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THE MULTIMETHODOLOGICAL INVESTIGATION OF KNOWLEDGE SHARING PRACTICES IN EASTWEI

*Approche multi-méthodologique des pratiques de partage des Connaissances chez
Eastwei*

Completed Research

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Abstract

The sequential or parallel application of a number of complementary methods offers researchers the potential of a holistic perspective to analyse and interpret a phenomenon. In this paper, we report on our multimethodological investigation into the knowledge sharing practices of Eastwei, a medium sized firm providing professional services in China, guided by an overarching action research framework. We introduce the research context, explain the selection of methods, and describe our experiences in their application. We then reflect on the integration of complementary research methods and epistemologies in this research project, as well as the potential for similar integrations in future research as we assess the contributions of the research. Finally, we summarise the lessons learned and conclude the paper.

Keywords: Multiple methods, Canonical Action Research, China, Knowledge Sharing

Mingers (2001) illustrates his stance with analytical critiques of three articles that he determines to be multimethodological. For instance, Markus (1994), in her investigation of the organisational application of email, first surveyed employees with a research instrument and used quantitative statistical techniques to analyse the resulting data; then engaged in an intensive set of interpretive (hermeneutic) analyses of email transcripts and grounded theory development; then followed this with a new round of interviews. Markus thus sequentially applied methods from both the positivist and interpretivist paradigms. In his commentary, Mingers (2001) suggests that it would have been better to start with ethnographic and interpretive research – so as to develop a detailed understanding of the research phenomenon as experienced by the organisational clients – then to follow this with a survey, whose design could draw on the preceding intensive research, and later to confirm findings through a new round of interviews and analysis.

In this brief introduction, we have explained how a mix of different methods (either in parallel or in sequence) is appropriate to the holistic investigation of multidimensional, complex phenomena. A multimethodological stance enables researchers to ask ‘what’, ‘why’ and ‘how’ questions dynamically during the process of a research investigation. This can more effectively ensure both that the research framework is related to the organisational problem and environmental context and that a richer, multiocular set of perspectives on that problem and context is gleaned.

The Action Research Framework

Before delving into the research context, it is appropriate to provide a brief introduction to Action Research, and its Canonical form (CAR) in particular. In general, action researchers seek to solve organisational problems through intervention. They are thus deeply involved in the organisational context and cannot merely observe what is happening. CAR involves a cyclic and iterative series of collaborative interventions that involve activities designed both to address the organisation’s problem(s) and to ensure researcher learning. This means that all the various research activities are managed under the aegis of the CAR framework, including interviews and conversations with the organisational client, surveys, ethnographies, etc. CAR has been recognised as a distinct form of AR since at least the 1970s, with the publication of Susman and Evered’s (1978) treatise. However, until quite recently, guidelines and criteria that could be used both to undertake and to evaluate CAR have been absent. The development of five principles and 31 criteria for CAR by Davison et al. (2004) directly responded to that call and we briefly review their approach here. The five principles concern: (i) the development of a researcher-client agreement; (ii) adherence to a multi-stage cyclical process model (typically including problem diagnosis, planning, action taking, observation and reflection); (iii) the critical role of theory; (iv) the importance of change through action; and (v) the contribution of learning through reflection. Each of these principles is associated with a number of practical and prescriptive criteria that assess whether or not something has been done.

Rigour in CAR is assessed in two ways. Firstly, “by iterating through carefully planned and executed cycles of activities, so researchers can develop both an increasingly detailed picture of the problem situation and at the same time move closer to a solution to this problem. Secondly, by engaging in a continuous process of problem diagnosis, so the activities planned should always be relevant to the problem as it is currently understood and experienced. This relevance thus becomes an essential component of rigor in CAR” (Davison et al. 2004, p.68).

In order to ensure the collaborative nature of CAR, researchers and organisational clients must identify and enact mutually supportive roles that are appropriate to the organisational, societal and professional cultures and research context. Researchers must be careful not to dominate the process and so unintentionally marginalise the clients, which can happen when researchers are overly enthusiastic and clients too busy with their own work to pay sufficient attention to the CAR project. Part of the solution to this diversity of attention lies in the development of a researcher-client agreement that embodies a “mutually acceptable ethical framework”. It encourages both researchers and clients to engage not only in organisational change but also in a reflective assessment of the progress of the project (Avison et al. 1999, p.94). Unlike other research methods, CAR is notable for its insistence that researchers both ameliorate organisational practice and contribute to scholarly knowledge in terms of the immediate project context and the broader ramifications (cf. Eden and Huxham 1996). Such projects may take a long time to complete since time is necessary not only to develop a trust-based relationship with the client, but also to engage with the client, through a number of CAR cycles, on the organisational change processes.

