Chapter 2

THE STRUCTURE OF POWER IN ACTION RESEARCH PROJECTS

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Abstract: Action research is a qualitative research method that emphasizes collaboration between researchers and practitioners. The process of action research requires that choices be made determining how power is balanced in various ways between researchers and their collaborators within the host organization. We discuss three aspects of power: the procedures for initiating an action research project, those for determining authority within the project, and the degree of formalization. We analyze seven action research projects in information systems and from this analysis distil recommendations for determining power structures. These recommendations will be important to those researchers using action research in information systems.

Key words: action research, qualitative research, power, information systems

1.   INTRODUCTION

Action research (AR) emphasizes collaboration between researchers and practitioners. It is an important qualitative research method for the information systems field (Baskerville and Wood-Harper, 1996; Lau, 1997; Myers, 1997; Avison et al., 1999). Action research differs from case study research in that the action researcher is directly involved in planned organizational change. Unlike the case study researcher, who seeks to study organizational phenomena but not to change them (Benbasat et al. 1987), the action researcher intervenes by creating organizational change and simultaneously studies the impact of this change (Baburoglu and Ravn, 1992). The intervention aspect of action research means that it is an especially interesting and relevant method for the area of information systems development (Avison et al., 1998).

Action Research is not without its problems. In particular, action researchers struggle with the dilemmas that are embodied in the tension between the intentions of the researchers and the intentions of the members of the host organization that may be collaborating in the project. These tensions inhabit even the basic definitions of the action research method itself. For example, Rapoport (1970, p.499) defines action research as an approach that "aims to contribute *both* to the practical concerns of people in an immediate problematic situation and to the goals of social science by joint collaboration within a mutually acceptable ethical framework".

While this definition draws attention to the collaborative aspect of action research, it also draws out the potential for conflicts that might arise from its use. Researchers and practitioners may not share the same values and they are likely to have different goals. On the one hand, action research is concerned to enlarge the stock of knowledge of the social science community (Clark 1972). On the other hand, action research is also concerned about solving practical problems confronting the organization in which the research is embedded. The "double challenge" of combining both practical action and research potentially leads to conflict where the roles of the collaborative members of the research team are different.

The issues of power in action research are not well understood. Previous studies have focused on the issues in terms of control (Avison, et al., 2001). But control is far too mechanical as an umbrella concept for considering potential conflicts between researchers and practitioners. Control is the exercise of restraining or directing influence. Power is the ability to act or produce an effect. Power is the possession of control, authority or influence over others. Control is the exercise of power. A situation in which the goals of the researchers are in conflict with those of the practitioners in the host organization can give rise to power struggles. Who is empowered in action research projects? If it is the practitioners, then they can control the researchers. If it is the researchers, then they can control the practitioners. If an action research project operates without an understanding of the power distribution, then conflicts between researchers and practitioners may lead to a power struggle as each group seeks to control the project directions.

Such power struggles are deeply embedded in social and cultural factors in the research setting. There may even be basic contradictions between the ethical and ontological assumptions of the researchers and the practitioners. Additionally, there may be power struggles *within* the research team and even more so *within* the organization with respect to goals and value of the project (and not just between the researchers and the representatives of the host organization). The potential for power issues add to the complex situational nature of action research.

In this paper, we draw upon the work of Jasperson et al. (2002), who provide a comprehensive review of the use of power in IT research. They point out that there are multiple conceptualizations of power in the IS research literature. They categories the literature according to various common themes: Authority; Centralization, Decision Rights, Participation in Decision Making; Influence; and Politics. Table 2-1 lists a subset of those particular themes that are particularly relevant to power issues in action research projects.

There are four major sources of power that inhabit these four common themes. First, there is authority. Authority is a source of power derived from formal or institutional structures. Formal structures are exemplified by authority attached to an office or job position while institutional authority is attached to university degrees, training certificates, etc. Second, there are resource rights. This source of power is derived from ownership or control over resources. Resource rights are exemplified by the ability to assign people or office space to an action research project. Third, there is influence. Influence is a source of power derived from social attributes like trust or charisma. Influence is exemplified by an ability of an action researcher to persuade practitioners to take actions even though the researcher has no formal authority. Fourth, there is politics. Politics is a source of power derived from the exercise of strategic processes. Politics is exemplified by the use of creeping commitment as a strategy for drawing cautious practitioners into taking revolutionary actions.

