvement* as mentioned before. To the potential ambiguity of power analyses, more structured ways of dealing with questions of ethics in IS evaluation like the ones presented by Ballantine et al (2003) (based on Habermas) can provide alternative and systematic answers. These alternatives focus on reviewing and developing spaces for equal debate about ethical issues, as well as providing general rules for examining or conducting debate. In contrast to these alternatives, for Foucault it is essential to explore the *conditions* that led debate and inequalities to emerge in the first place. These conditions could be unique in a context of intervention (Brooke, 2002), including those that enable participation in IS evaluation to take place.

To address the above question, there is a still largely unexplored area in Foucault's work that needs to be made more explicit, and that is ethics. Foucault's work is not power but the *human subjects*, how we have been constituted as the individuals we are (Chan & Garrick, 2002; Foucault, 1982a). According to Foucault (1977), any action in relation to power *cannot* be considered exterior to power relations, so that inevitably any debate on issues (including ethical) in evaluation takes place in relation to power relations. Therefore, we need to look at power relations from the inside (Brooke, 2002). Foucault's analyses aim to show how subjects position themselves to situations according to what they think it is *ethical* (Darier, 1998; Foucault, 1977). In his study of the history of sexuality, Foucault says:

Morality [ethics] also refers to the real *behaviour of individuals to the rules and values that are recommended to them…the manner in which they respect or disregard a set of values… (p. 25)…those intentional and voluntary actions by which men not only set themselves rules of conduct, but also seek to transform themselves, to change themselves in their singular being.* (Foucault, 1984b, p. 10)

This means that it is possible for subjects to make strategic use of their freedom (Foucault, 1984a, 1984c) and use it to "no longer being, doing or thinking what we are, do, or think" (Foucault, 1984c, p. 46). Foucault is aware that we need to continuously recognise the limits of our actions, what is no longer necessary (or dangerous) for the constitution of us as autonomous subjects and *act* accordingly. He says:

The question, in any event, is that of knowing how the use of reason can take the public form that it requires, how the audacity to know can be exercised in broad daylight, while individuals are obeying as scrupulously as possible. (Foucault, 1984c, p. 37)

This means that in the light of power relations in a particular context of intervention, it is possible to develop a reflexive and ethically oriented practice of individual freedom. Ethical practice becomes a way of providing direction to action for improvement, an opportunity to (re) develop forms of ethics within what is possible in relation to power relations. This aspect will be further discussed when proposing a system of inquiry into power for IS evaluation in the next section.

Towards a System of Inquiry into Power for IS Evaluation

From the above discussion on power and ethics, two important implications can be derived to inform the definition of a critical systems view of power for IS evaluation. First, the inclusion of power would require considering it as a backdrop (Horton, 2000) of relations against which any IS evaluation orientation can be studied. Any manifestation of power (as a resource, capacity, structure, or influence) in IS evaluation should be considered the by-product and medium of power relations operating in a context of intervention, with these relations having varied implications (for instance, economic, political, social, and cultural). Identification and analysis of how power relations operate would help those involved in evaluation to reflect on how they become subjects of evaluation activities and what they can do about it. The above does not mean that power should be avoided but its possibilities and constraints used strategically according to what individuals consider relevant to do (Brocklesby & Cummings, 1996) in relation to what has been institutionally unfolded and accepted as IS evaluation (Smithson & Tsiavos, 2004). For those involved in evaluation, analysis of power requires them to reflect on their participation in power relations that make evaluation (im) possible and that facilitate or inhibit unfolding of events. It becomes necessary to explore the origins and deployment of power relations in which IS evaluation has arisen as a process to be carried out.

Secondly, the analysis of power relations as a system requires ethical awareness from those involved about ethical issues that they adopt, debate, or resist in IS evaluation, *and this also includes the ethical issues that are adopted to analyse power*. This requires direct intervention from the "inside" of evaluation. Foucault is proposing to continuously study power in order to see the limitations of its "normalising" ethical systems, and how power can also offer possibilities for action for people as they see them fit (Brocklesby & Cummings, 1996) or ethically appropriate (Vega-Romero, 1999). In other words, Foucault is proposing to study and reflect on the internal conditions that can make ethical action possible in IS evaluation in order to define the "battleground" and possibilities for further action.