CAR is necessarily emergent: researchers engage in an unfolding problem situation that changes as the organisation itself evolves, and as the problem situation is encountered and tackled. This means that researchers have little control over the way a CAR project proceeds (cf. Davison and Vogel 2000; Mumford 2001). Consequently, the

subsidiary tools and techniques employed by action researchers must be sufficiently flexible and adaptable to the infinite variety of circumstances that may occur (cf. Descola 1996).

As Chiasson et al. (2009) note, action researchers regularly engage in a pluralistic approach, incorporating other methods under an action research framework. Considering how action researchers work, two distinct approaches can be identified: the dominant and the sequential. In the dominant approach, action research is selected as the “primary method of investigation from the very start of the research programme” (ibid. p.12). It thus serves as the research framework, and other research methods (such as interviews, surveys, etc.) will be applied by researchers as the project progresses and as the need arises. In the sequential approach, action research becomes the complementary method that is employed as a device to aid “examination or explanation of the research phenomena as the research programme unfolds” (ibid. p.15). The research described in this paper follows the dominant approach.

Research Context: Eastwei

Eastwei is a professional services firm in the media relations industry. It is headquartered in Beijing (China) and, through offices here and in Shanghai, Chengdu and Guangzhou, provides its clients with a variety of Public Relations (PR) services. Eastwei helps its clients, predominantly larger organisations, to communicate with their various stakeholders, but especially consumers, through various media channels. Eastwei’s employees operate in a rich and complex knowledge-driven and *guanxi*-based environment, where connections with journalists are critical. *Guanxi* is a term often used in studies of the Chinese business environment, and can be loosely translated as “relationship”. It refers to the importance of interpersonal relationships for individual Chinese people in both work and social contexts (cf. Buckley et al. 2006; Huang et al. 2008). Eastwei works both directly with its own staff and remotely with sub-contracted staff on each client project. Meticulous attention to detail is critical to ensure the promulgation of consistent media messages, nationwide. Eastwei consultants need real-time access to the knowledge and expertise of consultants at other offices. Knowledge is thus central to Eastwei’s work and the firm’s corporate value statement revolves around the concept of “knowledge-driven communications”.

A friend of a core member of the research team knew about Eastwei and recommended us to contact the firm, which we did in November 2006. In this first meeting, we engaged in a brief conversation with Eastwei’s CEO, Johan Björkstén, outlining our research interests in virtual collaboration and knowledge management (KM), organisational change and action research. As Johan explained, he too had previously considered KM initiatives in the firm, but had realised that they would require too much time and effort from already overworked employees (Eastwei’s business is growing at about 30% a year). Over the course of 18 months, we have engaged in a series of activities (conversations, observations, workshops, reflections) with Eastwei’s employees, as well as a number of spirited debates with Johan and his senior management colleagues on operational and strategic topics, both in our pursuit of understanding how Eastwei is positioned in its challenging environment, and as we attempt to facilitate a knowledge sharing culture in Eastwei.

At this juncture, it is appropriate to observe that we were all too conscious, particularly in these conversations, that we were party to sensitive and confidential information that could potentially be damaging to both individual employees and Eastwei as a whole if it was misconstrued or quoted out of context. Although we have never signed a confidentiality agreement with Eastwei, we have always strived to maintain the highest standards of integrity and data/source protection. We believe that our actions are consistent with prevailing standards of practice in China where the strength of a relationship acts as a far more effective guarantee of an informal and often unspoken agreement than would a legally codified (but potentially unenforceable) contract. Indeed, this relationship formed the basis for and ensured the continuing strength of our “Researcher-Client agreement”. Within the socially structured norms of this agreement, trust between the research team members, and Eastwei, Johan and his employees, the clients, was able to flourish. As it flourished, and as the two parties to the agreement delivered on their unspoken promises, so the *guanxi* between us also flourished. We believe that our continued access to Eastwei, and indeed our ability to penetrate deeper into the internal workings of the firm and thought processes of its senior management team, coupled with more intensive forms of data collection (which we document below) are directly related to the strength of our implicit agreement and its facilitating conditions: trust and *guanxi*.

Multimethodological Research at Eastwei: An Emergent Process

The Prediagnostic Phase

In our initial discussions with Johan, we learned about the nature of both Eastwei's business and the problems that it faces with respect to virtual collaboration, communication and knowledge management practices. As researchers who have previously successfully engaged in organisational change initiatives supported by a CAR framework, we sensed that CAR might also be applicable in this context - and we outlined its basic protocols and processes in this first discussion. Johan agreed that CAR would constitute the basis for a suitable research framework, thus ensuring our compliance with a fundamental criterion of CAR - that both researcher and client agree on the methods to be adopted. He suggested, furthermore, that in order both to develop our own appreciation for the way work at Eastwei was experienced by employees - participants in any change process - and indeed to familiarise employees with some basic ideas about KM, we should arrange to engage each employee in an informal conversation about their work, knowledge sharing, and collaboration and communication practices.