Because of the situational nature of action research and the potential for power issues, each action research project, to some at extent at least, is unique, and it is difficult to draft general *laws* about how to carry out such projects. Different themes and aspects of power will be relevant depending upon the situation. Therefore, rather than attempting to draft general laws that must be applied in every situation, we develop general *guidelines* for diagnosing and resolving problems of power in action research projects in IS. Where such issues arise, action researchers might consider these guidelines, although it is clearly up to IS researchers to interpret and apply the guidelines for themselves.

Table 2-1. Common Themes in Power Conceptualizations (adapted from Jasperson et al., 2002)

Authority	
Institutional Power	Power is mandated from ownership.
Rational Structural	Power that focuses on authority, information, and expertise as bases of power.
Centralization, Decision Rights, Participation in Decision Making	
Disciplinary Power	Power is a mechanism constituted by the multiplicity of power/knowledge relationships between agents. It is associated with bodies of

	knowledge (disciplines) that constitute the dominant view and meaning of things.
Rational	Structural Power that emphasizes rational decision making.
Resource Control	Power that relies heavily on exchange theory and is derived from the ability to control the supply of resources to others.
Zero Sum Power	Power is defined in terms of the control or ownership of resources.
Influence	
Behavioral Power	Focuses on exercise of power in which one actor influences another actor to behave in a manner differently than s/he would have behaved without the influence.
Interpretive	Power that assumes that reality is socially constructed... [and] that the parties involved exert influence by constructing the meaning of what others experience.
Politics	
Organizational Power	Power is derived from how political roles are played; rational views of political interests.
Pluralist	Development, prioritization, and execution of organizational goals are an explicitly political process involving conscious negotiation based on control of resources and information.
Processual Power	Power is part of the decision-making sphere and micro-politics of organizational life. Decisions and priorities involved in negotiation are emergent phenomena. Power lies not in concrete resources but in strategies like coalition-formation and the manipulation of information that protagonists employ in the power game.
Radical	Power and politics are outgrowths of social structures. Political activity, broadly defined, involves either maintaining or undermining (and ultimately overthrowing) existing power structures.
Zero Sum Power	Power is a zero-sum political game in which there is a fight between individuals over an object when one party wins the other loses.

2.   POWER AND ACTION RESEARCH PROJECTS: ISSUES OF INITIATION AND AUTHORITY

There is no consensus on the ideal power structures for action research projects. However, there are three key aspects of the action research situation that help to determine what the basic nature of these power structures should be. The first aspect concerns the initiation of the action research project, the second concerns the determination of authority for action in the research project, and the third aspect concerns the degree of formalization of the project.

2.1   The initiation of action research projects

Considering the first aspect, how are action research projects initiated? Action research focuses on addressing a situation where problems exist. Sometimes the action researcher may 'discover' the problems, but in other situations the problems 'discover' the action researcher (Root-Bernstein, 1989).

The former case is research-driven initiation, in that the action researcher might be in possession of a general theoretical approach to addressing problem situations and looking for settings that are characterized by such problems. In this situation, the practitioners may be somewhat dubious or indifferent, particularly if they are unaware that they are in fact confronting serious problems. Sometimes, there is a mixture of the two ways of initiation. It evolves from discussions between researchers and practitioners, possibly following on from consultancy work.

The latter case is problem-driven initiation, in that practitioners might be confronted by a seemingly insurmountable problem and seeking help from theoretical specialists. In this situation, the researchers may have to develop their research program somewhat opportunistically, undertaking a series of research projects that have a broad theoretical span. The researchers attempt to learn from these experiences and draw conclusions which then help to further develop the theory.

The goal of the initiation process among both the practitioners and the researchers is the discovery of a mutual interest in solving the problem at hand. Either of the cases above can lead to success or failure depending on whether this initiation goal is achieved. This failure occurs because the researchers find no prospects for knowledge discovery in the problem setting, or the practitioners find no prospects for solving the immediate problem (or both).

Kock (1997) has shown exactly how this failure unfolds in researcher-driven initiation, identifying three failure forms:

(1) *Iceberg Subjects*. Practitioners do not understand the real opportunities for improvement.
(2) *Irrelevant Subjects*. There are no prospects for generating knowledge in the particular problem setting.
(3) *No Client.* No problem setting can be found that matches the theoretical frames of the action researcher.

2.2   The Determination of Authorities for Action Research Projects

The second aspect of power – the determination of authority for action research projects – is more complex. Once the project has been started the mechanisms by which authority is defined are very important. These mechanisms include the determination of action warrants, power over the structure of the project, and processes for renegotiation and /or cancellation.

