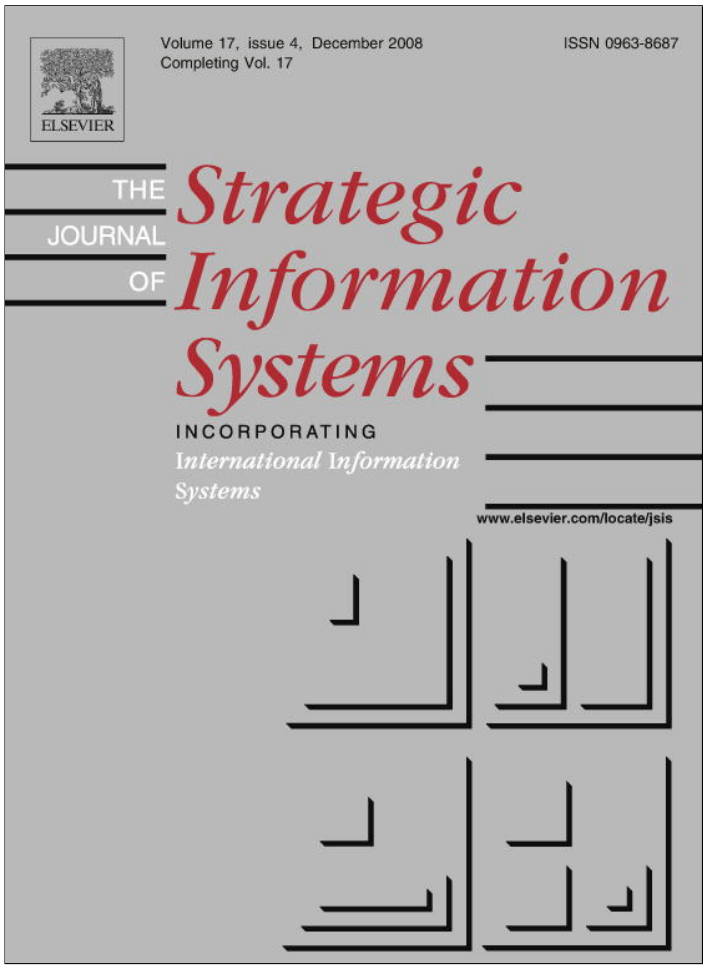

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Control, trust, power, and the dynamics of information system outsourcing relationships: A process study of contractual software development

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ABSTRACT

This paper provides a longitudinal description and analysis of the evolving relationships between a university and vendors contracted to develop software systems. A contextualised social process model is developed and employed using data gathered over the decade-long process, focussing on the early years. The right levels of control and trust are conceptualised to lead to confidence that the development process is set on the right course. The study gives unique insights into the contractual software development process from a client's perspective together with pointers for more general applications of the findings related to control, trust, and bargaining power in customised information system development. The analysis of the data reveals how the client's actions oscillated between trust and control in three areas: performance, price level, and observed behaviour.

1. Introduction

One of the core competencies of information systems (IS) and information technology (IT) managers is how to master the relationships with outside vendors (Feeny and Willcocks, 1998; Kern and Willcocks, 2001; Cullen et al., 2005). This requirement is related to IS contracting (e.g. Whang, 1992; Richmond et al., 1992; Fitzgerald and Willcocks, 1994; Kern and Willcocks, 2000), and IS procurement strategies, because management has to decide whether to develop software in-house or purchase it from the market (Saarinen and Vepsäläinen, 1994). In a broader context, the managers have to decide to what extent it is profitable for their organisations to outsource IS services (Lacity and Hirschheim, 1993; Lacity and Willcocks, 1998). The client–vendor relationships may be in constant flux because the business situations of the partners change and new technology and new vendors enter the market place. The management of outsourced services is an increasingly important topic (Clark, 1992, p. 70; Feeny and Willcocks, 1998; Lacity et al., 1996; Choudhury and Sabherwal, 2003; Sabherwal, 2003; Hirschheim et al., 2006; Rivard and Aubert, 2008).

It is typical of information systems outsourcing situations that it is very expensive for the client to change its vendor, i.e. the switching costs are high (cf. Whitten and Wakefield, 2006). Very early on in an IS development project a client becomes tied to its chosen vendor, even though the client may try to keep the costs reasonable through competitive arrangements by introducing additional vendors. Moreover, it is not possible to specify every contingency in a closed contract over a long period of time (Richmond et al., 1992; McFarlan and Nolan, 1995, p. 17). The parties form a hybrid organisation that is

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somewhere between a market and a hierarchy (Bachmann, 2001; Williamson, 1991). Negotiations and re-negotiations with bargaining (Argyres and Liebeskind, 1999) fill the voids that emerge due to incomplete contracting issues; it is also possible that the contract between the parties would evolve into a relational one (Kern and Willcocks, 2000; Lacity and Hirschheim, 1993, pp. 35–36). The influence mechanisms available to the parties form the basis of how the relationship is managed during long contractual periods. Power, trust and control are key notions here.

In this paper, the logic of action (Bacharach et al., 1996) of the vendor is assumed to be that of a product or service provider that expects compensation for its efforts. The level of expected compensation may, however, vary over time. If the profit expectations of the vendor grow very high and it succeeds in pursuing this end, the client may find that it is in an expensive trap. The client attempts to secure the supply of IS products and services in an economically sound way. To some degree the logic of action of a typical vendor contradicts the logic of action of a typical client, because the client and vendor are in an adversarial relationship: a euro gained by the vendor is one lost from the client's wallet (cf. Cullen et al., 2005). This adversarial relationship is moderated by two facts. First, it is assumed that the chosen vendor has during the sourcing process been deemed to be the best alternative for the client. Second, both parties may benefit out of a cooperation that is deemed as the most economic way of organising the services needed by the client. Of course, over time this initial equilibrium state may change in favour of one of the parties especially, for example, if more lucrative alternatives exist for the vendor as the competitive climate improves.

Some researchers have assumed that in IS outsourcing the parties form a strategic alliance, and indeed, cooperation between IS vendor and its client has features of a strategic alliance because of its longevity. However, a strategic alliance also entails the sharing of risks and rewards. In a seminal case, Applegate and Montealegre (1991) described how Kodak outsourced IS services as a strategic partnership. The view of strategic alliance (cf. also McFarlan and Nolan, 1995) has somehow downplayed the simple fact that in many cases the IS client is only buying products and services and the vendor is selling them, without any real intent of forming an alliance or changing the firm's boundaries (cf. Lacity and Willcocks, 1998).

As Cullen et al. (2005) argue, there is a multitude of options as to how to configure the IT outsourcing client–vendor relationship. Towards the end of this paper we elaborate in more detail the notions that have been pertinent for our case study of customised IS application development. We hope that our article is able to increase the understanding of the outsourcing process, an area in need of research as identified by Dibbern et al. (2004, p. 88). We also discuss vendor pricing policy which is deemed by Cullen et al. (2005, p. 370) to be a topic on which the outsourcing literature is surprisingly silent.

In this study, the client was trying to find the optimal kind and level of trust and control in order to safeguard itself against any possible opportunism of the vendor (Das and Teng, 1998; Wicks et al., 1999). Simply defined, trust entails that a client is confident that a vendor will deliver what has been stipulated in a contract, deal with problems, and be fair and honest in its charges (cf. Kern and Willcocks, 2002, p. 12). Control is the other side of the coin (Gallivan and Depledge, 2003; Möllering, 2005). Good control means that the controller can be reasonably confident that no major, unpleasant surprises will occur: establishing control mechanisms makes the attainment of desirable outcomes more probable and reduces the level of risks (cf. Das and Teng, 1998, p. 493).