We developed a rough set of protocols that would guide the conversations. We deliberately do not label these conversations as interviews, given their informality and semi-structured nature. Between November 2006 and January 2007, we engaged in face-to-face conversations with the vast majority of the employees - about 80 at that time. Nevertheless, each conversation was recorded (with permission from each individual employee) and designed to cover the same range of topics, i.e. according to the conversation protocol. From a CAR perspective, these initial conversations constitute a pre-diagnostic phase - they enabled us to collect sufficient information to undertake a more robust diagnosis of Eastwei's problem situation. From Eastwei employees' perspective, we acted as an independent third party and so assumed a privileged position to communicate with Eastwei's senior management. Nevertheless, we have always undertaken to protect the confidentiality of our informants. We presented our initial diagnosis in a report (4905 words) to Eastwei's senior management in early March 2007.

CAR Cycle 1

Following the initial diagnosis, we conducted a workshop for 15 senior employees in Eastwei's Beijing office in mid March 2007 where we introduced the principles of business process documentation and mapping. Formally documenting business processes was seen as a key step towards the embedding of knowledge sharing processes within Eastwei. The objective of the workshop was not only educational, but also outcome oriented: all business processes at Eastwei were to be mapped within the next month. Whilst the workshop itself was successful, the resultant process mapping was much slower than expected - indeed, when employees attempted it, they discovered new areas of concern that created a temporary hiatus and a reassessment by Eastwei's senior management about both the process maps and the way they should be represented. In this case, the final stage of the action research cycle - reflection - was experienced both by the clients and the researchers. As researchers we felt that the business process mapping exercise had been worthwhile and that it had stimulated Eastwei's participants to think more deeply about the way knowledge was embedded in their work processes. As a result of their own independent reflection, Eastwei employees identified an appropriate way to represent that embedded knowledge in the process maps. The discussions between the research team and the clients in both the prediagnostic phase and this cycle directly led to the second AR cycle.

CAR Cycle 2

Our initial work with Eastwei had not been particularly focused - it covered not only knowledge management/sharing but also virtual collaboration and communication. Given the problems associated with the business process mapping workshop and its aftermath, we realised that knowledge should be the central focus of our immediate work. We therefore embarked on a second series of conversations with a selected group of twenty Eastwei employees in the Beijing and Shanghai offices. These conversations were also protocol driven and focused entirely on knowledge topics such as sharing practices, needs, demands. These conversations enabled us to proceed in two major directions as explained below.

Firstly, we believed that Eastwei lacked the technical infrastructure to support formal knowledge sharing online. Sparked by our conversations with Johan, we sent two members of the research team to work with Eastwei's IT managers. After a focused discussion on IT matters, we submitted a technology report (1994 words) in April 2007.

This report summarizes the technical infrastructure, technology related business operations and requirements. It also identified a possible technology implementation strategy for Eastwei.

Another major outcome from the first round of conversations relates to the critical roles of leadership and guanxi in Eastwei's work system (cf. Alter 2002). The interviews indicated that many work practices at Eastwei were strongly influenced by senior management. We also discovered the importance of a variety of social networks for knowledge work (cf. Buckley et al. 2006; Huang et al. 2008). Eastwei's employees rely heavily on their guanxi with their colleagues (local and remote), journalists and other external third parties in the public relations industry and media business. Indeed, without effective and reliable guanxi, a lot of the work that they do would be impossible and so Eastwei's continued ability to thrive is dependent on it. In prior empirical research about KM, 'leadership' and 'guanxi networks' have been treated as two separate research targets (e.g., Michailova and Hutchings 2006; Srivastava et al. 2006). However, our analysis of the interview data, coupled with the knowledge-focused conversations described above, indicated their inseparability. Consequently, we decided to model both these sources of influence on KM outcomes in the next phase of the research.

CAR Cycle 3

In order to develop more codified findings about KS practices in Eastwei, we decided to survey all Eastwei employees. We developed a comprehensive research instrument, based on a formal structural model, with approximately 100 items. During the item development phase, the research team and Johan separately verified both the English and Chinese versions of the survey, in order to ensure that the questions were relevant to Eastwei's business context (thereby maintaining the relevance criteria of CAR). The finalized survey was located on a commercial survey web site (www.questionpro.com) and we invited all employees to complete it during August to September 2007. Initially, 36 employees submitted the survey online. On a visit to Shanghai and Beijing, we took hard copies of the instrument with us and persuaded another 32 people to complete them. In Beijing, Johan personally requested employees to complete the survey. Not all did so – the request was not a mandatory one – but by late September, 68 responses had been recorded, a 62% response rate.