Considering the above, the following is the definition of a system of inquiry into power

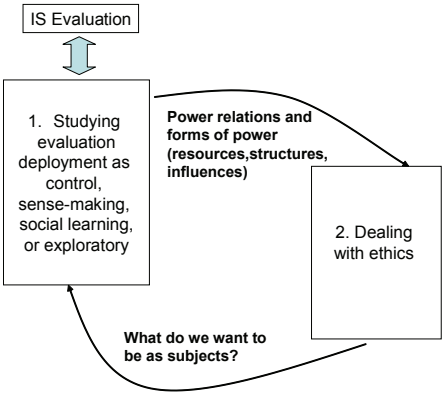
to support IS evaluation as presented in Figure 1. The system is composed of two areas interacting with each other and informing existing role(s) of the evaluation process as described by Serafeimidis and Smithson (2003). This analysis brings together an understanding of evaluation as a series of interpretations as described by Smithson and Tsiavos (2004), and a way of reflecting on ethical issues in IS evaluation as proposed by Ballantine et al (2003), so that those involved in evaluation can reflect on power from their own participation. The areas of inquiry are:

1. *Exploring the deployment of IS evaluation*. Analysis of power in relation to forms of being, knowing, and acting consists of locating how power relations contribute to deploy (implement) or undermine IS evaluation activities. The purpose is to identify how evaluation became possible and accepted as such, and how it progresses. This type of analysis requires unveiling power relations at different levels (for instance, economic, social, political)—as maps of actions influencing other actions—(Foucault, 1984a) that constitute the definition, approval and unfolding of the evaluation under study. A good starting point or "points of entry" to analyse power is to see how it helps in the deployment of accepted evaluation roles (i.e., as control, sense-making, social-learning, and exploration) (Serafeimidis & Smithson, 2003); in other words, to study how these roles came to being, and the wider relations that made them possible and valid. The analysis can then be complemented or developed with the following questions (Córdoba & Robson, 2003): How is that evaluation is defined and approved? How does it engage those involved? What role(s) for evaluation are accepted? Through which mechanisms and justifications? How do activities in evaluation become successful or unsuccessful? How are evaluations institutionally completed or abandoned?
2. *Dealing with ethics*. As said before, for Foucault (1977), one cannot be exterior to the power relations one is analysing or intervening. Therefore, analyses should also show how individual subjects position themselves in situations (Darier, 1998; Foucault, 1977). This consideration should lead those involved in IS evaluation to consider *what is ethical for them to do according to power*, and to go beyond the idea of interpretations. Analysis of power should also yield insights as to what behaviours and actions are ethically acceptable or unacceptable (including the analysis itself as a practice that is guided by ethical values), and what to do about them. Those involved in evaluation can decide to adopt a critical stance and go beyond what is being established, to imagine new forms of being and acting (Foucault, 1984c). This could mean that the purpose and nature of evaluation are re-defined according to what people consider ethical to do in a context of intervention.

Using Foucault's (1984b) elements of analysis of ethics, those involved in evaluation can formulate the following questions to help them decide on how to treat ethical issues: In the dominant role(s) of evaluation, what part of our behaviour (thinking, acting) do we need to be ethically concerned with? Through which evaluation activities (including analysis of power) ought we to show our ethical behaviour? What individual activities do we need to work on to become ethical? Most importantly, what type of ethical subjects do we want to be in relation to existing power? Answers to these questions can yield further insights as to how to define action to carry on with evaluation activities.