Action warrants define the authority under which action may be taken. Rarely will an organization cede ultimate authority for organizational action to an external researcher. This guarded commitment is reasonable since the researcher's motives are divided between research goals and organizational problem-solving goals (Rapoport, 1970). In some cases, the entire action research team, composed of both researchers from a university or other research team (whom we have termed researchers) and internal organizational professionals (whom we have termed practitioners) is consultative, advising decision-makers on recommended actions and possible outcomes. In other cases, a team consisting of researchers and practitioners may be granted final authority for determining organizational action. The form of such a warrant is rarely created by a direct fiat, but rather by appointing internal team members who already possess such authority for action.

The source of the warrants reveals a great deal about the project setting. A warrant established by the CEO in a large enterprise differs qualitatively from one established by an office manager in a small, remote field office of the same enterprise. The decision-maker issuing these warrants defines the actual scope of the project. Importantly, the organizational power held by that decision-maker also defines the potential scope of the project.

The nature of the action warrants has implications for the project. A team which is consultative rather than led by individual decision-makers has more potential for domination by researchers, since ultimate decisions for action are pushed outside of the group, and the practitioners can more easily defer to the researchers, particularly for high-risk action advice. A team with authority-bearing practitioners has more potential for domination by these powerful practitioners, since they will be personally held responsible for the

results of the team-determined action. Issues of risk may loom larger in such cases depending on the degree of risk-adversity that characterizes the powerful practitioners. Such a group may be more likely to make changes iteratively, since a series of small organizational experiments will be less risky in most situations than bold, sweeping organizational changes.

2.3 The Degree of Formalization in Action Research Projects

The third aspect of power in an action research project involves the ability to renegotiate action research structures. Formal or informal mechanisms may permit changes in the research team membership and warrants (perhaps thereby redefining the project scope). This renegotiation is likely to be quite informal, representing an evolution of the project as the outcomes from organizational actions emerge. The evolution may change a consultative team into an authority-bearing team, a linear action process into an iterative action process or vice versa. Indeed, the project may be re-initialized, shifting from a researcher-driven mode to a practitioner-driven mode, as the practitioners discover implications of a previously unnoticed problem.

Most action research projects begin with a fairly concrete conceptualization of the determination of their conclusion: a goal-state in which an immediate organizational problem or set of problems have been alleviated. This pre-conceptualization is particularly evident in practitioner-initiated projects. This conceptualization may evolve as a result of changes in the warrants (the scope), but the concluding goal state, whether achieved or not, can often be characterized, at least through later reflection, from the very beginning.

It is sometimes less clear, and an interesting indication of the project setting, how a project may be cancelled. A cancellation midstream by the host organization might be a disaster for the researcher, for example, if part of a PhD program, particularly if the work is a key element of a larger research program or the researcher has invested considerably in developing the theoretical foundations after the problem was discovered (Braa and Vidgen, 1999, look into the suitability of action research as a PhD project). Similarly, a cancellation midstream by the researchers may leave the host organization in a worse condition, relevant to the immediate practical problem, than their original position at the outset of the project. Valuable time and effort may have been wasted while a serious practical problem remains unsolved.

Particularly relevant in such cases will be the degree of formalization, typically defined in written agreements, such as a contract or letter of

agreement. If the AR project goes well, there may seem to be no need for such agreements. However, if a project is cancelled, or in danger of being cancelled, then the lack of a formal written agreement might be a cause of problems and disputes (though a formal agreement itself does not preclude the latter). A contract might also specify such aspects of researcher engagement and team composition (and formalities regarding publication, a major concern to researchers). Some potential alternatives for the formalization of action research projects will also be discussed further in the next section.

3.   SEVEN ACTION RESEARCH PROJECTS: THE STRUCTURE OF POWER

We now look at seven action research projects in order to assess their power structures according to the three aspects discussed in section 2: initiation, authority, and formalization. These seven examples were invited for discussion at the 1998 North American Information Systems Action Research Workshop in Atlanta, Georgia, USA. These were selected because of the opportunity afforded in the workshop to discuss the power structures of a variety of information systems action research projects with the researchers who conducted the studies. Of course, not all of the examples fell neatly and tidily into each of these categories, power in real-world research is both complex and subtle, but Table 2-2 emerged from the workshop discussions of the seven examples as being a fairly accurate description of what happened in practice.