Johan insisted that employees should feel obliged to complete the survey because the project is directly related to business process improvements at Eastwei. As he pointed out, if Eastwei is to take our research seriously, then all employees are similarly bound to do so. When it later emerged that some employees had simply ticked down a column so as to complete the survey as fast as possible, Johan was concerned about implications for employee morale and insisted that all future survey responses should be identified – employees should be prepared to take responsibility for their views, with those who chose not to participate being individually identifiable. This opinion provoked some discussion and marked the first instance where the research team's academic principles of confidentiality/anonymity might conflict with Johan's personal views of how employees should behave professionally.

Our analysis of the survey data proved interesting for a number of reasons. It enabled us to confirm some of our research hypotheses regarding the influences on knowledge sharing practices and outcomes. It also resulted in a brief report (1528 words) for Johan that highlighted the key findings from a business/knowledge perspective. This report stimulated a number of reflective conversations with Johan about the implications for future knowledge-related work at Eastwei. In conversation with Johan, we also realised that despite a number of hours of conversation, informal observation, workshops and now survey analysis, we knew very little about the actual minute to minute work that Eastwei employees did. This led us to the next phase of the research.

Table 1 - Canonical Action Research Framework with Multiple Methods at Eastwei

Pre-diagnostic phase begins	
Problem definition - conversations with selected stakeholders Aim: to reveal a promising scope of research rather than to determine it	November, 2006
Pre-diagnostic conversations and observations with most Eastwei employees	November 2006 to January 2007
Initial evaluation and reporting of the situation Aim: to consider the prospects for research with respect to various phenomena	March 2007
End of pre-diagnostic phase; CAR Cycle 1 begins	
Contextual understanding - business process mapping	March 2007
Problem downscoping (sharpened focus) - discussions with stakeholders	March 2007
End of CAR Cycle 1; CAR Cycle 2 begins	
Technical discussions with Eastwei's IT managers	March 2007
Submission of a technical report	April 2007
Problem diagnosis (specific) - interviews with selected employees	April to May 2007
Strategic discussions with senior management	May 2007
End of CAR Cycle 2; CAR Cycle 3 begins	
Hypothesis development - discussions with senior management	Summer 2007
Hypothesis testing - to obtain wide but shallow understanding	August to September, 2007
Submission of a report based on the survey and earlier discussions	November 2007
End of CAR Cycle 3; CAR Cycle 4 begins	
Ethnographically informed observation to gain deeper understanding of work practices	November 2007
Integration of survey and observation findings into a new report with 6 specific action items	December 2007
Evaluation and reflection by research team and clients on 6 action items. Initial discussions about implementation	December 2007 - January 2008
End of CAR Cycle 4; CAR Cycle 5 begins	
Eastwei undergoing major personnel changes. Project on hold for a few weeks.	January-March 2008
Analysis of the knowledge-driven work system (inspired by Alter, 2002)	April, 2008
Discussion with senior management about implementation and progress	March and April, 2008
Design and implementation of 6 specific changes based on the work systems method	In progress
Evaluation - post-implementation survey of the work system changes	To be conducted
Submission of final report and project completion	Expected in late 2008
End of CAR Cycle 5 and Project	

CAR Cycle 4

In cycle 4, we undertook what we term an “ethnographically informed observation” of work at Eastwei. Over the previous year, we had been visiting Eastwei’s Beijing and Shanghai offices on a regular basis for a few days at a time (see Table 1), but these visits had been largely focused on specific conversations, workshops or other activities driven by us, the researchers. One member of the research team had had some level of social contact with Eastwei employees, for instance at lunch times, but we had not attempted an ethnographic immersion at Eastwei. We now felt that we should step back from our own agenda and instead let the actual practice of work at Eastwei drive our learning and action taking. While it was not feasible for us to observe employees for a few weeks or months at a time, we decided at least to glimpse the nature of work through two day-long observations by two members of the research team. We worked with Johan to identify key employees in each of the Shanghai and Beijing offices and spent most of two separate days in November 2007 observing them. We tried to minimise our conversation with them so that they could undertake their work as naturally as possible, but we did ask for additional explanation when necessary. We also ended up observing other people in the same work place – for instance, when a key observant

had to take some time off. We insist that these observations do **not** constitute an ethnography as it is usually conducted (cf. Orlikowski, 1991; Myers, 1999). However, the underlying principle of ethnography, viz.: studying the phenomenon in its social and cultural context, was reflected in our observations of the employees at work (cf. Avison and Myers, 1995; Lewis, 1985).