We take a process point of view and examine the case history of a contractual cooperation during the years 1996–2002 (cf. Argyres and Liebeskind, 1999; Newman and Robey, 1992; Nooteboom, 1996). The empirical material comes mainly from a process where up to 13 Finnish universities with outside software houses developed a student record system, called Oodi (Heiskanen et al., 1998; www.oodi.fi). Currently more than half of Finland's total university student population are in Oodi universities. The expected number of direct Oodi users will grow to 100,000 individuals when all the components of the system targeted at students and faculty members have been installed. The University of Helsinki administers the Oodi consortium and is the legal body that signs the contracts with software vendors on behalf of the consortium.

The motivation for this paper is straightforward. We wish to analyse the dynamics of the client vendor relationship from the inside to increase our understanding of the general IS outsourcing process. We want to show how and why the client's behaviour oscillated between trust and control when they were trying to gain confidence that a project and its costs are on the right course. Part of our task is to condense the vast amount of empirical data into an easily grasped graphical format using social process modelling (Newman and Robey, 1992).

The paper proceeds as follows. An overview of the theories of power, trust and control is provided leading to a simple classification that brings these notions together. This section also explicates the contextualised social process model. This is followed by describing the research approach and analysing the first and third authors' role as active participants in the process including how we analysed the data in order to construct the contract trajectory. We also present the background to the case. The next section combines theory with the observed histories by presenting the results of the cooperation of the client and the main vendor. Possible interpretations of the case are then discussed. The concluding section sums up the implications of this study for research and practice, and suggests topics for further research.

2. Power, trust and control in IS client–vendor relationships

Ideally, trust and control are balanced in such a way that both the client and the vendor are confident that the relationship will be so beneficial to them that they are willing to continue it and will be satisfied with its outcomes. According to the literature, trust and control are complicated notions (e.g. Bachmann, 2001; Das and Teng, 1998, 2001; Gallivan and Depledge, 2003; Möllering, 2005; Nooteboom, 1996; Reed, 2001; Sambamurthy and Jarvenpaa, 2002; Wicks et al., 1999). Moreover,

both of them are related to the (bargaining) power that can be exercised in the relationship by the parties (cf. Argyres and Liebeskind, 1999). Power, for its part, has been recognised to be an important but complex and elusive concept in IT research (Jasperson et al., 2002), although the resource dependency view (e.g. Swinarski et al., 2007) seems most applicable for our purposes.

We start our analysis examining the perspectives of power. Mintzberg (1983, p. 4) defines power as simply the capacity to effect (or affect) organisational outcomes. In our case the outcomes are produced by the joint efforts of the client and the vendor. The outcome for the client is IS services (e.g. enhancements and maintenance) and IS products (e.g. systems), the resources spent to produce them and the continued relationship with the vendor. The outcome for the vendor is remuneration and the possible indirect effects concerning, say, their reputation for future prospects with this and other clients. Both parties also learn from their experiences. Lacity and Hirschheim (1993) relate power and politics. They write, based on Pfeffer (1981) and Tushman (1977), that power is the potential of an actor to influence the behaviour of another actor on a particular issue. Politics can be defined as the structure and process of using power. In this paper, following Kern and Silva (1998), we restrict our scope and discuss power as the capacity of the client to discipline the vendor in the outsourcing relationship.

It seems reasonable to assume that both parties use their respective power bases in order to obtain an "optimal" outcome *from their own points of view*. For the commercial vendor, the optimal outcome may best be measured in financial terms, either in the short term or the long term. The optimal outcome for the client in our case is more difficult to define, because of its nature as a public organisation. The University of course needs administrative information systems, but the relationship between the prosperity of the organisation and its information systems is not a straightforward one. Perhaps the best way to characterise the optimal outcome from the client's point of view comes from the project group or individual level: a successful project, delivered within a reasonable schedule and budget, gives personal and professional satisfaction, although there is no direct compensation scheme related to performance. According to the first author's experience over 20 years (Heiskanen and Assinen, 2003), the University has also shown great patience in waiting for troubled IS projects to eventually deliver their results. In conclusion, it could be said that the client organisation defines the positive outcome to be the long-term success of the IS projects with users who are eventually satisfied. The organisation has been reluctant to stop projects prematurely in spite of overruns of the original budgets (cf. Keil, 1995; Keil and Robey, 1999, 2001).

The theoretical constructs of power, trust and control between client and vendor have been widely discussed in IS/IT outsourcing research (cf. Gallivan and Depledge, 2003; Kern and Silva, 1998; Kern and Willcocks, 2002; Langfield-Smith and Smith, 2003; Swinarski et al., 2007), but we think that more investigations are still needed. Our view is that these three notions must all be discussed when analysing the dynamics of client–vendor relationship development. Our argument is based on two points of view. First, Argyres and Liebeskind (1999) and Miranda and Kavan (2005) maintain that relationship governance is inevitable for the whole period of client–vendor cooperation: it is not possible to make an initial contract and give the relationship no attention after contracting. Argyres and Liebeskind (1999) argue convincingly that the bargaining power possessed by the contracting parties is an important factor for the outcomes of the relationship. Second, trust is sought in all forms of business relationship (Cullen et al., 2005, p. 378), but the existence of trust means that there must also be present the possibility (of some degree) of control at the same time (Gallivan and Depledge, 2003; Möllering, 2005).

It is possible to omit one or two of power, trust, and control, but the analysis of the client–vendor relationship suffers consequently. Some writers consider only one aspect: e.g. Babar et al. (2007) discuss only trust. Lacity and Hirschheim (1993) acknowledge the importance of power, but they do not elaborate how trust and control are related to the use of power in the client–vendor relationship. In another case, Sabherwal (1999) did not consider that power was a key notion in the analysis of trust and control. He conceptualised that unexpected changes can be handled through structural controls that are written in the contract and via trust that is generated by the psychological contract between the client personnel and the vendor personnel. This may be possible, but this presumably requires that the client–vendor cooperation has evolved into a cooperative community (cf. Adler, 2001).

The distinction between a formal/written contract and a psychological contract (Handy, 1999; Koh et al., 2004) in IS outsourcing could be influential. For example, Miranda and Kavan (2005) suggest that after making the formal, written contract the cooperation continues mainly according to a psychological contract. Quite probably both types of contract are needed because it is difficult to write a formal contract that is specific enough. Hence the need for a psychological contract.

For trust in IS outsourcing, a typical classification is presented by Sabherwal (1999) who found four types of trust: calculus-based trust, knowledge-based trust, identification-based trust, and performance-based trust. However, these classifications of trust were criticised by Bachmann (2001, p. 339) who claimed that it is doubtful whether such schemes take us very far in coming to grips with the trust phenomenon itself. He insists that much theoretical input is needed to understand fully how trust works as a governance mechanism within trans-organisational relationships. The point of Bachmann's critique seems to be that a more insightful classification of trust is required. Our tentative suggestion is that to a great extent the definition of trust (as well as control) is case specific. Towards the end of this section we develop our definition for power, trust and control. Later we discuss whether it is possible to generalise our definitions to other circumstances. Our point of departure is that from an IS client perspective: power, trust and control are related to the issue of behavioural uncertainty of the vendor who may use guile to create hidden costs to be paid by the client (cf. Watjatrakul, 2005, p. 391).