Table 2-2. Power aspects of seven IS action research projects

Example	**Initiation**	**Authority**	**Formalization**
Semantic Database Prototypes (Baskerville, 1993)	Client	Client	Formal
Reorganization of the IS of the NCF (Simon, 1998)	Client	Client	Formal
Coping with Systems Risk (Straub and Welke, 1998)	Researcher	Client	Informal
An Action Research Study of Asynchronous Groupware Support (Kock and McQueen, 1998)	Researcher	Staged	Informal

Example	Initiation	Authority	Formalization
Building a Virtual Network (Lau and Hayward, 1998)	Collaborative	Client	Formal
Revealing Complexity in ISD (Chiasson and Dexter, 1998)	Collaborative	Identity	Evolved
IT Requirements to Augment Organizational Sensemaking (Nosek, 1998)	Collaborative	Identity	Informal

3.1   Initiation

Initiation refers to the genesis of the action research project. Did the problem discover the research or vice-versa? There are three forms of initiation found in the seven examples: client initiation, researcher initiation, and collaborative initiation.

Client initiation represents the classic genesis of action research, in which a host organization with a serious immediate problem seeks help from a knowledgeable researcher. While this form of initiation has been characterized as typical, or even characteristic in action research (Schein, 1987), only two of the seven examples seem to fit this type. Baskerville's (1993) study of *Semantic Database Prototypes* involved a search by an organization for an alternative design approach following the failure of two previous projects. Simon's (1998) study on *Reorganization of the Information Systems of the US Naval Construction Forces* involved an invitation to the researcher by the organization. In both these settings, the researcher neither selected the research site nor the research question: the researcher's interest was called upon by the problem organizations. Rather than the researcher defining the research setting, the problem discovered the researcher.

Researcher initiation represents an alternative approach for action research, in which the researcher begins by searching for a host organization as a site for an action research project. This form of action research initiation leads to a project bearing some similarity to a field experiment. While supposedly less common, two of our examples appear to fit this characteristic. The action project underlying Straub and Welke's (1998) study on *Coping with Systems Risk* began as a non-intervention case study with an established theory. The opportunity for intervention arose after the engagement had begun. In Kock and McQueen's (1999) study *An Action*

Research Study of Asynchronous Groupware Support, the researcher sought two host organizations, whose primary concern was business process redesign, which were willing to experiment with groupware as a means to achieve the redesign.

Collaborative initiation represents a setting in which the action research evolved from the interaction between researchers and client. In Nosek's (1998) study *IT Requirements to Augment Organizational Sensemaking*, executives in a special MBA program led by the researcher chose to participate actively by intervening in their own organizations. Similarly, in Lau and Hayward's (1998) study, *Building a Virtual Network*, the research evolved from the interventions of regional health representatives following a seven-week training course that positioned information technology in the restructuring of community health services. In Chiasson and Dexter's (1998) study, *Revealing Complexity in ISD*, the researcher was developing software and infrastructure in two heart clinics, and used this venue as an opportunity to engage the host organization in an 'offshoot' action research project. In these projects, researchers and host organization representatives were originally engaged in one activity, and although not unrelated to the ultimate action research project, both the problem and the research seemed to be interactively discovered by both the client and the host.

3.2   Authority

Authority refers to the issue of 'who is really in charge of the research project'. Elements of this authority include action warrants, processes for renegotiation of the structure of the project, and authority for cancellation discussed in section 2. While action research reports may not explicitly describe the division of power among the stakeholders, it can sometimes be inferred from the way that the research project evolved. As in the initiation characteristic, there are three notable authority patterns in action research projects. However, these are not parallel with the initiation characteristics. These patterns are client domination, staged domination, and identity domination.

In a client dominated action research project, the research team itself does not hold an action warrant. Rather the team recommends and justifies action to organizational managers outside of the team. Once approved, the team may thereafter be intervening, that is, executing the approved action and monitoring the outcomes. This form of authority seems to be quite common in action research practice, despite the preoccupation with collaboration espoused in the general social science action research literature (Whyte, 1991). Three of the examples are characterized by client domination. In Baskerville's (1993) study, the action research team was

composed of analysts and programmers without any warrants for action or authority to renegotiate the project structures established between a government department and a consortium of universities. An interagency agreement nested cancellation authority strictly with the client. In Simon's (1998) study, the research team did include three powerful managers (chiefs of staff), however it is explicitly noted that the team's proposals of action must be sanctioned by more senior commanders outside of the team. In Lau and Hayward's (1998) project, the role of the researcher involved suggesting technologies, but the final decisions regarding their use were always left with the organizers, participants, coordinators and support staff.

In Straub and Welke's (1998) study, the power domination profile is much more subtle. The intervention involved inserting concepts and principles of theory-grounded models of security planning into a professional training program and systematically evaluating the outcome. While it is conceivable that this intervention might have been made without notice from upper management in the organization, the researcher continuously met with these senior managers and conceded authority over the intervention to their approval.