The findings from this phase were as remarkable as they were unexpected, the more so given the very short time that we spent in observation. For instance, it emerged that many Eastwei employees had formed an almost symbiotic relationship with their instant messenger tools: in one case, an employee in Shanghai had seventeen IM windows open and active simultaneously. We wrote up these findings in a new report (2909 words) for Johan with six specific suggestions for action that needed to be taken. These covered the key themes from the survey – leadership and guanxi – as well as new thoughts related to reward structures, contact integration, best practices – especially in communication and knowledge sharing, standardisation, bricolage and innovation, and the need for individual privacy within the public Eastwei online spaces. Once again, this report generated a lot of discussion and reflection between Johan and his colleagues and with the research team. It also came at a slightly unfortunate time: Eastwei had outgrown its offices and both the Shanghai and Beijing operations were shortly to move to new premises. This would hinder the immediate introduction of organisational change – indeed, it was not until after the Chinese New Year in late February 2008 that we were able to embark on discussions about implementation.

Considering the outcomes from this and previous cycles, our progress to this point in the project was more than satisfactory with both unexpected and stimulating findings. Although we have not reported the five stages of the individual CAR cycles in detail here, the overarching CAR framework was instrumental to our achieving significant change through action, combined with learning and reflection.

CAR Cycle 5 - Plans for the Future

Eastwei is currently hiring for two new senior management positions in order to cope with fast business growth. These changes have temporarily intervened in our own intervention. As always in Action Research, there are circumstances like these that lie beyond the control of the researchers. When the new HR director and IT systems manager have been appointed, we expect to resume progress on the initiatives that we suggested at the close of Cycle 4. However, in the meantime, political circumstances have intervened! Beijing's hosting of the 2008 Olympics has also resulted in a curtailment of the issuing of multiple entry business visas. Two of the key researchers on the project are currently unable to gain entry to China, a situation that is not expected to change until October 2008. In the mean time, we are drafting a framework for the formal rollout of a knowledge driven work system, building on Alter's (2002, 2006) Work Systems Methodology. A few weeks after roll out, we expect to survey all Eastwei employees on their use of that system and will complement that survey with a further round of conversations so as to assess how knowledge sharing practices are evolving. Finally, we expect to develop a more robust theory of knowledge sharing in the Chinese context.

Discussion

In our account of this multimethodological project, we have deliberately employed a linear approach, describing the different activities that occurred in chronological order. In this way, we aimed to illustrate the natural complexity of the phenomenon as we experienced it and as it emerged. Organisational situations (unlike laboratory experiments) are almost invariably evolutionary and emergent in character: they are not particularly amenable to rigid planning and control by researchers. This is particularly true in action-oriented, interventionist research where the researcher aims not only to contribute to scholarly knowledge through his/her research, but also to effect a successful organisational outcome – with success defined and measured by both the researcher and the organisational client. As interventions progress, so the nature of the organisational problem, and its potential solution, are likely to shift. Initial conjectures about problem causes may no longer prove valid, and the nature of the final outcome may be far from what was initially anticipated. The structural anthropologist Claude Levi-Strauss famously told his PhD student Philippe Descola not to plan too far in advance, given the infinite variety of natural circumstances, but instead to “go along with the lie of the land” (Descola, 1996, p.40). The same advice applies here, the land in question being the organisational phenomenon (including people, problems, structures) in its social and cultural context.

To eyes that are accustomed to an excess of precision and control, this will appear messy, unplanned and quite unscientific. But nevertheless, this is the reality of the organisational context where we have chosen to work. As we diagnosed (and later solved) problems under the auspices of the CAR framework, so our understanding of the

organisational phenomenon developed and our ability to delve deeper into the problem situation was sharpened. In some situations, previously developed theory could be applied to the emerging problems, whereas in other situations, we were at the mercy of our imagination and power of interpretation. Thus, having started with organisation-wide conversations that enabled us to pre-diagnose the nature of organisational circumstances at Eastwei vis-à-vis knowledge sharing practices, we proceeded through a linked series of activities: a business process mapping workshop, technical discussions, hypothesis development and associated survey, ethnographically-informed observations of employees, and so on. All of these were accompanied by a vigorous commentary from Johan, Eastwei's CEO, and our own ongoing reflections on how our appreciation of the problem was developing. We characterise this research as multimethodological, not because it was designed to be multimethodological, but because a multimethodological approach turned out to be the appropriate one for the context. Looking back, we believe that a multimethodological approach was, if not inevitable, then at least desirable – had we but recognised it at the outset. In our reflections that follow, our objectives are to illustrate how our multimethodological approach developed, identify the impact it had on the CAR project, and prescribe lessons that can guide future researchers in similar situations.

The problem was defined initially by discussing the situation with the client and engaging in informal conversations with a selection of stakeholders. Additional interviews and observation were used to further diagnose the problem. At the same time, we deliberately sought to inform employees about some of the basic ideas and concepts associated with virtual communications and knowledge management. In this way, we could be more certain that in later stages of the research, they would be familiar with the concepts and principles that underlay the interventions that we would perform. The first AR cycle was completed by reflecting on the findings and producing an initial report that summarised this general diagnosis together with suggestions for potential actions to be taken.