Figure 1 shows how these two areas of analysis are related. To the deployment of IS evaluation through power relations, analysis of power (e.g., how is evaluation deployed?), could trigger the identification of ethical issues for those involved. Using this analysis, individuals could then identify and reflect upon their

Figure 1. A system of inquiry into is evaluation



ethics and how to develop it by considering what has been deployed as ethically acceptable. This could place people in a better position to define their possibilities and constraints for action according to existing power relations. As new issues of concern emerge in an evaluation process, further analysis of power and forms of ethics is required, as the interactions between the elements of Figure 1 show.

AN EXAMPLE

As an example of how to use the above elements of inquiry, let us consider that in an IS evaluation process, financial control and communication to stakeholders are seen as essential (Irani, 2002; Serafeimidis & Smithson, 2003) in order to guarantee compliance with organisational procedures of auditing. In this context, evaluation can then be seen as control mechanism, more specifically as a way of exerting control over IS investments (or perhaps as a way of enabling financial officers to exert control over the rest of the organisation). The deployment of evaluation as an accepted process can have many manifestations. These could include, for instance, continuous exercise of formal authority (e.g., via established practices of reporting to finance officers), traditional use of financial skills and resources to get evaluation activities "done" (e.g., by an influential chief financial officer), or emerging pertinence of financial matters in IS investment decisions (e.g., a sound business case with "numbers" that now needs to be elaborated before being approved). These manifestations could be the by-product of previous practices (i.e., a history of financial success or failure in the organisation).

With this understanding of evaluation as a deployment of power relations, those involved in evaluation could then proceed to reflect on how a particular issue (e.g., communication) and its treatment can be dealt with. This issue can be then considered "ethical," and the expected behaviours or ways of thinking about it identified. People involved in evaluation could decide not to pay any more attention, for instance, to requests to analyse or communicate (financial) progress to other stakeholders or use existing communications to raise a different set of ethical issues (e.g., confidentiality, quality, etc.) Decisions can follow people's desire to become ethically different (e.g., more professional in their practice) or to be "seen" as ethical (and then using the power available to make themselves known). These decisions need to be examined in the light of potential consequences for individuals and their organisations, and any effect that could be foreseen (for

instance, excessive professionalism could then generate a desire for people to become "professionally accredited"). In this particular case, the emergence of new issues to be discussed in evaluation (for example, due to new business practices related to improvement in customer service), or new ways of conducting evaluation in the context of intervention (e.g., those seen as more "professional") can then trigger further analyses on how these elements are being deployed and how they need to be managed. Although this example is brief, it illustrates the type of analysis that can be conducted and the actions that could result to improve the practice of IS evaluation. The example can also prompt evaluation practitioners to reflect on the scope of their analyses by considering manifestations and effects of power at different levels (economic, social, "political", etc).

CONCLUSIONS

In this article, a review of the issue of power in critical systems thinking and information systems evaluation has been undertaken to define an alternative view about it. It has been found that existing interpretations of power as operating "externally" from those involved in evaluation leaves individuals with little guidance in relation to how to identify and act about it. Using the commitments of critical systems thinking and Foucault's ideas on power and ethics, the paper develops a view of power and a system of inquiry into how it can be analysed in IS evaluation. The system enables practitioners and others involved in evaluation to be *critically aware* of the influence of power to deploy evaluation. It also allows for the inclusion and study of *different* manifestations of power and relations between them. Using this system, practitioners can inquire about how evaluation becomes possible through power relations. Inquiry should lead practitioners to reflect on ethical issues associated with IS evaluation and develop their own actions to *improve* their practice according to what they consider is ethical to do.

In comparison with other perspectives on power, Foucault's ideas can prompt those involved in evaluation to study the *power conditions* of the evaluation itself before establishing any possibilty of dialogue or debate6. This can help them to frame their actions into the possibilities and constraints given by power relations in the context where they are immersed. In evaluation practice, there is still a need to compare the study of power from this perspective with others. We see an opportunity to incorporate the use of the proposed system of inquiry with the use of systems methodologies to promote participative IS evaluation. We hope the view on power developed in this article contributes to open up further opportunities of dialogue and research between critical systems thinking and information systems.