We agree with Bachmann (2001, p. 351) when he writes that trust and power can produce very different qualities of relationships and they are not equal in the harm or benefits they can produce for the actors on both sides. Actors usually have

good reasons when they consider the use of power, or control that is based on power. According to Bachmann, power may generally be the second best choice, but it may be a good choice if trust is unavailable. Bachmann (2001, p. 339) also cites literature that maintains that trust is simply a particularly sophisticated tool to exert power on weaker business partners. Nooteboom (1996, p. 998) produces plausible examples of the reactions of industry representatives towards trust: the automobile industry could not "afford" to trust their suppliers in times of declining sales, while for the oil and gas exploration and production monopolies, such trust was easily "affordable".

The direct power basis of the parties is defined through contracts. The IS incomplete contracting issue (Richmond et al., 1992; McFarlan and Nolan, 1995, p. 17) makes it desirable that the parties enter into a relational contract (see for example, Kern and Willcocks, 2000, pp. 345–346). The importance of power in the exchange relation is increased, because the parties are dependent on each other for a long period. Power is important, but it should be used cautiously. Bakos and Brynjolfsson (1993), using the economic theory of incomplete contracts, show that a buyer can and will often maximise profits by limiting their options and reducing their own bargaining power.

We maintain that the power plays between an IS vendor and its client can best be understood through mutual dependency: the client is dependent on the development resources and technical expertise of the vendor, and the vendor is dependent on the client's compensation and expertise in the application area (cf. Swinarski et al., in press). This is the first dimension of power according to Hardy's classification (1994, p. 222), and is perhaps the easiest one to define and understand compared with the three other more subtle ones, (2) the power of non-decision making, (3) the symbolic power dimension, and (4) the Foucaudian power of the system. The three latter dimensions of power seem to be more relevant within either the client or vendor organisation, not between them (cf. Allen et al., 2002).

Our conceptualisation of trust and control is a modification of the frameworks developed for the analysis of strategic alliances. Summarising the strategic alliance literature, Das and Teng (2001) define trust as having two dimensions, goodwill trust and competence trust. Goodwill trust of the trusting party refers to the intentions of a trustee to perform according to the agreements and not to employ opportunities for defection (Nooteboom, 1996). Competence trust concerns a partner's ability to perform according to agreements and goodwill trust refers to his intentions to do so. Our modification of the trust dimensions is based on the simple notion that the vendor should deliver the products and services according to the agreed schedule and price. If different opinions of the contents of the contract surface, the vendor should show goodwill by their behaviour when settling contractual disputes. In summary, we get three areas in which the client may trust the vendor: *performance* (contents and schedule of deliveries), *price*, and *behaviour*. Essentially we have separated the competence trust of Das and Teng into performance trust and price trust. Our behaviour trust is directly related to the observed behaviour of the vendor or client personnel when they handle the problems that emerge in the relationship. The general understanding that the trustor is vulnerable to the acts of the trustee is embedded in our conceptualisation.

When considering the concept of control, Das and Teng (2001) use the "traditional" classification that consists of behaviour control, output control, and social control, originally developed by Ouchi (1979). We think it more straightforward to use the same classification for both trust and control, because our conceptualisation is being developed to understand the action design from the client's perspective. This action perspective is the major reason for our classification: the client may choose to act in any of these three different areas and thus exercise control. In this way, we can relate the concept of control to the observed behaviour of the client. Trust, on the other hand, means the absence of control activities. Our reasoning is compatible with Möllering (2005) and Gallivan and Depledge (2003) who maintain that trust and control are "the different sides of the same coin", i.e. they are in a dialectical relationship. The existence of trust makes it necessary for control to exist, and vice versa.

To conclude: we obtained three interrelated areas to be taken into account in the analysis of trust and control in our case. The first one is the performance of the parties. Do they deliver what they promise within the budget and schedule? Actions to correct deficiencies in this area can be called *performance control. Performance trust* means the belief of one party that the other party is able to deliver its products and services according to what has been agreed concerning the contents and schedule of the software and services. Second, the price level of the vendor may be too high, and the client may want to influence this. Actions that ensue from this basis can be called *price control. Price trust* means a belief by the client that the price of a product or a service is "reasonable" or at least competitive, or the product or service produces value that makes it worthwhile to pay the compensation; i.e. the vendor is not over-pricing. For the vendor, price trust means that the business with the client is sufficiently profitable. Third, the behaviour or attitude of one party may show malevolence towards the other who may want to control and improve their behaviour. This can be called *behaviour control. Behaviour trust* means mutual understanding, goodwill, an intention to voluntarily take corrective actions, and openness when failures occur.

We agree with Das and Teng (1998) in their claim that confidence means a degree of certainty that a partner will behave in a desirable manner. Trust and control are the areas from which the confidence comes. Neither trust nor control alone is sufficient for explaining confidence, but even with minimum trust the partners can develop a fairly high level of confidence if the power bases and control mechanisms are adequate. When it is possible to fully trust a partner, there is no need for control activities. Control is involved when there is not a sufficient level of trust. Trust and control, as attitudes, complement each other in creating confidence. In the following sections of the paper, we will apply our notions of mutual dependency, power, trust and control to a IS client–vendor history.

2.1. The process model

We use the Newman–Robey social process model showing the relationship between users (or the client) and developers (or the vendor) to outline the shape of the process (Newman and Robey, 1992; Robey and Newman, 1996). In their process model, Newman and Robey (1992) identified three main elements: (1) the antecedent conditions or history, (2) the possible interaction states between the users and developers (acceptance, equivocation, rejection), and (3) the development trajectory of the interaction process. The interaction process consisted of "equilibrium" state progress passages, called episodes, and critical events between the episodes, labelled encounters. This model fits best the data we have concerning software contracting (cf. Choudhury and Sabherwal, 2003, p. 298).

According to the Newman–Robey model, information system development progresses through time as a series of longer *episodes*, punctuated by brief *encounters (cf.* Gersick, 1991) and we apply these concepts to the vendor–client relationship. Encounters mark the beginnings and ends of episodes. An example of an encounter can be the hand-over of a test system to the users. This may change the state of the interaction from acceptance to equivocation or even rejection when the users begin to discover that the proposed system does not fulfil their needs. Of course the very stability of episodes may be perturbed by actively constructing critical events (encounters). For example, if the vendor is inactive in a project for some time, the client may try to encourage progress by looking elsewhere for a solution. Other times the encounters may arise from events apparently unrelated to the project such as a change in personnel. But each encounter will represent a period of relative instability in the project during which the issues related to the project come under close scrutiny.

The focus of this paper is on the analysis of trust and control between the client and the vendor. Therefore, we have replaced the original classification acceptance–equivocation–rejection with a new one: trust–equivocation–control. Classification "*trust*" for an encounter or episode means that the client trusts the vendor and no control activities are needed. An example of trust is when the client allows the vendor to *bill for services by the hour. "Equivocation*" means some kind of wait-and-see, transitional stance. The classification "*control*" means that the client exercises controlling activities in order to change the functions of the vendor. Control activities may ensue for three reasons, as described above: the client may exercise performance control, price control, or behaviour control. For example, *contract negotiations* would be classified as performance and price control. We have grouped all these variants of control (and similarly for trust) into a single category in order to make the model of the process comprehendible and tractable. In theory, this grouping may lead to the bifurcation of the process description. For example, the client may at the same time trust the performance of the vendor but exercise price control.