The second AR cycle used the principles of business process mapping to develop a better understanding (by both researchers and clients) of Eastwei's core processes. At this juncture, we realised that the project's focus was too broad. Consequently, we sharpened it and chose to focus solely on knowledge management issues. Further discussions with key stakeholders led to the identification of various social and technical aspects to the knowledge management problem. The second cycle of AR concluded with both the researchers and the client reflecting on these findings and deciding how to proceed.

The third AR cycle began with the development of specific hypotheses about various aspects of the KM problem. These hypotheses related culture and leadership to dependent variables such as the ability to share knowledge. The hypotheses were derived both from the research literature and from previous conversations conducted with Eastwei employees. A survey of employees was used to test the hypotheses. This resulted in a broad but shallow understanding of the key issues. However, while we had a very good understanding of the overall situation, we did not know many of the intimate details.

Therefore, we embarked in the fourth AR cycle on a pair of ethnographically-informed observations in the Beijing and Shanghai offices to complement the survey data. The observations enabled us to develop a deeper and more detailed understanding of specific problems. Based on the wide and deep understanding resulting from the combined use of a survey and observations, we felt confident in recommending specific changes aimed at alleviating the problem and improving Eastwei's performance.

We are relying on the work system methodology (Alter 2002, 2006) to analyse the knowledge-driven work model at Eastwei and to describe the specific changes that we were recommending. After our recommendations are put into practice, we expect to conduct a post-implementation survey in order to evaluate the outcomes. The results of this survey would enable us to reflect on our most recent actions, and thus complete the fifth AR cycle in this project.

While we have primarily studied knowledge management at Eastwei, this paper focuses on the methodological issues, and particularly the interactions between and complementary contributions of our various methods. It is our belief that the inclusion of a number of different research methods, in sequence and in parallel, enabled us to make far more progress than would have been the case had we deliberately restricted ourselves to a single method such as a case study or survey. Indeed, given the intentionally interventionist premise for our work, the use of multiple methods was essentially unavoidable. Only through the different lenses afforded by each of the different methods were we able to experience the problem situation in sufficient detail and from a sufficient number of perspectives to have the confidence to make strong recommendations to Eastwei's senior management on the actions that we believed needed to be taken.

Thus, our initial conversations at Eastwei opened our eyes to a small part of the knowledge sharing context. Our strategic conversations with Eastwei's senior management gave us insights into the way different managers believed knowledge work should proceed. These initial perceptions were usefully complemented by a broad survey of attitudes towards knowledge sharing, but the responses prompted more questions than they answered. Then, our ethnographically-informed observations plunged us much deeper into the work systems at Eastwei, through the daily experiences of a small number of individuals. This too enabled us to glean, almost serendipitously, new findings about the way IT was used in the knowledge sharing process. For instance, we found that employees had an almost symbiotic relationship with their instant messenger applications, relying on them for a much wider range of communications than we had imagined. Ideally, and assuming that we could overcome privacy concerns, we would also have been able to engage in a hermeneutic analysis of the content of their IM conversations.

CAR in organisations requires the active involvement of one or more clients - in this case, primarily Johan, Eastwei's CEO, but also all Eastwei employees. As action researchers, we had to satisfy two demanding masters - the academic community and the organisational client (McKay and Marshall 2001). As academics, we are well placed to satisfy the former as exemplified by this paper. However, satisfying an organisational client can involve much more than generating a solution to ameliorate a problem situation. The client - Johan - demonstrated a great interest and intimate involvement in the project. He frequently engaged us in conversation, discussion and debate. By keeping him deeply informed about research progress, emerging findings and practical implications, and by involving him in reflections about issues of research design and method selection, we both remained true to the principles of CAR and simultaneously exposed both ourselves and himself to very different worlds. Naturally, as researchers interested in organisational phenomena, we expect to learn about the client's world - and if we can't learn, then the research may well turn out to be a failure. But the client is seldom deeply involved in the practice of research (even though such involvement is stipulated as essential by CAR's principles). Johan's keen participation, both practical (through giving us unfettered access to Eastwei) and intellectual (through his engagement in our planning, action taking, analysing and reflecting), represented both an unexpected contribution (it helped us enormously with our ongoing efforts) and a source of tension (we did not always share the same views on research processes). Thus when he indicated that future survey data collection should be from identifiable individuals, not anonymous ones, he inadvertently suggested the violation of a basic principle of research ethics: protecting the privacy of respondents - a principle established formally through human ethics approval processes and informally through good research practice. In consequence, we mentally winced! But this was useful as well, because it led to more animated discussion - and undeniably a better appreciation of each other's worlds, worldviews and constraints.

