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TOPIC NEGOTIATION IN INFORMATION SYSTEMS ACTION RESEARCH

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Abstract

This paper discusses the gradual negotiation process involved in the resolution of the initiative dilemma of IS action research. This dilemma occurs when the researcher faces the decision to either take the initiative to define an opportunity for generating knowledge, and then try to find possible client organisations, or to leave this initiative to client organisations and tackle problems proposed by them. The first option may lead to the definition of a research project that does not meet the interests of client organisations, while the second may lead to a research topic beyond the researcher's area of interest or area of expertise. The dilemma is resolved through a process of negotiation. The paper proposes two models to explain this negotiation process and to resolve this dilemma: a model of the overall negotiation process, and a model of the cyclical information exchange that supports this process. These models are supported by analysis of an on-going action research study of the effects of groupware technology on business process improvement groups in organisations. The paper highlights that the researcher and target organisation may initially hold different and potentially conflicting views, but that through an effective negotiation process these can change over time, and eventually converge into an agreed research project.

TOPIC NEGOTIATION IN INFORMATION SYSTEMS ACTION RESEARCH

INTRODUCTION

The joint endeavour of action research (AR) - putting together a researcher and client organisation - leads to a dilemma originating from the different and sometimes conflicting interests and perspectives held by these two parties. While the researcher is interested in solving a problem to add to the body of scientific knowledge, an organisation's management team wants to solve a problem in order to enhance the organisation's business performance. The researcher is thus forced to choose between either defining beforehand a problem to be solved and then searching for client organisations which may be facing that problem, or tackling problems that are known to be faced by one or more organisations (Rapoport, 1970).

The resolution of the initiative dilemma, which occurs through a gradual negotiation process, may lead to problems. For example, the service-oriented characteristic of AR fosters the initiative being placed on the client organisation. The service orientation then requires the researcher to solve a problem which is of relevance to the organisation. However, the problem presented by the organisation may not be scientifically relevant or even a "real" problem. Instead, it may be a symptom of a more serious situation.

This paper begins with a brief introduction to AR[1] and the negotiation process involved in the definition of research topics. This results in a first-cut model of the negotiation process. This is followed by an analysis of the early stages of an information systems (IS) action research study. This case study is used to validate and extend the applicability of the model, and to generate greater understanding of the negotiation process and the cyclical information exchanges that support it.

Action Research and Negotiation

Action research has been considered a distinctive form of research since the 1940s. Kurt Lewin is generally regarded as one of its pioneers, applying AR to deal with social problems (Argyris, Putnam and Smith, 1985; Checkland, 1981; Lewin, 1946; Peters and Robinson, 1984) along with those at the Tavistock Institute of Human Relations in London, who used AR as a ground-breaking method to deal with psychological disorders arising from prison camps and war battlefields (Fox, 1990; Rapoport, 1970).

While the definitions of AR are numerous, they all agree on one point: AR involves research intervention in real life contexts in order to both improve those contexts and, at the same time, generate relevant scientific knowledge (Jonsonn, 1991; Peters and Robinson, 1984). That intervention may target core business improvements, such as overall competitiveness, or more limited improvements, such as building or expanding the existing learning skills of the organisation. (Elden and Chisholm, 1993; Whyte, Greenwood and Lazes, 1991). This improvement-oriented characteristic of AR is based on the belief that the researcher's positive intervention fosters involvement, co-operation and information exchange with organisation members, which in turn leads the researcher to a deeper understanding of the context being observed (Fox, 1990; Gustavsen, 1993).

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[1]A more thorough discussion of action research can be found in (Kock, McQueen and Scott, 1995) and (Kock, McQueen and Fernandes, 1995).