Staged domination involves a migration of power domination among the action research stakeholders. For example, a project that begins rather informally regarding a problem that the practitioner organization does not feel is serious, might initially be dominated by the researcher. As the collaborative team develops organizational awareness of the gravity of the problem, the field of action may broaden. The power domination may migrate from the researcher into a form of collaborative power-sharing. A further, wider-scope stage may even migrate power from the collaborative form to a final practitioner-dominated form. This stage pattern may be found in action research projects that grow in scope and field of action. An example of staged domination is found in Kock and McQueen's (1998) study, in which the researcher intervened initially to insert the use of a particular group process methodology into the organizational processes. Further interventions became more collaborative, as the members of the original group dispersed back to their parent organizations and the long-range effects of the original intervention rippled through five organizations.

Identity domination means that the researchers and the practicing organization professionals were the same person (or persons). In other words, one or more of the researchers were internal members of the practitioner organization, and already possessed the action warrant authority necessary to make the interventions. Typically, these persons would also have the authority to renegotiate the scope or cancel the action research project. Two example studies are characterized by identity power domination patterns. In Nosek's (1998) study, executives involved in an

executive MBA program became the action investigators. These people were either already participating in making the decisions within the field of action scope, or were able to become involved in these decisions. Four researchers joined together in Chiasson and Dexter's (1998) study to undertake the multi-purpose SoftHeart project. The purposes of this project were varied, with each researcher operating with shared and individual goals that were nevertheless kept explicit.

3.3   Formalization

Formal power structures are typically defined in written agreements, such as a contract or letter of agreement. These agreements may describe the immediate problem situation and the scope of the research. These may also prescribe the mechanisms of researcher entry into the organization (engagement), the collaborative team composition, the warrants for action, mechanisms for renegotiating the agreement, and termination of the project through either cancellation or disengagement (Susman and Evered, 1978). These agreements may also deal with research sponsorship or compensation for the researcher.

Informal power structures are found when no written agreements exist. In some cases, the project may begin with little consensus or understanding by the parties involved over essential aspects of the research. The exact nature of the problem situation may be indeterminate; the scope of the problem may be unseen, and the remaining action research project details equally unpredictable. In such settings, the researcher's first task may be to discover the nature and scope of the problem, and thereby determine the power structures. Here, any formal power structures must emerge after the research commences. The question of formal structures may never be raised, and some action research projects may complete having engaged the researchers and practitioner organizations informally throughout.

A 'pure' formal or informal set of action research power structures may be rare in practice. Depending on the nature of the researcher, the practitioner organization, resource provisions, and the problem setting, some projects may commence with more formal structures than others. There may be some transition as the project emerges, and this transition will not always move from informal to formal power structures. A project that begins with more formal power structures is not likely to become less formal as the project develops. However, informal power structures may evolve into other forms of informal power structures as an action research project emerges. Another possible variation occurs where a written contract is agreed and signed on the basis of 'don't worry about this – it is just a formality', but which might be enforced brutally later if one party is dissatisfied with the

outcome. In the past, researchers and research institutions have been particularly prone to suffer from a partner organization's legal department.

Action research power structures can be classified as formal, informal and evolved. Formal power structures are well-defined in written agreements at the project outset. Informal power structures will begin and complete with, at most, only broad and general written agreements. Evolved projects require changes in the power structures as the research scope develops progressively, but not necessarily from informal to formal structures.

The nature of the researcher or research organization is one of the factors that may influence the power structures. If the research is organized through a large or formal research organization, this organization may have policies or common practices that involve formal agreements (often standardized) with research hosts. The researcher's status as an authority in the particular problem setting may affect the demands for initial resource provision, which in turn may require the practitioner to initially increase the formality of the research power structures.

Another factor is the nature of the practitioner organization. Organizational size will affect the formality of allocating resources and policies. Organizations will vary in their policies about involving external expertise, and the organizational element negotiating the action research power structures may have more or less latitude for involving external expertise. The visibility of the problem and the consequent research results to other parts of the organization (or outside the organization) may increase the organization's need for formal research agreements.

The need for resource provision is another factor. The material support for the research must be divided between the practitioner and the researcher organizations or housed entirely in one or the other. Action research often requires a substantial involvement of practitioner organizational staff as well as researchers. Support and clerical staff will also become involved. Where the practitioner organization adopts a philosophy of cost-accounting, the dedication of these resources to the action research project may require formal power structures. The practitioner organization may also provide compensation directly to the researcher in the form of consulting fees, or to the researcher's organization for consulting, research support, or for a secondment package. This may be seen to be the practitioner organization 'buying' power at the expense of that of the researcher and some researchers doing action research refuse to be paid by the practitioner organization for this reason.