3. Research method

3.1. Data sources

The focus of the study is the cooperation between the University of Helsinki (the client) and Novo Group (the vendor). The main point of view in this paper is that of the first author when he worked as the Chief Information Systems Officer of the client. He was also in charge of the Oodi consortium personnel. This point of view is supported by the practical role of the third author who was a project manager in an Oodi university during the research period and later became a project manager for the Oodi consortium. Research data consists of archived folders gathered over the years as personal project documentation (663 electronic documents in total), contracts, memos of meetings, e-mail messages (12,931 in total), personal notes and the like. The paper archive consists of 28 folders. In addition, there are three unpublished masters' theses written by Oodi practitioners[1] that have used the system as their focus of study. In addition, the first author wrote a 9 page document detailing 98 major events including contracting issues and his interpretation for the period 1990 to 2002. This document with an earlier version of this paper was sent to the vendor project leader to be commented upon. While the project leader generally agreed to our portrayal of the development history, he had some critical remarks towards our classification of the cooperation into periods of trust and control and we return to these differences later in the paper.

As the first and third authors are insiders in the process, special attention has to be devoted to the research methods used. Here the second author's considerable experience with contextualised social process modelling is of great help: he spent considerable time validating the data sources and writing of the first author. The second author also conducted interviews at four sites (HU, HSE, SibA, and LTU; these organisations are explained in Section 3.3).

3.2. Analysing the data: reflection-in-action (the reflective IS practitioner)

The idea of basing academic research on data generated during normal IS development process grew gradually during the first author's work on his Ph.D. in the late 1980s and early 1990s (Heiskanen, 1994, 1995). Inspired by the work of Schön (1983), the first author investigated the possibilities to put his direct experience from practice into a form that would make sense to both academic and practical audience (Heiskanen and Newman, 1997). The task resembles what Nonaka and his colleagues (Nonaka and Takeuchi, 1995; Nonaka et al., 2000) call knowledge conversion from unarticulated practice to

[1] One each at Oulu University, Helsinki School of Economics, and Lappeenranta Technical University.

explicit knowledge. Currently there are other examples of how to reflect over development projects (e.g. Ayas and Zeniuk, 2001). Indeed, reflection and reflective practice have experienced a boom since the seminal work of Schön (1983). For example, a journal called "Reflective Practice" has been founded. A recent Google search with the keywords "reflective practice" produced 548,000 hits.

Reflection is the practice of periodically stepping back to ponder one's self and those in one's immediate environment (Raelin, 2001). The object of reflection may be in three areas. First, content reflection is about how a practical problem was solved. Second, process reflection examines the procedures and the sequence of the events. Third, premise reflection goes to questioning the presuppositions attending the problem. The timing of reflection may be anticipatory, contemporaneous, or retrospective. Originally, Schön (1983, p. 163) characterised the work of design as a reflective conversation with the situation where the practitioner functions as an agent and experient that appears to mean an experimenter who is at the same time a target and a part of this experiment. He coined the term "reflection-in-action" to describe all of this.

Research conducted on a process with which the researcher is actively involved has its strengths and weaknesses (Coghlan and Brannick, 2001; Gummersson, 2000; Heiskanen, 1995; Heiskanen and Newman, 1997; Heiskanen et al., 2000). The strengths are that access to the research site and many data sources is easily established, and the observation period can be extensive with minimal research resources. On the other hand, the danger of post-rationalisation and one-sidedness is considerable. This approach may become worthless, even harmful, if the researcher does not consider the reflective process as a possibility of personal growth but targets research results at any price. The danger of false research also exists, because the practitioner/researcher can easily construct misleading "research" data to support nearly any argumentation. Reliance on organisational documents, preferably produced by other authors than the practitioner/researcher is an asset.

Therefore, great care should be exercised about data gathering methods. The first author has felt that it is unethical to interview his co-workers for research purposes only. These interviews could have implied that the author was taking undue advantage of his dual role, aggrandising himself improperly, and intimidating the interviewees by giving "scientific" backing to his practical acts. In the same way, direct observations have been possible only when they occur as a part of the practitioner's role. All this brings irony to the data access issue: some phenomena are more visible to outsider observers than insiders. The issue is related to how the dual roles (practitioner, researcher) are mastered in the context of organisational politics (cf. Coghlan and Brannick, 2001).

Organisational conflicts are endemic and related to organisational politics (cf. Coghlan and Brannick, 2001). Therefore the insider researchers should develop procedures to cope with research reporting about conflicts in which they are involved. Sometimes it is enough to report in a conservative way, not revealing much of the conflict. This was the case in Heiskanen and Newman (1998) about a troubled IS development project: "the working climate of the project deteriorated dramatically during spring 1994" (Heiskanen and Newman, 1998, p. 842). Behind this reporting was a profound dispute how of to manage the project. If the conflict is essential for the research, then it is essential to base the description of the conflict on organisational documents, preferably written by some other party than the insider researcher himself. This was the case when the first author wrote his doctoral dissertation (Heiskanen, 1994) about the decentralisation of the student record functions of Helsinki University. There a conflict description was based on memos that were written by the party with which the first author had a difference of view as to how the decentralisation should proceed.

An additional issue is the anonymity or identity of the author and other actors or informants. The first author has chosen a writing style that does not hide his identity and practical role, because it explains why and how he has such intimate access to some data, thus increasing the credibility of the results. The writing style is related to what Walsham (1993 pp. 247–248)) calls cogency of reasoning: how to tell a scholarly and convincing story.

The disclosure of individual actors and the role of writers vary in in-depth studies of information systems. For example, Copeland and McKenney (1988), Mason et al. (1997a, b), McKenney et al. (1997), Lasher et al. (1991), and Caron et al. (1994) give the names of individual actors, while typical ethnographers, e.g. Schultze (2000) and Barley (1990), use pseudonyms for their informants and research sites. Generally, it is often considered unfair in social sciences to report in such a way that an individual can be identified. However, in historical studies the procedure is totally different: the anonymity of individual actors is of less concern.

The stance taken tries to find a parallel in good journalism where the anonymity of the informants and participants is honoured to a certain degree, depending on the position of the person (Skolnik, 1989; Patton, 1987, p. 135). The issue of participant anonymity or publicity is very important, because at least in the long run the participants will learn that in the projects of the publishing reflective practitioner their anonymity will be disclosed to some degree. This will most probably affect their future behaviour.

In some in-depth studies or ethnographies the anonymity of the organisation and the persons is demanded as a pre-condition for the entry of the researcher, although in many cases the anonymity of the organisation studied will eventually be disclosed, perhaps through the grapevine. In our case this requirement of disclosure is partly reversed, because many contracts between the University and the major software vendors contain a clause to the effect that the vendors agree that the projects are also research objects, and the vendor representatives should also be informants.

When it comes to the practical terms of the research methods used in this paper, the construction of the case history began when the first author compiled a detailed event list based on the historical documents of the focal projects mentioned above. The event list gives a pointer to the wealth of historical project documentation. This list served as the basis for the interpretations of this paper. The interpretations were made with theoretical lenses developed through analysis of the concepts of power, trust, and control, all three being taken as ingredients of a process study of the evo-

lution of the client–vendor relationship. Furthermore, our retrospective approach to analysis is well-established in management research (Gummersson, 2000, p. 122). The mastering of the vast amount of historical documents is often easier to an insider than an outsider, because the insider has memory traces that can be used when tracking a special document (cf. Coghlan and Brannick, 2001).