Publication of IS action research studies in organisations has been very modest, due to both the small number of published examples of AR itself (Ledford and Mohrman, 1993a) and the dominant role positivism plays in IS research (Orlikowski and Baroudi, 1991). One of the causes for this is the alleged emphasis on action rather than research. This means that AR is often seen more as a consulting process targeted to solving problems presented by organisations rather than a bona fide research methodology. To avoid this, it is necessary to define the research topic through a process of negotiation with organisational representatives. The outcome of a well-negotiated process will be an intervention which profits the organisation, but more importantly for the research community, brings about an advance in relevant and scientific knowledge. Poor negotiation is likely to lead to the definition of a scientifically irrelevant research topic. An understanding of the negotiation process is thus an essential skill for the IS action researcher.

Despite the importance of the negotiation process, it appears that this phase tends to be glossed over in AR texts. One of the reasons for this is the fact that in fields where AR has been traditionally applied (such as clinical psychology and teaching) ethics often preclude actively seeking out research clients.

In contrast, IS action research often involves the analysis of organisational changes that require strong support from management to succeed. Unlike clinical patients and students, managers must be thoroughly convinced that the research programme is likely to improve their organisation. Moreover, benefits must be couched in their own terms - that is, by means of competitiveness measurements and forecasts, analysis of expected return on investment, and so on. This makes the topic negotiation process, in IS action research, particularly challenging.

While the negotiation literature provides strategies to achieve the ideal mutually satisfying outcome brought about by a collaborative approach (for example, Finkel & Kaminsky 1991; Thompson, 1991; Nielsen, 1989), it is very rare that the literature deals specifically with the process of AR. The model described in the next section attempts to fill this gap by providing a process approach to the dilemma of meeting both the researcher's and client organisation's needs.

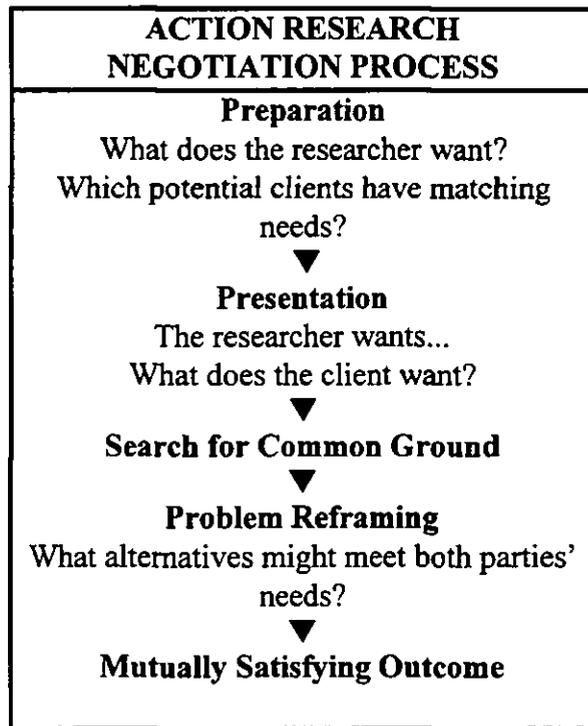**A Model of Successful Negotiation Processes**

The negotiation literature emphasises that successful negotiation normally requires that mutually satisfying outcomes are achieved. Outcomes where one party benefits at the expense of the other are likely to generate future discontent, while compromise, where usually neither party's needs are fully met, is also likely to be problematic. The literature suggests that successful negotiation follows a process that involves the following key elements:

- clearly determining your own needs and desires, constraints and resources;

- establishing these for the other party, firstly through background research, then through supportively encouraging the other party to express its needs;

- searching for areas of common ground;

- reinterpreting needs, desires, constraints and resources or, alternatively, reframing the problem in creative ways to meet the needs of both parties;

- selecting an outcome that leaves both parties satisfied.

Figure 1 provides a model of the negotiation process that has been tailored to the needs of AR, and that incorporates an approach to several potential clients. This step may be needed because in

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negotiating AR, it is likely that the needs of some potential client organisations will be so different from the needs of the researcher that there is, in fact, little common ground. In such circumstances it may necessary to seek out alternative clients whose needs are more closely aligned with the researcher's. It is based on several negotiation process models taken from the management literature, including Bolster (1984), Batros (1985), Fisher and Ury (1986) and Randolph and Posner (1992).