Through interactions with Johan, notably in the reflection stage of each CAR cycle, we have come to realise that Eastwei incorporates agile work systems (cf. Alter 2002, 2006). The agility reflects Eastwei's employees' ability to adapt to the infinite variety of organisational circumstances (cf. Descola 1996) as they emerge in the course of client-centred, knowledge-driven relations. This adaptiveness involves a seamless integration of business processes, information and knowledge, technologies, participants, products and services. Given the inherent richness of the research context, and in order to reach an equally rich and broad understanding of the way in which knowledge is managed at Eastwei, we would have been hamstrung had we decided to employ only a single paradigm or specific lens in this research: the application of multiple methods and paradigms was essential.

Much of the discussion so far has focused on our reflections on the research process. However, another plane of reflection beckons, and this is more future oriented. What lessons have we learned, or could we identify, that would facilitate the conduct of multimethodological research in organisations? It is clearly too trivial merely to remark that multimethodological research is a good thing.

Firstly, the researchers and client must agree on an overarching framework which will govern the research methodologies, structure and guide the overall research project, and so help to ensure a degree of rigour in what might otherwise seem to be an unrigorous process. However, the researchers must expect to act flexibly within the framework, whether this involves adjusting the focus or scope of the research, attempting to address different aspects of the organisational problem at different times, or simply exploring the organisational situation so as to uncover additional rich information that will facilitate later action taking. Method-task fit is important, with members of the research team familiar with multiple methods. Each method is likely to be applicable to one or more specific purposes and should illuminate part of the organisational reality, even as it obscures other parts. Thus conversations enable respondents to answer questions freely, whereas surveys usually force specific types of answer. Ethnographies on the other hand enable the researcher to step back and let the organisational experience 'show the way'. In the end, it is the synergistic combination of methods under the overarching framework that will determine the successful (or otherwise) outcome of the research.

Secondly, it is important that the organisational client understands how each method is used, what kind of data will be collected, and what impact the use of the method might have on the organisation itself. In CAR, this kind of researcher-client collaboration is part and parcel of the agreement that forms the foundation for the whole research project. Clearly, CAR is not the only way to apply multimethodological research and researchers who do not wish to intervene should not adopt it. But nevertheless, we do believe that the legitimate interests of an organisational client should be recognised and respected. If multiple methods are selected in a linear fashion and on an emergent basis, then it will be necessary to maintain regular communication with the client – it cannot all be done in advance. This begs a question about the relationship between researcher and client. We believe that a close relationship is preferable so long as it permits each party sufficient intellectual space for independent analysis and also ensures that neither party steps on the toes of the other. While researchers can give advice, they are not responsible for running the organisation (though their advice may be of great value). While an organisational client can critique instrument design, they do not shoulder the scholarly responsibility to publish research findings (though they may be co-authors). In most organisational research projects, the organisational client is too distant from a project, not too close, and so the problem is one of getting them more involved. Indeed, developing a close relationship with the client may go far beyond the original research purpose. In the case of Eastwei, we found that our relationship focused not only on Eastwei, but also on other topics of mutual, intellectual interest such as contemporary Chinese politics and societal culture, English literature and gastronomy: as a result, our developing professional relationship was paralleled by a personal friendship, with the latter strengthening the former. If academic researchers are fortunate enough to locate a client who deeply desires to be closely involved on a project, then don't disillusion him/her: it is a rare experience!

Thirdly, researchers must be aware of the risk that organisational employees will assume that they (the researchers) are little more than management spies, and in consequence refuse to provide any valuable information! For this reason, it is important that researchers gain (and do not betray) employee confidence and trust. We were able to do this by: first formally stating the risk to Johan; second by ensuring that we spoke with all employees, insisting that they be protected by our own principles of data subject anonymity; and thirdly, by delivering our pre-diagnostic report (in English and Chinese) to all employees, not just senior management. In the reports themselves, while we did not flinch from critical analysis, we were careful not to identify individual employees by name.

Fourthly, researchers (in conjunction with the client) must decide which methods to use and when. Mingers (2003) suggests that it may be better to start with ethnographic and interpretive research – so as to develop a detailed understanding of the research phenomena as experienced by the organisational clients – then to follow this with a survey, whose design could draw on the preceding intensive research. However, such a prescription is unlikely to be universally applicable. If the research team has a good relationship with the organisational client, then jumping straight into ethnographic investigation may be possible. However, if the organisational culture is conservative or if there is a need for researchers and clients to develop a deep level of mutual trust before significant progress can be made, then it may not be appropriate to jump straight into ethnography, where researchers can develop a rich but potentially sensitive awareness of organisational circumstances. Starting off with more informal conversations, and so building researcher-client trust (including trust with individual employees), and in the Chinese context, a sense of *guanxi*, may be more advisable – before proceeding to more intensive research methods. Each organisational phenomenon will thus have to be assessed independently.