To situate our approach in relation with other and more established ways of doing intensive organisational research, we compare it to ethnography and action research. Here we have two dominant characteristics of RISPs[2] in mind: RISPs are both active and have professional stakes in the practical IS work that is also their research target. The first yardstick is ethnography; this choice makes the comparison between the active (RISP) and the passive (ethnographer). The second yardstick is researcher-led action research. The comparison here is between the active insider (RISP) and the active outsider (action researcher).

Ethnography is an established form of cultural anthropology with a well-developed researcher code of conduct (e.g. Sanday, 1979; Van Maanen, 1979; Bernard, 1989; Denzin and Lincoln, 2000). The ethnographer observes closely the organisation over an extended period of time, taking part in the daily activities of the people under investigation. However, an ethnographer is normally not supposed to be active in the manner of a practitioner, because the archetype of an ethnographer is that of a "professional stranger" (Agar, 1996).

The role of action researcher varies considerably from study to study. We develop the characteristics of an archetypal action researcher from Chisholm and Elden (1993) by pushing the archetype to the non-participant extreme; participatory action research is so close to reflective practice that it does not give enough power to the comparison. The non-participative action researchers are the leaders of organisational change processes. They are outsiders of the organisations in which they have clients. The researchers are normally in control of key aspects of the process such as data gathering and analysis, and the interpretation of the results. They may have theories of their own for action to be tested in the client organisation. The meanings for the organisation come dominantly from the outside experts (the researchers), not from the members of the organisation, although the latter may bring in-depth understanding or individual perceptions. The rich store of clients' unique knowledge tends to be downplayed in favour of the views of the outside researchers. These researchers are different from a reflective practitioner in four major aspects. First, they are outsiders and therefore may have difficulties to find the organisation to be studied. Second, they can leave more easily than a permanent member. Third, as outsiders they do not have a natural role in the organisation; their mere presence is an intervention (e.g. Schein, 1995). Fourth, they have a (novel) theory that they want to test in the client organisation, while a practitioner may well proceed without theoretical underpinnings.

We have summarised our comparison of ethnography, action research, and reflective IS practitioner (RISP) in Table 1. The issues are presented in the left-hand column and reflect the work of empirical researchers (Miles and Huberman, 1984: 230; Van Maanen, 1979; Coghlan and Brannick, 2001; Barley, 1990, p. 228; Pettigrew, 1972). The cells are our assessment of the threats posed by the three research methods for each issue.

To summarise, the RISP research approach is best seen as a branch of the wide array of action research options (cf. Coghlan and Brannick, 2001) in IS research taxonomies (cf. Galliers et al., 2007). The distinctive feature is that the roles of the researcher and the client are combined into the same (single) person. It is also possible to see, as Järvinen (2007) argues about action research, that RISP research is quite close to design science (Hevner et al., 2004).

3.3. The research sites

The parties of our case are Helsinki University (HU), and two software houses, Novo Group (Novo) and its subsidiary company Karjalan Tietovalta (KaTi). HU has 35,000 students pursuing degrees. Its full time equivalent number of employees is 7700 and the annual budget is about 370 million euros. The University of Helsinki represents the other Oodi Universities in negotiations with software vendors. In this context the first author's role has been to take care of the relationship with the software vendors and prepare decisions for the Oodi board (see Fig. 1).

The personnel of Novo numbered about 2200 and its annual turnover was 320 million euros during the core years of our study. KaTi was much smaller software house. The number of its personnel at the beginning of the cooperation in the early 1990s was below ten. During the core part of the history the personnel at KaTi expanded to about 30 in number and its turnover to about 2.6 million euros. In June 1999 Novo bought KaTi. At the beginning of 2002 KaTi gave up its independent status and was merged with Novo.

The authors have chosen four IS histories to describe the evolution of the client–vendor relationships. This is a purposeful sample. The reason for choosing these particular cases is that they form a logical chain: previous case histories give a basis for the future actions and expectations of the client. The core system is Oodi, a nation-wide student records system. Three preliminary histories (auditorium reservation system, budgeting, and dental clinic IS development) give a historical background for Oodi development. The same kind of issues as with Oodi emerged when developing Oodi admissions module, but we omit this system for brevity. In addition to these systems, Novo has delivered IS accounting and data warehousing products and services for HU.

[2] RISP is our term which stands for reflective information systems practitioner.

Table 1
Comparison between ethnography, researcher-led action research and reflection-in-action. Gen means general issue; Proc, research process issue; and Post means post-research issue.

Issue	Ethnography	Researcher-led action research	Reflection-in-action (RISP)
Holistic fallacy (Gen)	Considerable threat	Considerable threat	Unlikely to happen
Elite bias (Gen)	Considerable threat	Possible, because the researcher is engaged into the client organisation by a member of the organisational elite	Considerable threat, especially when the career prospects of the practitioner are dependent on the research findings
Going native (Gen)	Considerable threat	Unlikely to happen because of research professionalism	Unlikely to happen in the classical sense The threat comes from too limited a reflection if the practitioner remains too close to his (initial) perceptions
Neutrality of the actor (Gen)	Option for neutrality exists	Problems because of the own agenda of the researcher	Problematic, because the practitioner may also have stakes in the process; difficult to withdraw from the research site in case of conflict
Experience of the actor (Gen)	Multiple sites, broad comparisons possible between different organisations	Multiple sites, broad comparisons possible between different organisations	Single site or a few sites. Deep but narrow experience
Selection of the research site (Proc)	Can be chosen according to the research interests	Can be chosen according to the research interests	No choice possibility, the research site is the organisation of the practitioner. This "convenience sample" restricts the research topics to those phenomena present in this particular organisation
Entering the research site, moving around the research site (Proc)	Difficult, sometimes impossible. Access to one group may exclude the ethnographer from others (e.g. management vs. labour unions)	Entering is easy, because the client management has hired the researcher. Access to some groups may be difficult or impossible	Usually easy, because the practitioner is already in the site. Strained relationships may prohibit access to some parts of the site. Access to other sites may be difficult, but perhaps easier than for ethnographers
Access to data on the site (Proc)	Demands effort. Relies on good will of informants. The ethnographer must gain the trust of the actors	Partly easy (management), partly difficult (antagonists of the management)	Usually well-established. Some actors may have specific motives for sharing or withholding information, because the Reflective Practitioner is not a neutral person
Mastering the language of the site (Proc)	Takes time	Takes time, may not succeed at all	By default
Actor as a perceived threat in the site (Proc)	Only modest and rarely occurs	Varies from case to case, may be very high	Varies depending on the amount and severity of conflicts; may be very high
Penetrating the fronts of the informants (Proc)	Possible, demanded from a good researcher when informants seem to distort evidence. Corroboration may alleviate this problem	Possible, demanded from a good researcher when informants seem to distort evidence. Corroboration may alleviate this problem	Unethical for research purposes in case of conflict; other means should be employed. Unnecessary if there is no conflict. Authority can distort findings
Reporting evidence and verification (Post)	Established rules and procedures exist for checking research validity	Established rules and procedures exist for checking research validity	No tradition. Must be treated on a case- by-case basis
Burden of proof (Post)	Heavy, because the researcher has adopted the role of a "professional stranger"	Varies from moderate to heavy	Alleviated by the researcher's familiarity with the field, but can be a problem because of the threat of partiality and revisionism

3.4. Preliminary histories – antecedent conditions

History is considered important for its patterning ability. Without interventions or contextual changes, established patterns (e.g. client–vendor relations) will tend to be reproduced (Newman et al., 2008). Three of the case histories – the auditorium reservation system, the budgeting system, and the dental clinic – are shorter descriptions and form the background for the major story, the Oodi student records system. Preliminary histories for these systems are presented in this section.