The negotiation model for AR avoids the situation where conflict is either avoided at all costs, or an immovable position taken. Instead, it has more in common with a third strategy known as 'principled negotiation' (Kaye, 1992). This is characterised by parties working collaboratively on a situation (for example, the researcher helping management determine the underlying cause of a problem); focusing on interests rather than 'right or wrong' (for example, focusing on the needs of the researcher and the needs of the organisation, rather than who has the most 'right' in a given situation, or whose needs take priority); considering options for mutual gain (for example, the researcher adjusting the research question to make it more relevant to the organisation; and the organisation making resources available to the researcher); and agreeing on critical requirements (for example, the organisation may only consider proposals

ACTION RESEARCH NEGOTIATION PROCESS
Preparation
What does the researcher want?
Which potential clients have matching needs?
▼
Presentation
The researcher wants...
What does the client want?
▼
Search for Common Ground
▼
Problem Reframing
What alternatives might meet both parties' needs?
▼
Mutually Satisfying Outcome

Figure 1: Negotiation Process for Action Research

where the research will be confined to one section of the organisation; while the researcher may require the organisation to free a number of staff from regular duties for a certain number of hours per week).

The model also meets the three criteria for effective negotiation proposed by Fisher and Ury (1986). Firstly, the model can lead to an agreement which meets the legitimate interests of both parties. Secondly, the process is efficient. It does not involve any party making 'ambit claims' in order that concessions can be granted later. Finally, the model encourages the parties to focus on issues and requirements, rather than people.

Case: Groupware Effects on Process Improvement Groups

To see how the negotiation model might work in organisational settings, this section describes the initiation of an IS action research study. It describes the stages the negotiation went through, and concludes with a description of the current status of the research project. The focus of the study was the effects of groupware technology on business process improvement groups.

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Defining an Opportunity for Generating Knowledge (Preparation)

This research originated in work done in 1993 in tandem with several quality management implementations. These implementations were based on a methodology, known as the Quality and Productivity Improvement Programme (PMQP, in Portuguese), which comprised a group process approach for quality improvement groups (Kock and Tomelin, 1993).

As the project advanced, it became apparent that it had the potential to offer considerable learning beyond meeting the needs of the organisation. Preliminary implementations of groupware systems seemed to improve the efficiency of quality improvement groups, suggesting an opportunity to learn more about how the use of groupware systems would affect quality improvement groups. A literature review of empirical research on groupware led to the refinement of the research topic. Initially the researcher (one of the authors of this paper) proposed to study the effect of group decision support systems (GDSS) on an instance of permanent quality improvement groups - quality circles.

Listening to Organisation's Expectations (Presentation, Search for Common Ground, Problem Reframing)

Interviews with management in a number of the organisations revealed that the proposed research project was at odds with the management's perception of the organisations' opportunities for improvement. This was due to a number of reasons. Most of the organisations were not willing to set up their own GDSS because of the relatively high costs. These included costs involved in setting up a GDSS room with dedicated workstations and software, as well as the significant costs of assigning and training a meeting facilitator. Additionally, most organisations were very sceptical of the bottom-line results of the implementation of quality circles which were seen as a concept imported from Japan and unlikely to be accepted by employees in western organisations. This scepticism was sharpened by the emergence of the business process re-engineering (BPR) movement, whose radical approach (Hammer and Champy, 1993) was seen as a potentially more appropriate alternative in the western business environment than the Japanese quality-oriented approach.

At this point it became necessary to review the opportunity for generating knowledge in order to match the expectations and needs of prospective client organisations. This review led to the re-definition of both the class of groupware to be used in the research and the types of groups involved. The study focus moved from the effect of GDSS on permanent quality improvement groups to the effect of asynchronous groupware on business process improvement groups.