Finally, and with synergy in mind, we strongly suggest that researchers consider adopting methodologies from more than one epistemological persuasion (cf. Mingers, 2001; Chiasson et al., 2009). We do not believe that (the assumptions of) positivism, interpretivism and critical theory are necessarily contraindicated. There are a small number of examples of published multimethodological research that are also multiepistemological – and this is one. CAR is generally taken to be an interpretivist methodology and in this project we employed an interpretivist lens: we were interpreting Eastwei's organisational circumstances with specific respect to knowledge sharing practices, and we aimed to improve those practices through our own intervention. However, in order to effect the interpretation, intervene and make the improvements, we relied on both our prior research experience and the theories developed by other scholars, and on newly collected and analysed data from: conversations and interviews (qualitative data analysis), observations (interpretation and reflection) and surveys (quantitative data analysis). The interpretive analyses usefully informed our 'bigger picture' comprehension of Eastwei's situation, and provided illustrations of specific behaviours. The positivist analyses enabled us to focus on specific variables and the relative importance of antecedents. Further, the positivist research design incorporated lessons that we had already learned through interpretivist analysis and the outcomes from the positivist analysis helped us identify new focal points for future conversations. Interpretivism and positivism thus combined in a fruitfully synergistic and symbiotic interplay. In this

way, our proposed ameliorations to the organisational situation resonated with both organisational employees and management.

While CAR is by no means the only suitable framework for multimethodological research, it is singularly appropriate. The outcomes of such CAR projects must unequivocally include 'solutions' for the organisational client and 'knowledge' for the academic community. The knowledge often relates to methodology, as in this paper, theoretical contributions and practical solutions. Both masters (organisation and scholarly community) benefit from the multimethodological investigation of the organisational phenomenon - each is richer than would have been the case had only a single methodology (or epistemology) been used. In this project, had we limited our investigation to a survey based entirely on a review of the literature, ignoring local circumstances and values, our understanding of knowledge sharing practice would be all the shallower and less complete. Any theory that we developed would have been marked by its lack of local context, lack of local relevance. Equally, had we only engaged in conversations with employees so as to write up a case study, but denied the possibility of more detailed observations or more extensive surveys, again our appreciation of the complexities of knowledge sharing practices, and the interrelationships among variables would be incomplete. If we had only observed, but never talked to anyone, never surveyed opinions, then our observations could only have been analysed in a vacuum, devoid of the rich contextual information that those conversations and survey revealed. The inclusion of all of these methods under the overarching framework of CAR meant not only that the methods would inform each other, holistically, but also that we had a purpose - to ameliorate Eastwei's organisational situation through intervention, an intervention based on our rich and detailed understanding to which each of the methods had contributed.

Conclusions

Organisational problems always evolve as a research project progresses. In this project, the overarching CAR framework and the five principles from Davison et al. (2004) have guided our adoption of different methodological and epistemological lenses so as to achieve a holistic view of a firm. We believe that a similar multimethodological approach should be valid in other organisational contexts where business problems are often complex, ambiguous and emergent. It is almost impossible for researchers to address the complexity and ambiguity if they have only a single lens through which to see the problem and investigate its causes, let alone improve it. Furthermore, if researchers work alone, it is unlikely that their suggestions and interventions will map effectively onto a company's work system. Instead, the complementary efforts of both researchers and the client organization are required. There are a number of lessons that we derive from the research reported in this paper and offer to researchers excited by the rich possibilities that a multimethodological approach offers.

First, it is important to develop an overarching framework within which the various research methods can be structured. We recommend CAR as the basis for a framework, assuming that researchers are comfortable with action and change-oriented research. Second, researchers and clients need to develop a deep level of trust in each other as part of a longish term relationship that will, at minimum, see them through the project. Both parties need to engage in regular conversation about the design and progress of the research - this can be a challenge for researchers and clients alike. But the inclusion of etic (researcher) and emic (client) perspectives helps facilitate diagnostic processes that drive towards actions that subsequently ameliorate the organisational problem situation and contribute to scholarly knowledge. Third, researchers must gain the confidence and trust of employees, as well as senior management. This will help to dispel the perception that researchers are no more than management spies. Fourth, the selection of methods cannot be pre-planned, as it will depend on the emerging organisational problem and the researcher-client relationship. Moreover, each method may use outputs from previous methods and contribute to subsequent ones. We recommend that less formal methods are used at first while the researcher-client relationship is still being built, and that more intensive methods are used later, when the necessary trust has been established. Each method must be applied so as to achieve a specific objective in the larger project. Finally, we recommend that researchers consider the benefits that can be achieved through the use not only of multiple methods, but also multiple epistemologies. Positivist research methods such as surveys both rely on interpretations of data collected previously and usefully contribute towards an interpretivist understanding of an organisational phenomenon.

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