REFERENCES

Avison, D., & Horton, J. (1992). *Evaluation of information systems* (Working Paper). Southampton: University of Southampton, Department of Accounting and Management Science.

Avison, D. E., & Wood-Harper, A. T. (1990). *Multiview: An exploration in information systems development*. Henley on Thames, UK: Alfred Waller (McGraw-Hill Publishing Company).

Avison, D., Wood-Harper, A. T., Vidgen, R. T., & Wood, J. R. G. (1998). A further exploration into information systems development: The evolution of Multiview2. *Information Technology and People, 11*(2), 124-139.

Ball, K., & Wilson, D. (2000). Power, control and computer-based performance monitoring: A subjectivist approach to repertoires and resistance. *Organization Studies, 21*(3), pp. 539-565.

Ballantine, J., Levy, M., Munro, I., & Powell, P. (2003). An ethical perspective on information systems evaluation. *International Journal of Agile Management Systems, 2*(3), 233-241.

Bariff, M., & Galbraith, J. R. (1978). Intraorganizational power considerations for designing information systems. *Accounting, organizations and society, 3*(1), 15-27.

Bernhauer, J., & Mahon, M. (1994). The ethics of Michel Foucault. In G. Gutting (Ed.), *The Cambridge Companion to Foucault* (pp. 141-158). Cambridge, UK: Cambridge University Press.

Bloomfield, B., & Coombs, R. (1992). Information technology, control and power: The centralization and decentralization debate revisited. *Journal of Management Studies, 29*(4), 459-484.

Brocklesby, J., & Cummings, S. (1996). Foucault plays Habermas: An alternative philosophical

underpinning for critical systems thinking. *Journal of the Operational Research Society, 47*(6), 741-754.

Brooke, C. (2002). What does it mean to be "critical" in IS research? *Journal of Information Technology, 17*(2), 49-57.

Burrell, G. (1988). Modernism, post modernism and organizational analysis: The contribution of Michel Foucault. *Organization Studies, 9*(2), 221-235.

Chan, A., & Garrick, J. (2002). Organisation theory in turbulent times: The traces of Foucault's ethics. *Organization, 9*(4), 683-701.

Checkland, P. (1981). *Systems thinking, systems practice*. London: John Wiley and Sons.

Checkland, P. (1990). Information systems and systems thinking: Time to unite? In P. Checkland & J. Scholes (Eds.), *Soft systems methodology in action* (pp. 303-315). Chichester, UK: John Wiley & Sons Ltd.

Checkland, P., & Holwell, S. (1998). *Information, systems and information systems: Making sense of the field*. Chichester, UK: John Wiley and Sons.

Checkland, P., & Scholes, P. (1990). *Soft systems methodology in action*. Chichester: John Wiley and Sons.

Churchman, C. W. (1970). Operations research as a profession. *Management Science, 17*, b37-b53.

Churchman, C. W. (1979). *The systems approach and its enemies*. New York: Basic Books.

Clarke, S. (2001). *Information systems strategic management : An integrated approach*. London: Routledge.

Clarke, S., & Lehaney, B. (2000). Mixing methodologies for information systems development and strategy: A higher education case study. *Journal of the Operational Research Society, 51*, 542-566.

Córdoba, J. R., & Robson, W. D. (2003). Making the evaluation of information systems insightful: Understanding the role of power-ethics strategies. *Electronic Journal of Information Systems Evaluation, 6*(2), 55-64.

Darier, E. (1998). Time to be lazy: Work, the environment and modern subjectivities. *Time & Society, 7*(2), 193-208.

Darier, E. (1999). Foucault and the environment: An introduction. In E. Darier (Ed.), *Discourses of the environment* (pp. 1-33). Oxford: Blackwell.

Dhillon, G. (2004). Dimensions of power and IS implementation. *Information & Management, 41*, 635-644.

Doherty, N., & King, M. (2001). An investigation of the factors affecting the successful treatment of organisational issues in systems development. *European Journal of Information Systems, 10*, 147-160.