Reviewing Literature and Assessing Research Risks (Preparation, Problem Reframing)

The move towards asynchronous groupware was also influenced by a further literature review which focused on business applications of groupware. This review suggested that asynchronous groupware instances (for example, e-mail, conferencing and work flow control systems) have consistently been more commercially successful than GDSS and other types of synchronous groupware. This suggested there would be greater opportunities for finding innovative applications of asynchronous groupware.

The shift in focus was also influenced by a review of the BPR literature and an analysis of its practice in several organisations, which led to the conviction that it consisted in an evolution grounded on several emerging managerial practices (Kock, 1994). However, interviews with

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prospective client organisations and further literature review suggested that BPR projects needed a strong commitment from top management, including the CEO, and involved radical changes in core processes and high risks (Hall, Rosenthal and Wade, 1993). It was felt that an outsider, unless brought in by top management, would have problems gaining the co-operation necessary for such change. A BPR project would require considerable trust in the change agent's ability to conduct large-scale organisational change, which was unlikely to be achieved in a short-term basis. As this was clearly not an option, it was decided to change the scope and nature of the research project. Consequently, the decision was made to study asynchronous groupware effects on business process improvement (BPI) groups, where organisational changes would not necessarily have to be radical and, consequently, the risk faced by the client organisation would be considerably lower.

At this point a considerable body of knowledge about the research topic and the possible needs and expectations of prospective client organisations had been acquired, but organisations had yet to be approached with a concrete proposal. To narrow down the selection of organisations, a profile of prospective organisations was developed.

Selecting Prospective Client Organisations (Preparation)

Information about potential organisations was obtained from three different sources: a directory of ISO 9000 certified organisations[2], a local independent consultant, and the quality manager of the School of Management Studies, University of Waikato. A shortlist of 11 organisations was eventually decided upon, from which five organisations were approached. A one-page summary of the project, named GrouProi, was faxed along with an introductory letter to the of the organisations. Within three working days after sending the fax, each organisation was contacted by phone and an attempt was made to establish an initial meeting.

Approaching Prospective Client Organisations (Presentation, Seeking Common Ground, Problem Reframing)

Two of the organisations, a local accountancy firm (ACCOUNT) and a health insurance company (HEALTH) operating on a national basis, declined participation in the research project. ACCOUNT's refusal was made on the basis that it was, in the words of the CEO, "*[...] too busy at the moment.*" and that "*The participation in the project seems to require some effort, while we believe its bottom-line impact is likely to be very limited*". The local business manager of HEALTH has referred the matter to her IT manager, who said that "*[...] we may have some interest in the future, but at the moment we are involved with the implantation of some customer support systems and have neither the time nor the resources for the installation and use of this type [asynchronous groupware] of applications*". A further analysis suggested that the researcher had over-emphasised the technical aspects of the research project when approaching those organisations.

Two of the organisations contacted, a manufacturer of plastic products (PLASTICS) and a large dairy products group (DAIRY) (a leader in its industry) showed interest in participating in the project. The proposed research topic was explained to these two organisations, possible benefits for

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[2]Provided by Telarc New Zealand, the national accreditation authority. It is a user-funded, not-for-profit statutory body. It was responsible for over 80% of all ISO 9000 accreditations in New Zealand, by the time the directory was obtained (Telarc, 1993; Minchin, 1994).

the organisations were discussed, and general questions about technical implementation issues, research needs, and previous results were answered.

The plant manager at PLASTICS manifested scepticism about the usefulness of an asynchronous groupware system as a new interaction media for BPI groups. However, he seemed interested in the work flow and information-sharing features to be found in the commercial asynchronous groupware systems. As a result of his interest, the plant manager proposed that the research project be carried out at his plant, but demanded a change in the research focus to the study of the organisational effect of work-flow control applications. The change would allow the company to benefit from the implementation of work-flow control systems to control production and inventory processes in the plant. This proposal was carefully analysed, but the offer was declined by the researcher on the grounds that most of the research work done so far would be lost.