In the early 1990s, KaTi was chosen following a bidding competition to deliver an auditorium reservation system for HU.[3] The development process was at first problematic, but eventually the system was delivered according to the user's requirements in 1995. The dismissal of the project leader and the CEO of the vendor added dramatic aspects to the development process. The reason for these actions was that the project leader could not handle his workload; the inferior economic performance of the firm was the reason for letting the CEO go. The new project leader (Kim,[4] a subcontractor for KaTi), supported by the new CEO

[3] The system history description is based on project documentation, 5 paper folders in the HU archive.

[4] We use pseudonyms to denote the vendor representatives. It is important to identify them for explaining how the relationships evolved between the individual actors. However, we are not using their real names, because we consider that irrelevant for the purposes of this paper.

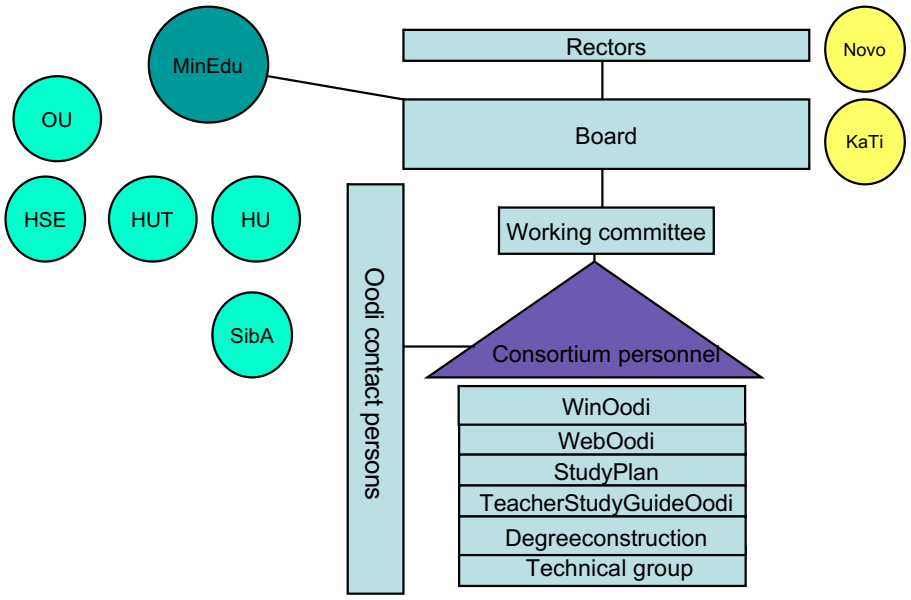

Fig. 1. Oodi-stakeholders 1995. *Note:* OU – Oulu University; HSE – Helsinki School of Economics; HUT – Helsinki University of Technology; HU – Helsinki University; SibA – Sibelius Academy.

(Patrick), could do the job to the satisfaction of the client. Both newcomers later continued cooperation with the client in the Oodi process.

The development process of the budgeting system[5] (Heiskanen and Newman, 1998) began in 1991 following the Finnish State decision that a new management procedure should be installed in all state bureaus. In early 1993, after a bidding competition, it was decided that the budgeting system specifications would be developed with Novo. In October 1993, the State Computing Centre approached HU with an very attractive tender for a state-of-the-art client–server budgeting package that claimed would have all the functions HU would need. It was "aggressively" priced with HU acting as a pilot customer. After bargaining with both possible vendors (the State and Novo), HU made the decision to develop the budgeting system with the State Computing Centre. Further analysis of the budgeting system development process is beyond the scope of this paper. What is relevant here is how the first author perceived the bargaining behaviour of the Novo executive and director (Oscar, Hugh, respectively): discussions were straightforward and open, and it seemed that both parties understood each other's points of view. This gave them the credibility they required for further projects even though HU chose the State Computer Centre solution.

In October 1996, Novo and the Dental Clinic of HU signed a contract for Novo to deliver an integrated dental, patient, dental student, and billing and accounts receivable system.[6] The Clinic would act as a pilot customer of this generic product that Novo planned to introduce to the market. In November 1997 the personnel of the Clinic contacted the first author and asked whether he could help in negotiations with the vendor. The project was in trouble, even though the system was in use. The response times were extremely long, occasionally data were lost by the system, and sometimes the system would totally collapse.

It appeared that the integration of the parts of the system had not been successful. Additionally, the original vendor of the dental subsystems announced that it could no longer continue its development. Key people from the original vendor left the firm, and a Novo executive (Oscar) began to suspect that the dental part was not operational.

The project was cancelled in October 1998. While the vendor paid fair penalties, the billing and accounts receivable subsystem was accepted and paid for by the client. The impression we got from the actions of Novo during the process was that the vendor executive (Oscar) accepted his responsibility and did not try to stretch the contract to the advantage of his firm.

In summary, the relationships between the client and the vendors had been positive and the parties enjoyed a large measure of good will and trust. This would then prepare the ground for the much larger Oodi project.

3.5. Oodi

In 1995 an agreement was signed by five Finnish universities to begin a feasibility study to produce a common information system to replace a variety of outdated student record systems (Heiskanen et al., 1998).[7] This Oodi software would

[5] The system history description is based on project documentation, 7 paper folders in the HU archive.

[6] The system history description is based on a project folder in HU archive.

[7] The costs of the feasibility study, paid to an experienced consultant, was 110,000 FIM or approximately 18,500 Euros and was split equally between the five pioneer members.

Table 2
Summary of contracts for Oodi development between the client consortium and the vendor alliance.

Contract and date of signature	Time frame	Value (1000€)	Estimated amount of work (days)
Specification 24.9.1996	10.9.1996–31.1.1997	158	302
Framework 22.4.1997	22.4.1997–22.4.2002	NA	NA
Planning 22.4.1997	14.4.1997–19.12.1997	242	450
University adoptions 15.4.1999	1.2.1999–31.5.2000	Hourly rates	349
Programming 14.5.1998	1.2.1998–30.4.1999	706–745	1355
Maintenance 2.2.2000	On going	Hourly rates	NA

support administrative personnel, teachers, and students with a state-of-the-art user interface and www/Internet capabilities, and enjoy an operating life of over 10 years.[8]

Oodi was developed by the university consortium and an alliance of two software vendors (KaTi, Novo) that first won the bidding competition of the specification project in spring 1996, and later won the bidding competition for design and programming in spring 1997. The client suggested that two rival software houses, KaTi and Novo, should cooperate in Oodi development. KaTi and Novo both had already developed software packages for student records, KaTi for universities and Novo for polytechnics; so they both knew the business area. If it had been decided that only one software house was to be used, KaTi would have been the choice. In addition to the modest price of its bid, the key persons (Patrick, Kim) of this small vendor were familiar with the first author from previous co-operations. However, the size and the risks of the project were perceived by the client to be so great that a sufficiently large software house was needed. Should the project fail, a big vendor could recover the loss and pay the penalties. Over the years the parties (the client consortium and the vendor alliance) signed several contracts that are described in Table 2.