The perceived seriousness of the problem may also be a factor affecting the need for more formal power structures. If organizational survival is at stake, the practitioner may seek strong guarantees that the researcher is committed to developing a 'solution'. Likewise, if the researcher or the

research institution is struggling, this pressure could lead the researcher to seek increased formality in the power structures.

There are two further factors related to the seriousness of the problem. One is the scope of the perceived problem. A broad scope reaching across the entire organization may be considered more difficult than a narrow scope. The problem history is also a factor. An intractable problem that has endured repeated, expensive attempts at solution may incline the practitioner to seek stronger commitments from the researchers.

These factors may evolve as the action research project develops. A project that was initiated with informal power structures may progressively discover more and more underlying problems with broader scope demanding increasing resources. The formality of the power structures may evolve in concert with these developments.

Two of the examples involved relatively informal power structures throughout the action research project. Executives involved in an executive MBA class became voluntarily involved in the action research interventions and analysis in Nosek's (1998) study. Although there were some formal power structures involved in the MBA course, these were tangential to the research. The action research was conducted without any need for resources, or even a substantial commitment of the participants beyond that normally required for their professional and academic activities. There were no formal agreements between the practitioner organizations and the researcher. In Kock and McQueen's (1998) project, the action research was implemented in the context of an organizational process redesign training program that would have progressed to its practical outcome with or without the overlaying action research infrastructure. Although there were formal power structures regarding the process redesign training, no such structures were agreed between the practitioner organizations and the researcher.

Three of the examples involved relatively formal structures. Baskerville's (1993) study involved an inter-agency agreement between government agencies and a university consortium. Formal letters established the project infrastructure detailing tasks and resource commitments from the researcher and practitioner organizations. The immediate problem was highly visible, somewhat serious, and 'consumed' with history. Similarly, the research power infrastructures underlying Lau and Hayward's (1998) study were established with the sponsorship of a partnership of eighteen health authorities. The action research was a component of a pilot project involving resources from three universities and a funding agency. The action research project underlying Simon's study did not involve a separate research organization, or a written agreement with the researcher (who was a member of the organization). The action research power structures were nevertheless established internally in the practitioner organization with formal power

structures (for example, the command staff board). The need for this formal power structure is closely related to the visibility and seriousness of the problem (mission critical system infrastructure).

Changes in the power structures do not always imply an evolution in formalization. Two of the examples exhibit evolutionary power structures, moving among power structures as the project developed. Only one of these evolved in its formalization. The SoftHeart software project underlying Chiasson and Dexter's (1998) study began as an informal collaboration between four researchers, but evolved as the scope of the stakeholder community broadened into the clinic. Problems and communication breakdowns with the clinic increased the need for more formal structures. The power structures in the project underlying Straub and Welke's study (1998) also evolved, with the project progressing in an organic way. Some formality is indicated, for example, the use of non-disclosure agreements. But the relationship with the practitioner organization afforded the latitude for a case study design to emerge into an action research design. While these power structures may have remained more-or-less informal throughout the evolution, structures for controlling an action research project must be quite different from a case study. For example, in a case study the determination of action warrants and authority for cancellation are not typical structures.

4. DISCUSSION

We have suggested that the rigor of action research projects in information systems can be improved if more attention is given to the issue of power. Table 2-3 details the forms and characteristics of the three aspects of power structures discussed above: initiation, authority and formalization. Table 2-4 details the forms and characteristics of the various authority mechanisms discussed above that were implied by the examples. These mechanisms include the determination of action warrants, power over the structure of the project, processes for renegotiation and authority for cancellation. Table 2-5 summarizes the various influence factors that were important in understanding the determination of formalization for action research projects.

The description of the action research power structures indicates how these power structures are interactive to a limited degree. For example, we associated factors like a high visibility problem that involves practitioner organizational survival with power structures like formalization, practitioner initiation and practitioner domination. This interaction implies that the elements in the power groups (Table 2-3) are deterministically associated with the mechanisms and influence factors. This determination is certainly

not absolute, but may be considered implicit. We can detail these implications by mapping the influence factors and mechanisms onto the common forms within the power groups. Table 2-6 embodies this mapping.

4.1   Recommendations

The action research power structures make it clear that determining the control of an action research project is beyond the independent power of both the practitioner organization and the researcher. Project control is shared, collaboratively determined and emergent. The researcher is obliged to stay within the realm of applied theory, those theoretical aspects that are relevant to real problems of today's managers. The practitioner within the organization is also obliged to stay within the realm of applied theory, taking those actions that can be reasoned from what is broadly known within the field of information technology.