Doolin, B. (2004). Power and resistance in the implementation of a medical management information system. *Information Systems Journal, 14*(4), 343-362.

Farbey, B., Land, F., & Targett, D. (1999). Moving IS evaluation forward: Learning themes and research issues. *Journal of Strategic Information Systems, 8*(2), 189-207.

Flood, R. L. (1990). *Liberating systems theory.* New York: Plenum Press.

Flood, R. L., & Jackson, M. C. (1991a). Total systems intervention: A practical face to critical systems thinking. *Systems Practice, 4*, 197-213.

Flood, R. L., & Jackson, M. C. (Eds.). (1991b). *Critical systems thinking: Directed readings*. Chichester: John Wiley and Sons.

Flood, R. L., & Romm, N. (1996). *Diversity management: Triple loop learning*. Chichester: John Wiley and Sons.

Foucault, M. (1977). *The history of sexuality volume one: The will to knowledge* (Vol. 1). London: Penguin.

Foucault, M. (1980a). Truth and power. In P. Rabinow (Ed.), *The Foucault reader: An introduction to Foucault's thought* (pp. 51-75). London: Penguin.

Foucault, M. (1980b). Two lectures. In C. Gordon (Ed.), *Power/knowledge: Selected interviews and other writings Michel Foucault* (pp. 78-108). New York: Harvester Wheatsheaf.

Foucault, M. (1982a). Afterword: The subject and power. In H. Dreyfus & P. Rabinow (Eds.), *Michel Foucault: Beyond structuralism and hermeneutics* (pp. 208-226). Brighton: The Harvester Press.

Foucault, M. (1982b). On the genealogy of ethics: An overview of work in progress. In P. Rabinow (Ed.), *The Foucault reader: An introduction to Foucault's thought* (pp. 340-372). London: Penguin.

Foucault, M. (1984a). The ethics of the concern of the self as a practice of freedom (R. e. a. Hurley, Trans.). In P. Rabinow (Ed.), *Michel Foucault: Ethics subjectivity and truth: Essential works of Foucault 1954-1984* (pp. 281-301). London: Penguin.

Foucault, M. (1984b). *The history of sexuality volume two: The use of pleasure*. London: Penguin.

Foucault, M. (1984c). What is enlightenment? (C. Porter, Trans.). In P. Rabinow (Ed.), *The Foucault reader: An introduction to Foucault's thought* (pp. 32-50). London: Penguin.

Gregory, A. (2000). Problematizing participation: A critical review of approaches to participation in

evaluation theory. *Evaluation, 6*(2), 179-199.

Gregory, W. J. (1992). *Critical systems thinking and pluralism: A new constellation.* Unpublished doctoral dissertation, City University, London.

Gregory, A., & Jackson, M. C. (1992). Evaluation methodologies: A system for use. *Journal of the Operational Research Society, 43*(1), 19-28.

Guba, E. G., & Lincoln, Y. S. (1989). *Fourth generation evaluation*. Newbury Park, CA: Sage Publications.

Handy, C. (1976). *Understanding organizations*. Aylesbury: Penguin.

Hirschheim, R., & Smithson, S. (1999). Evaluation of information systems: A critical assessment. In L. Willcocks & S. Lester (Eds.), *Beyond the IT productivity paradox* (pp. 381-409). Chichester, UK: John Wiley and Sons.

Horton, K. S. (2000). The exercise of power and information systems strategy: The need for a new perspective. *Proceedings of the 8th European Conference on Information Systems (ECIS)*, Vienna.

Introna, L. D. (1997). *Management, information and power: A narrative of the involved manager*. Basingstoke: Macmillan.

Irani, Z. (2002). Information systems evaluation: Navigating through the problem domain. *Information & Management, 40*, 11-24.

Irani, Z., & Fitzgerald, G. (2002). Editorial. *Information Systems Journal, 12*(4), 263-269.