Although the plant manager later changed his mind and expressed interest in exploring further the possibility of a project, this did not eventuate, partly because of the lack of interest of a third party, working for UNIVERSITY, whose advice had been sought by PLASTICS. The negotiations with PLASTICS and with this third party at UNIVERSITY took considerable time, and required the researcher to build a groupware prototype that was used to facilitate a business process improvement group in a small division of UNIVERSITY.

The CIO at DAIRY, seemed to be more positive than the PLASTICS' plant manager about the utility of using asynchronous groupware to support BPI group members, but seemed wary of dealing with students and researchers. He saw an application for the research project in a business re-engineering effort, which was about to begin at the corporate level. His concern was that, as the project was expected to be led by an international consulting firm, there might be some resistance to the idea of introducing an independent member into the re-engineering team. He told the researcher he would carefully analyse this issue and get back to him as soon as possible. This did not happen.

One of the organisations, a branch of the New Zealand government (GOVERN), was contacted in a different manner. Even though it was in the list of prospective organisations from the start, as it had one of its business units certified by ISO 9001, the first contact was made by chance. During an informal gathering, the researcher was introduced to the communications officer of GOVERN and, taking the opportunity, spelled out the main points of the GrouProi project. This led to a preliminary meeting with GOVERN's quality manager and IS team leader, followed by two others with the regional business manager. After this, eleven interviews with management and employees were conducted, so that a more specific version of the GrouProi project could be generated for GOVERN.

Fine Tuning the Project (Search for Common Ground)

As a result of these initiatives, the research project has currently one client organisation - GOVERN. A report was completed in May 1995 summarising interviews with the management and employees of GOVERN, and proposing a more detailed project plan. Seven copies of this project were distributed to managers at GOVERN together with a reply form with questions designed to gain feedback on the report and assess support to the project. Four managers declared that they thought the project, as it was, would improve the organisation. Three managers said that the project might improve the organisation, but indicated uncertainty. Their feedback included the suggestion to reduce the formality of the project, which led to some changes in the plan.

Present Situation (Mutually Satisfying Outcome)

To date, five business process improvement groups have been run with support of the asynchronous groupware prototype developed by the researcher. These groups followed a group process methodology called MetaProi, under the researcher's facilitation. This facilitation allowed the researcher to compose a database with participant observation notes. Other sources of data are interviews with open-ended questions, and discussion data held by the groupware prototype. Interviews have already been carried out with all members of the five completed business process improvement groups. An initial assessment of the research progress, involving GOVERN's management and peer academics, suggests a successful implementation of an IS action research project, from the point of view of both research community and client organisation.

THE CASE STUDY INTERPRETED

The General Negotiation Model

The case study described a series of sequential stages. These began with defining the opportunity for generating knowledge, and seeking the views of organisational members who could act as proxies for likely clients. This process led the researcher to re-examine the research questions, requiring further review of the literature and re-assessment of research risks. With the question reframed the researcher then selected candidate clients, and approached them to establish the negotiation process. Not all these organisations had goals that could be aligned with those of the research, but through examining opportunities within some organisations, and tailoring the AR project to the needs of one organisation, the researcher and this client were eventually able to arrive at mutually acceptable AR project.

The case study does map to the negotiation model described in Figure 1, illustrating all of the elements. However the case study demonstrates that the negotiation process is far more complex than the linear model presented, since the process is highly iterative. The case study also highlights the two different views that must ultimately be reconciled. One, held by the researcher, concerns a relevant opportunity for generating knowledge, and the other, held by candidate client organisations, concerns a relevant opportunity for improvement. The case study illustrated that these two views change, as the negotiation proceeds, until they converge on an agreed research project.