An explicit discussion of power structures is rarely found in action research reports and yet it is clearly of great importance. In some cases these power structures can be detected as implications of the descriptions of the research project setting. Although ambiguity can often be a helpful 'social glue' and some blurring of power structures may be positive in an action research project, there needs to be some, perhaps brief, explicit reference to power structures in action research reports to help us interpret and validate the study. There may be some cases, for example, where shifts in the power structure of the action research project needs to be reported in order to maintain the validity of the study as findings shift across method variants. Straub and Welke (1998) provide a good example of this as the authors describe how the elements of action research evolved from a case study.

Despite the importance of the power structures for a collaborative activity like an action research project, these structures are sometimes emergent, either highly undefined at the beginning of a project or highly adapted in the later stages of the project. As the examples illustrate, highly defined, formal power structures are not necessary in action research projects. Indeed, they are probably impractical in many action research situations. However, there are some common associations between various influence factors, control mechanisms and forms of action research power.

Our recommendations do not deal so much with exactly how action research power structures ought to be determined for certain research settings, rather, we recommend that researchers and their action research practitioner professionals actively and collaboratively determine these power structures in the early stages of the project. Even if this determination only yields informal structures (for example, an undefined cancellation authority), it is important that these determinations be consciously discussed and

preferably decided during the course of the research, rather than ignored. The reason that this is important is based on the possible evolution of the power structures. If these structures are not recognized at the outset, their gradual development may go unnoticed by either the practitioner or the researcher. These changes may signify oncoming important scope shifts, critically important information for both practitioner and researcher, but perhaps more critical to practitioners. These changes may also signify shifts of power between practitioner and researcher. Such power shifts may suggest concerted changes in related power structures.

In order to manage the action research project, power is required. Power depends on an understanding of the project power structures. Action research is collaborative. Without an explicit understanding of the current and past project power structures, either the researcher or the practitioner (or both) can unknowingly lose power and thereby mismanage the project. This reduces the potential of action research as a way to improve a problem situation in organizations and also as a way of increasing our stock of knowledge about information systems.

Table 2-3. Forms and characteristics of the major action research power structures

Power Aspect	Forms	Characteristics
Initiation	Researcher	Field experiment
	Practitioner	Classic action research genesis
	Collaborative	Evolves from existing interaction
Authority	Practitioner	Consultative action warrant
	Staged	Migration of power
	Identity	Practitioner and researcher are the same person
Formalization	Formal	Specific written contract or letter of agreement
	Informal	Broad, perhaps verbal agreements
	Evolved	Informal or formal projects shift into the opposite form

Table 2-4. Forms and characteristics of authority in action research projects

Authority Mechanisms	Forms	Characteristics	Ideal Researcher Power Sources
Action warrants determination	Consultative	Practitioner organization leadership retaining power	Institutional Authority Influence
	Authority-bearing team members	Practitioner organization projecting power into research team	Institutional Authority Influence
	Vested by fiat	Research team assumes responsibility	Institutional Authority Formal Authority Resource Rights Influence Politics
Power over the structure of the project	Researcher dominated	Consultative, low risk, low profile problems	Institutional Authority Formal Authority Resource Rights Influence Politics
	Practitioner dominated	Authority-bearing team membership, high risk	Institutional Authority Influence
Renegotiation processes	Team membership, problem definition	Changing scope of problem	Institutional Authority Influence
	Re-initiate project	Discovery of essentially different underlying problem, scope shifts from researcher-dominated to practitioner-dominated	Institutional Authority Influence
Cancellation authority	Researcher	The practitioner characterizes the problem as minor	Institutional Authority
	Practitioner	Limit practitioner commitment to the research	Institutional Authority Formal Authority Resource Rights Influence Politics
	Undefined	Most common	Institutional Authority Formal Authority Resource Rights Influence Politics

Table 2-5. Action research power structure influence factors

Factor	Forms	Characteristics	Ideal Researcher Power Sources
Nature of the researcher	Formal research organization	Policies may require formal power structures and researcher domination	Institutional Authority Formal Authority
	Researcher status as an authority	Limited availability, may require more resources and researcher domination	Institutional Authority Influence
Nature of the practitioner organization	Organization size	Large organizations often have more formal policies	Formal Authority
	Policies about involving external expertise	Affects latitude to engage researchers informally and limits researcher domination	Institutional Authority
	Visibility of the problem	High visibility increases need for formalization and practitioner domination	Institutional Authority
Need for resource provisions	Substantial involvement of practitioner organizational staff	Formalization affected by tight cost accounting philosophy	Formal Authority
	Compensation to researcher or research organization	Formalization for payment of grants, fees, honorariums, *etc.*	Institutional Authority Formal Authority
Perceived seriousness of the problem	Organizational survival	Great practitioner commitment may increase formalization and practitioner domination	Institutional Authority Formal Authority
	Scope	Broader scope may increase formalization and practitioner domination	Institutional Authority Formal Authority
	Problem history	Intractable, enduring problems may lead to more formalization and practitioner domination.	Institutional Authority Formal Authority

Table 2-6. Associations between action research power structures and research setting factors.