Irani, Z., & Love, P. E. (2001). Information systems evaluation: Past, present and future. *European Journal of Information Systems, 10*(4), 189-203.

Irani, Z., Love, P. E., Elliman, T., Jones, S., & Themistocleus, M. (2005). Evaluating E-government: Learning from the experiences of two UK local authorities. *Information Systems Journal, 15*(1), 61-82.

Jackson, M. C. (1982). The nature of soft systems thinking: The work of Churchman, Ackoff and Checkland. *Journal of Applied Systems Analysis, 9*, 17-29.

Jackson, M. C. (1992). An integrated programme for critical thinking in information systems research. *Information Systems Journal, 2*, 83-95.

Jackson, M. C. (1999). Towards coherent pluralism in management science. *Journal of the Operational Research Society, 50*(1), 12-22.

Jackson, M. C. (2000). *Systems approaches to management*. London: Kluwer Academic/Plenum Publishers.

Jackson, M. C. (2003). *Creative holism: Systems thinking for managers*. Chichester, UK: John Wiley and Sons.

Jackson, M. C., & Keys, P. (1984). Towards a system of system methodologies. *Journal of the Operational Research Society, 35*, 473-486.

Jasperson, J. S., Carte, T., Saunders, C. S., Butler, B. S., Croes, H. J. P., & Zheng, W. (2002). Power and information technology research: A metatriangulation review. *MIS Quarterly, 26*(4), 397-459.

Legge, K. (1984). *Evaluating planned organizational change*. London: Academic Press.

Lewis, P. (1994). *Information systems development: Systems thinking in the field of information systems*. London: Pitman Publishing.

Lukes, S. (1974). *Power: A radical view*. London: Macmillan.

Lyytinen, K., & Hirschheim, R. (1987). Information systems failures - A survey and classification of the empirical literature. *Oxford Surveys in Information Technology, 4*, 257-309.

Markus, M. L. (2002). Power, politics and MIS implementation. In M. Myers & D. Avison (Eds.), *Qualitative research in information systems*. London: Sage.

Mertens, D. (1999). Inclusive evaluation: Implications of transformative theory for evaluation. *American Journal of Evaluation, 20*(1), 1-14.

Midgley, G. (1996). What is this thing called CST? In R. L. Flood & N. Romm (Eds.), *Critical Systems Thinking: Current Research and Practice* (pp. 11-24). New York: Plenum Press.

Midgley, G. (1997). Mixing methods: Developing systemic intervention. In J. Mingers & A. Gill (Eds.), *Multimethodology: The Theory and Practice of Combining Management Science Methodologies*. (pp. 249-290). Chichester, UK: John Wiley and Sons.

Midgley, G. (2000). *Systemic intervention: Philosophy, methodology and practice*. New York: Kluwer Academic/Plenum.

Mingers, J. (1984). Subjectivism and soft systems methodology: A critique. *Journal of Applied Systems Analysis, 11*, 85-113.

Mingers, J. (1992). Technical, practical and critical OR: Past, present and future? In M. Alvesson & H. Willmott (Eds.), *Critical management studies* (pp. 90-112). London: Sage.

Mingers, J. (2005). 'More dangerous than an unanswered question is an unquestioned answer': A contribution to the Ulrich debate. *Journal of the Operational Research Society, 56*(4), 468-474.

Mingers, J., & Gill, A. (1997). *Multimethodology: The theory and practice of combining management science methodologies.* Chichester, UK: John Wiley & Sons Ltd.

Mora, M., Gelman, O., Cervantes, F., Mejia, M., & Weitzenfeld. (2003). A systemic approach for the formalization of information systems concept: Why information systems are systems? In J.

Cano (Ed.), *Critical reflections in information systems: A systemic approach* (pp. 1-29). Hershey (PA): Idea Group Publishing.

Oliga, J. (1996). *Power, ideology and control*. New York: Plenum.

O'Neill, T. (1995). Implementation frailties of Guba and Lincoln's fourth generation evaluation theory. *Studies in Educational Evaluation, 21*(1), 5-21.