One of the key issues the case study raises is the difficulty of matching a pre-determined learning opportunity to the needs and expectations of organisations. As a result of this difficulty, the researcher is forced to reframe the problem, by either reshaping the research opportunity, or else abandoning the organisation for the time being. An analysis of the case study suggests that while the identification of a basic research hypothesis is an important early step of an IS action research study, this basic theory is likely to change considerably in the early stages of the research project. However, rather than changing because new knowledge is generated, this basic theory changes due to the fact that it may not match the organisation's view of the opportunity for improvement. In the case described, for instance, the original topic moved its focus from quality circles to business process improvement groups. This is consistent with previous AR study findings (Checkland, 1981; 1991).

The case study highlights that the negotiation involved in AR is complex, iterative, and does not follow a linear progression. The negotiation process described shares many of the attributes of strategic organisational decisions studied by Mintzberg and his colleagues (Mintzberg, Raisanghani and Theoret, 1976). A limitation of the model in **Figure 1** is that it does not sufficiently reflect the iterative nature of the negotiation process, and the number of discontinuities that occur as the negotiation progresses. However, as a simplified, normative model of the process, we believe that it is valuable.[3]

Information Influences

The importance of gathering information to support the negotiation process is evident throughout all phases of the case study. The researcher's perception of the organisation as an appropriate research subject varies as information regarding the organisation and its needs comes to light. And in order to get information from organisations to add to the body of scientific knowledge, and to convince management that the proposed study could indeed help solve organisation problems or promote organisational learning, the researcher must present his or her views to the management team. This begins in the *Presentation* stage, when the researcher communicates information about what the researcher can offer, which in turn encourages the client to provide more information. Similar information exchanges occur during the *Search for Common Ground* and *Problem Reframing* stages of negotiation.

The case study suggests that the information reaching the researcher can be in three different forms. Firstly, *secondary information* can be obtained from internally and externally published material, files and documents from the organisation's archives and from proxies such as managers in similar organisations. Secondly, management and staff *perceptions* regarding the problem to be solved can be obtained via formal interviews and informal conversations with organisation members. These focus on management and employee perceptions of the socio-technical structure (Ketchum and Trist, 1992) of the organisation and the likelihood of success of the AR project. Thirdly, *behaviour* can be observed by the researcher while collecting secondary data and interviewing management and employees. This observation is focused on organisational practices and interaction between people. Behaviour information can be compared with information collected from interviews so inconsistencies and contradictions can be identified and resolved.

The Presentation stage involves three main types of information: firstly, the *basic theory*, which is drawn from the body of knowledge typically obtained by literature review, and discussions with peers and practitioners; secondly, the research services the researcher can contribute to the client organisation, normally expressed in terms of activities such as consulting, training, software development, system analysis, or a proven organisational methodology; and thirdly, *research needs*, which can be defined in terms of research project requirements to be fulfilled by the organisation, such as allocating equipment, physical space, clerical services, time for interviews, and support to the project - especially from top management.

This information exchange supporting the negotiation process is also cyclical in nature, and can be represented by the model in **Figure 2**. In this model the information sources which influence the researcher and the client are clearly shown. The two views - the researcher's, about the opportunity

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[3]This model is further developed in Baker, M.E. and Kock N.F (1996) 'Success and Failure: The Negotiation Process in Action Research' *Working Paper Series*, Department of Business Management, Monash University.