Mechanisms and influence classes	Factor	Forms	Initiation			Domination			Formalization		
			Researcher	Practitioner	Collaborative	Practitioner	Staged	Identity	Formal	Informal	Evolved
Authority mechanisms	Action warrants determination	Consultative	⇔			⇔	⇔		⇔	⇔	
		Authority-bearing team members		⇔		⇔			⇔		
		Vested by fiat		⇔		⇔			⇔		
	Power over the structure of the project	Researcher dominated	⇔				⇔				
		Practitioner dominated		⇔		⇔					⇔
	Renegotiation processes	Team membership, problem definition			⇔						⇔
		Re-initiate project			⇔						⇔
	Cancellation authority	Researcher	⇔				⇔				
		Practitioner		⇔		⇔			⇔	⇔	
		Undefined				⇔				⇔	
Factors influencing power structures	Nature of the researcher	Formal research organisation		⇔					⇔		
		Researcher status as an authority		⇔			⇔		⇔		
	Nature of the practitioner organisation	Large organisation size							⇔		
		Policies about involving external expertise							⇔		
		Visibility of the problem (Lo, Hi)	Lo	Hi		Hi	Lo		Hi	Lo	
	Need for resource provisions	Substantial involvement of practitioner organisational staff		⇔		⇔			⇔		
		Compensation to researcher or research organisation		⇔					⇔		
	Perceived seriousness of the problem	Organisational survival		⇔		⇔			⇔		
		Scope (N-Narrow, W-Wide)	N	W		W			W	N	
		Long problem history		⇔		⇔			⇔		

5.   CONCLUSION

Action research is a qualitative research method that emphasizes collaboration between researchers and practitioners. The action researcher is directly involved in planned organizational change along with the practitioners. A mutually ethical framework is usually assumed or deemed essential for the success of an action research project, yet researchers and practitioners are likely to come from different cultures, may have different values, and different objectives. Tension and consequent power struggles are therefore not unknown in action research. They may come to the surface within the researcher-practitioner team and/or with the host organization and/or academic institution. It is this tension and the way the balance of power can be resolved in an action research project that we have emphasized in this chapter. We suggest general guidelines for discussing, diagnosing and resolving problems of power in action research projects in IS.

Following Jasperson et al. (2002), we discuss power in terms of a number of themes: authority; centralization, decision rights, participation in decision making; influence; and politics. We look at how the four main sources of power: authority; resource rights; influence; and politics inhabit these four themes in an action research project. There are three key aspects of the action research situation that help to determine what the basic nature of these power structures will be. The first aspect concerns the initiation of the action research project, the second concerns the determination of authority for action in the research project, and the third aspect concerns the degree of formalization of the project. A discussion of these shows us how different AR projects can be from each other. Initiation can come from the researcher or from practice and be research driven or problem driven. Authority can come from within the team (researcher or collaborator) or from outside (from the organizational hierarchy or academic funding body), and this list is not exclusive. The degree of formalization can be high with strongly-worded contracts or much weaker and dependent on trust and goodwill and can change during the life of a project.

Given this variance – all action research projects are different – it is not feasible to provide hard and fast rules on how to achieve a balance of power for all situations. However, we have discussed seven action research projects to show how some of the issues were resolved in a number of contexts. In some successful projects control is shared, collaboratively determined and emergent; the allocation of power is informal, indeed 'blurred', and may become clearer by mutual consent as the project develops. This may suggest avoiding discussion of power issues in the early stages of a project. We do not share this view. We argue that it is indeed important to discuss these issues early but this does not imply determining formalized (written and/or authoritarian) agreements. On the contrary, such discussions should lead to

understandings about these important issues and become a basis for the collaboration. Tables 2-3, 2-4 and 2-5 (which detail the forms and characteristics of the major action research power structures; the forms and characteristics of authority in action research projects; and action research power structure influence factors respectively) can, we hope, help to inform and drive these discussions. However, this does require that the mutual trust that can be established from these discussions is well founded. We therefore end by re-emphasizing the final phrase of Rapaport's (1970) definition of action research viz. that it can only be successful if the joint collaboration occurs *within a mutually acceptable ethical framework.*

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6.   REFERENCES

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