Ormerod, R. (1996). Information systems strategy development at Sainsbury's supermarket using "soft" OR. *Interfaces, 16*(1), 102-130.

Ormerod, R. (2005). Putting soft OR methods to work: the case of IS strategy development for the UK Parliament. *Journal of the Operational Research Society, 56*(12), 1379-1398.

Parker, M. M., Benson, R., & Trainor, H. E. (1988). *Information economics: Linking business performance to information technology*. Englewood Cliffs, NJ: Prentice Hall.

Piccoli, G., & Ives, B. (2005). IT-dependent strategic initiatives and sustained competitive advantage: A review and synthesis of the literature. *MIS Quarterly, 29*(4), 747-776.

Remenyi, D., & Sherwood-Smith, M. (1999). Maximise information systems value by continuous participative evaluation. *Logistics Information Management, 12*(1/2), 145-156.

Robey, D., & Boudreau, M. (1999). Accounting for the contradictory organizational consequences of information technology: Theoretical directions and methodological implications. *Information Systems Research, 10*(2), 167-185.

Rowlinson, M., & Carter, C. (2002). Foucault and history in organization studies. *Organization, 9*(4), 527-547.

Serafeimidis, V., & Smithson, S. (1999). Rethinking the approaches to information systems evaluation. *Logistics Information Management, 12*(1-2), 94-107.

Serafeimidis, V., & Smithson, S. (2003). Information systems evaluation as an organizational institution - Experience from a case study. *Information Systems Journal, 13*, 251-274.

Smithson, S., & Tsiavos, P. (2004). Re-constructing information systems evaluation. In C. Avgerou, C. Ciborra & F. Land (Eds.), *The social study of information and communication technology: Innovation, actors and contexts* (pp. 207-230). Oxford: Oxford University Press.

Stowell, F. (1995). *Information systems provision: The contribution of soft systems methodology*. London: McGraw-Hill.

Symons, V., & Walsham, G. (1988). The evaluation of information systems: A critique. *Journal of Applied Systems Analysis, 15*, 119-132.

Taylor, C. (1984). Foucault on freedom and truth. *Political Theory, 12*(2), 152-183.

Ulrich, W. (1983). *Critical heuristics of social planning: A new approach to practical philosophy.* Berne: Haupt.

Ulrich, W. (2003). Beyond methodology choice: critical systems thinking as critically systemic discourse. *Journal of the Operational Research Society, 54*(4), 325-342.

Valero-Silva, N. (1996). A Foucauldian reflection on critical systems thinking. In R. L. Flood & N. Romm (Eds.), *Critical systems thinking: Current research and practice.* (pp. 63-79.). London: Plenum.

Vega-Romero, R. (1999). *Care and social justice evaluation: A critical and pluralist approach.* Hull: University of Hull.

Walsham, G. (1993). *Interpreting information systems in organisations*. Chichester, UK: John Wiley and Sons.

Walsham, G. (1999). Interpretive evaluation design for information systems. In L. Willcocks & S. Lester (Eds.), *Beyond the IT productivity paradox* (pp. 363-380). Chichester, UK: John Wiley and Sons.

Walsham, G., & Waema, T. (1994). Information systems strategy and implementation: A case study of a building society. *ACM Transactions on Information Systems, 12*(2), 150-173.

Weiss, C. (1970). The politicization of evaluation research. *Journal of Social Issues, 26*(4), 57-68.

Weiss, C. (1998). Have we learned anything new about the use of evaluation? *American Journal of Evaluation, 19*(1), 21-34.

Wilson, B. (1984). *Systems: Concepts, methodologies, and applications*. Chichester, UK: John Wiley and Sons.

Wilson, B. (2002). *Soft systems methodology: Conceptual model and its contribution*. Chichester, UK: John Wiley and Sons.

Wray-Bliss, E. (2003). Research subjects/research subjections: Exploring the ethics and politics of critical research. *Organization, 10*(2), 307-325.

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