The vendors and the client consortium together chose Compuware's Uniface 7.2 to be the development and deployment tool. Later this choice was claimed by the vendor to be the reason for most of the problems they had. Whether this is true remains unanswered in this paper. What is evident from the case history is that this combination of application, vendor and software tools did not perform as the client expected.

The specification and design phases did not pose any apparent problems in 1996 and 1997. However, when the first pieces of software were delivered in spring 1999, it appeared that the functionality of the software was not as the client representatives wished. Most likely the client representatives had not put enough effort into reading and correcting the specification documents. Moreover, they complained that the vendor staff had mechanically transformed the plans into programs, without giving enough consideration to how it would be possible to interact smoothly with the system. Although we might speculate that increasing user involvement with the system would have improved the results, the evidence shows that the project group had enough expertise and it would have been impossible to arrange greater involvement from the user side.

The client and the vendor negotiated intensively about the price of the programming phase in early 1998. The client used an external consultant to evaluate the bid. Consequently, the target price was set about 10% below the bid, without removing any functionality from the project plan. The maximum price the client would pay was also set. It was also agreed that if the vendor succeeded in delivering the system at a lower cost than the target price, it would receive a bonus.

The first software deliveries contained many errors, and the "debugging" of these was time consuming. Moreover, the client requested many changes to the functionality of the software. Work progressed, however, and the project was formally ended in August 1999. The work however continued to warranty the software, as well as normal maintenance but now as a service agreement. In order to master the software changes, a system called Prodoc was installed. It contained the description of the changes needed. Later the changes were classified either as corrections or improvements. Table 3 contains the cumulative number of software changes made in 2000–2002, according to the Oodi situation reports.

Two members of the client consortium, HU and the Lappeenranta University of Technology (LTU)[9] had to begin the use of Oodi before the millennium changeover because of Y2K problems with their old systems. This appeared to be a painful operation, because the testing of the software was not complete. The system was also slow. User personnel had to work over time, and LTU had to hire extra workers. An additional problem was that the web application of Oodi did not function at all in the Lappeenranta network. The web application was supposed to be used by the students for the course and examination registration. This had worked well with the old system, but now it required a manual work-around. In May 2000 the web application tools were changed from Uniface to Java and WebLogic. With these tools the vendor was able to deliver an acceptable web application that was put into use in LTU in August 2000. All these problems received public attention via the local press. The student union newspaper even published an "obituary" for Oodi after the web application had crashed after a few seconds into its first real test trial with several users.

[8] At the time of writing, the consortium consists of thirteen members and six vendors including the Novo Group and has an annual budget of over 1 million Euros. New members pay a joining fee and all members pay an annual maintenance fee based on the size of their student body.

[9] LTU joined the consortium in 1998 as the sixth member.

Table 3
The cumulative number of changes made to Oodi software.

Time	Cumulative number of software changes
10.5.2000	742
1.11.2000	1091
14.3.2001	1293
25.10.2001	1466
10.4.2002	1607

Table 4
Joining consortium (J) and adoptions (A) Ao represents the start of an extended adoption.

	-95	-96	-97	-98	-99	-00	-01	-02	-03	-04	-05
HU	J				A						
HSE	J						A				
OU	J					A o					
SibA	J								A		
HUT	J					A o					
LTU				J	A						
THA							J		A		
SBS							J		A		
UADH								J	A		
JoU								J			A
VU									J		A
LU									J		A
TuSE										J	A

Note: THA – Theatre academy; SBS – Swedish Business School; UADH – University of Art and Design Helsinki; JoU – University of Joensuu; VU – University of Vaasa; LU – University of Lapland; TuSE – Turku School of Economics.

Testing proceeded slowly during spring 2000.[10] The client had requested more programming resources from the vendor already in December 1999, but the vendor could not manage this. The vendor had allocated its resources according to the autumn 1999 negotiations. In January and February 2000 it became apparent that more money was urgently needed to get the software ready. So in March HU loaned 2 million Finnish Marks to the consortium,[11] nearly doubling the consortium's budget for the year 2000. It was agreed that the consortium would pay the loan back by the end of 2003.

Gradually during the year 2000 the vendor raised the development resources up to a level of about seven full time person equivalent (FTEs) from the previous level of four. This was further increased to about fifteen FTEs in spring 2001 working on Oodi. In 2002 the FTEs was reduced to a level of around four FTEs.

The first real indication of the eventual success of Oodi was that the Helsinki School of Economics and Business Administration (HSE) successfully adopted Oodi in April 2001. Another indicator of the success was that new universities chose to join the Oodi consortium (Table 4). Furthermore, HU users gave the Oodi software good scores for their levels of satisfaction in a user survey (5.4 on a 7 point scale – the second highest score of 13 systems assessed (Internal report, 20.12.2002)). Finally, in the 2004 annual report of the Oodi consortium it was stated:

> "The functionality and user-friendliness of Oodi have been developed considerably since the premature start of use in the beginning of year 2000. According to the user surveys in HU in spring 2002 and in OU in spring 2003 the usability of Oodi is at least on satisfactory level.... The users of HU Oodi are clearly more satisfied to their system than are the users of personnel or accounting systems towards these latter systems. In OU the users graded Oodi to be of good average among seven surveyed systems. The number of the users of Oodi was enlarging greatly because of decentralization. The Oodi user satisfaction grew rapidly when users got more experience and learned the system." (Oodi Annual Report 2003, 14.6.2004, p. 4, translated from Finnish.)

[10] This was witnessed e.g. in the e-mail messages the first author received from a vice rector of LTU.
[11] Approximately 336,000 Euros.

Table 5
An illustration of data analysis.

	Time (month/year)	Classification	Explanation
ep7[a]	9–12/2000	Control	Negotiation period, ended by a client–vendor meeting on 15th of December 2000
en8	1/2001	Trust	The Oodi consortium board decides that the vendor will bill by the hour (a strong indicator of performance trust)
ep9	1/2001–summer 2001	Trust	Oodi development work

[a] *En* and *Ep* refer to encounters and episodes, respectively. They are numbered chronologically.

HU organised a bidding competition in summer 2001 for the delivery of IS development and maintenance services, including Oodi. The outcome was that three software vendors were nominated as the preferred Oodi vendors. Novo now had two competitors, one led by Kim who was no longer a subcontractor of Novo.

3.6. Data analysis

In this section, we give an illustration of how we took the data from the case and classified it according to the framework presented earlier (Table 5). In this way we show the data audit trail from the "raw" documents to final classification. The "raw" documents are used, along with our memory traces for constructing the major events in the model. If we take the following episode, encounter and episode sequence extracted from Table 6, we can trace in the archived documents how the decision was made to change the classification from control to trust. The issues of the Oodi development problems, discussed during episode 7, are collected in a free-style memorandum[12] written by the Oodi project manager (John). The opinions of Oodi university representatives and vendor managers are quoted in the memorandum text.

The starting point of the client and the vendor was that cooperation should be positively encouraged. The vendor announced that it was serious in the negotiations. The basic demand of the client was that the vendor delivers in due time what has been agreed, without errors in the deliverables. Moreover the client demanded that Oodi will be made as the back-bone of Finnish student administration, and the vendor should adopt an active and client-oriented approach. The quotations below are examples of how the client was exercising control over the vendor during episode 7:

> "The starting point: Is the standpoint of the client still that the cooperation with the current vendor are tried to put in good shape? Yes (said the client representatives) the vendor says it is serious with these negotiations." (Memorandum 15.12.2000, p. 1, translated from the Finnish.)