for generating knowledge, and the organisations', about the opportunity for improvement - are represented as information repositories which are updated by the researcher and the organisation as the information exchange proceeds.
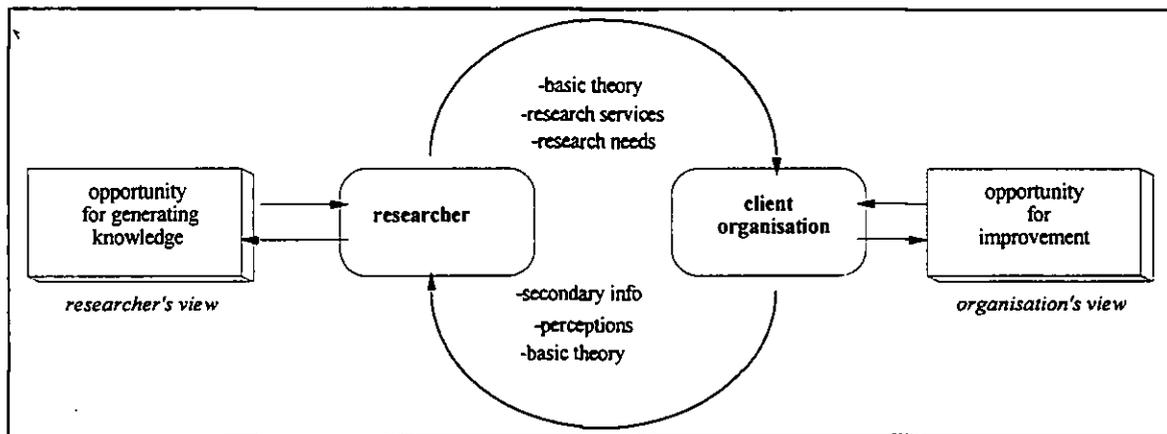
Figure 2: Information Influences on the Negotiation Process

The two interacting elements of the model are represented in **Figure 2** by "researcher" and "client organisation". "Researcher" may be one person or a research team, while "client organisation" may be any organisation or group of organisations from or about which information is obtained at the early stages of the AR project.

CONCLUSION

This paper highlights the often conflicting views held by the researcher and organisation about knowledge generation and organisation improvement opportunities raised by the research project. This difference in viewpoints requires that a negotiation process take place in the initiation of IS action research projects. We present this negotiation as a gradual one, where the researcher refines a previously identified opportunity for generating knowledge as a result of an understanding of the perceived and real opportunities of improvement at client organisations. This refinement occurs concurrently with the organisation redefining its perception of the opportunity for improvement, by balancing research needs and services and, with the help of the researcher, separating biased perceptions from real improvement opportunities. The cyclical process involves a continuing exchange of information as the parties search for areas of common ground. This process was captured in a model of AR negotiation (Figure 1) that was based on more generalised negotiation models taken from the management literature.

The analysis of the case study validated the usefulness of this negotiation process model, and also led to a second model (Figure 2). This second model refines the more general model by emphasising the role and types of information exchanged between researcher and client organisation during the negotiation.

The models serve two purposes: they provide useful guidelines for IS researchers interested in using AR as a research methodology, and also provide a starting point for greater understanding of the AR negotiation process itself.

Finally, the case study illustrates the complexity and amount of work involved in an IS action research project. It shows that, like IS case research, AR is not an 'easy option'. The process involved in defining an opportunity for generating knowledge, and then discussing and refining it with client organisations is difficult and time-consuming, and severely tests the negotiation skills of the IS researcher.

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FACULTY OF BUSINESS AND ECONOMICS

DEPARTMENT OF MANAGEMENT

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JANUARY 1997

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2.   Joy Selby Smith, Chris Selby Smith and Fran Ferrier, "Key Policy Issues in the Implementation of User Choice".

3.   Phyllis Tharenou, "Is There a Link Between Family Structures and Women's and Men's Managerial Career Advancement?".

4.   E. Anne Bardoel and Phyllis Tharenou, "Organisational Predictors of Work-Family Responsiveness".

5.   Dr. Brian D'netto, "Managing Workforce Diversity in Australia".

6.   Margaret Lindorff, "Perceived Support, Received Support, and Source of Strain: An Exploratory Study of the Characteristics of Workplace Relationships for Managers".

7.   Judy Gray, "Diversity in Small Business Strategy".

8.   Judy Gray, "Entrepreneurial Decision-Making Style and Small Business Success in Australia".

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11. Ken Reed, "Integrating Qualitative and Quantitative Data in Organisational and Management Research".

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