We also illustrate issues of mistrust felt by the client towards the vendor, and recorded into the memorandum. In the next section, we relate this mistrust to the lack of openness of the vendor. Openness means in this context that the vendor lets the client learn early enough about technical problems. The strength of feeling related to the inadequate technology tools and how the vendor should have informed the client about this became apparent in the 15.12.2000 meeting:

> "The client is wondering when the leaders of the vendor knew that Uniface is not a working tool for Web-Oodi and at which stage the vendor planned to inform the client about this. There are two unpleasant options:
>
> - the leadership of the vendor is unprofessional/incapable, and did not recognise the problem;
> - the vendor does not obey the ethical rules. . ., according to which these kind of problems should be brought to the fore as soon as they came to be known by a worker obeying the ethical rules;
> - Charles (the vendor project leader): there is also third option: things have been gone through with Compuware (the Uniface tool vendor) and the vendor has relied on Compuware.
>
> Patrick's (the managing director of KaTi, not present in the meeting, but conveyed by Charles) comment: there were no unnecessary delays – the client was informed as soon as the vendor workers knew. The workers seemed to have this view for quite a long time." (Memorandum 15.12.2000, p. 2, translated from the Finnish.)

Then at the Oodi board meeting the following month at the University of Joensuu, the decision was made to allow the vendor to bill the client by the hour, a strong indicator of trust. This encounter 8 changed the autumn 2000 control situation to trust. Control was relaxed as the client approved the scheme of delivery that did not contain pre-set contents for each new piece of software. Instead, the vendor could deliver what was possible within each "time-box":

> "With the introduction of time-box thinking, the consortium moves to buying labour by the hour instead of fixed-price deliveries". (Oodi board meeting memorandum 26.1.2001, p. 2, translated from the Finnish.)

[12] This eleven page long document was recorded during the 15.12.2000 meeting by Oodi project manager (John) and saved in the Lotus Notes database.

Table 6
The episodes (ep) and encounters (en) of the Oodi system.

	Time (month/year)	Classification	Explanation
en 1	5/1996	Control	Oodi specification bidding competition
en 2	9/1996	Trust	Oodi specification project contract is signed
ep2	9/1996–2/1999	Trust	Oodi specification, design and programming project, punctuated by two bidding arrangements
en3	4/1997	Control	Oodi design bidding competition is won by Novo/KaTi alliance. A contract for five years cooperation to develop Oodi is signed (Oodi base contract)
ep3	9/1996–2/1999	Trust	Oodi specification, design and programming project, punctuated by two bidding arrangements
en4	1–5/1998	Control	Oodi programming bidding with the chosen vendor, contract negotiations, contract signed 5/1998
ep4	9/1996–2/1999	Trust	Oodi specification, design and programming project, punctuated by two bidding arrangements
en5	2/1999	End of trust	Delivery of Oodi software for client testing
ep5	2/1999–12/1999	Equivocation	Oodi software testing; contract of support for Oodi adoptions is negotiated and signed
en6	12/1999	Equivocation	Oodi production begins
ep6	12/1999–9/2000	From equivocation to control	Oodi testing and use, first admission round in summer 2000
en7	9/2000	Control	Negotiation of how to improve the software
ep7	9–12/2000	Control	Negotiation period, ended by a client–vendor meeting on 15th of December 2000
en8	1/2001	Trust	The Oodi consortium board decides that the vendor will bill by the hour (a strong indicator of performance trust)
ep8	1/2001–summer 2001	Trust	Oodi development work
en9	Summer/2001	Control	Bidding competition for Oodi work
ep9	Summer/2001 onwards	Trust	The vendor will bill by the hour (a strong indicator of performance trust)

This trust continued for some time well into the future (ep9) apart from one further period of negotiations that was part of competitive arrangements in summer 2001. These events and others were then used in constructing the pictorial trajectory (i.e. Fig. 2, next section).

According to the procedures for retrospective action research (Gummersson, 2000, Coghlan and Brannick, 2001), we have shown above how our interpretation of the sequence en7–ep7–en8–ep8 is based on organisational documents. For an insider, it is possible to recall and understand what the recorded passages of texts meant, and how they can be interpreted. The 15.12.2000 memorandum contains a lot of ‘‘short-hand” notations that may remain obscure for an outside researcher. Also the Oodi board meeting memorandum 26.1.2001 is quite terse; e.g. it does not describe what the concept time-box means. The use of this term is one example of what is required to master the local language (cf. Table 1).

4. Power, trust and control in Oodi – results

The client’s perception in 1996, during the Oodi specification bidding competition, was that the vendor alliance of Novo and KaTi would be a trustworthy partner. The price of the project proposal by the Novo–KaTi alliance was acceptable, but the price was for the specification phase only. There was an obvious risk that the vendor could behave opportunistically during the later stages of development and set its price at an unacceptably high level, taking the advantage of the fact that hiring a new vendor would mean extra costs for the client.

The auditorium development project, as well as the personnel changes and reorganization of the business functions of KaTi during that project, gave support to the belief that the vendor would not behave opportunistically. There had been positive experiences of trustworthy behaviour from Novo in the budgeting project. More trust was generated from the dental system project deconstruction. Thus, after the Oodi specification bidding competition (en1), the second encounter (en2), the Oodi specification project contract, and the ensuing but similar episodes (ep2, ep3, ep4) are classified as ‘trust’ because of the positive antecedent conditions.

The equivocation of the client (ep5) began in spring 1999. Two encounters can be identified. The first of these two was the delivery of Oodi software for the client to test (en5). The delivery was several months behind the original schedule and the quality of the software was judged to be very poor. This kind of encounter is a clear indicator of a relationship change from trust to equivocation or control. The second encounter was related to the administration of Oodi admission module development; its description is omitted for brevity.

Equivocation continued in ep6 during the production use of Oodi. The client could exercise more control in autumn 2000 after the admission problems in summer 2000 had been cleared. The beginning of negotiations in September 2000 is an encounter (en7) that starts in episode 7, an era of open conflict between the client and the vendor. The client wanted to control the vendor, and the vendor complained that the client did not do its share of the work. The vendor executive (Patrick) wrote[13]:

[13] Patrick’s e-mail message to the first author 13.10.2000, translated from Finnish.

" Quite a lot of problems have been caused by the fact that the client representatives have perhaps lacked project work capabilities and apparently they have lacked possibilities to use their time for project work – reading documents and commenting them in due time. The outcome is that the real needs and procedures have emerged only during the beginning of use, when real feed-back begins to come much too late from the point of view of project success and client satisfaction."

This episode (ep7) in Autumn 2000 led to the meeting between the client and the vendor in December 15th, 2000. Then the client relaxed its performance control and moved to trust (en8). This move to trust entailed the change of the governance of the Oodi software improvements delivery. Before encounter 8, each piece of software delivery had a price tag that had to be negotiated in advance (i.e. control). This control was now relaxed and the vendor's personnel could bill by the hour after encounter 8 (i.e. a sign of trust). The rationale for this change was to lessen the administrative work of both parties' project managers.

Episode 8 was briefly punctuated by encounter 9, the bidding competition for further Oodi services, launched in June 2001. This was quickly followed by en9, a return to hourly billing (trust).

The episode and encounter descriptions are given in Table 6 and the pictorial description of the process is shown in Fig. 2 (cf. Pentland, 1999). The development trajectory of the client–vendor relationship seems to veer from a long periods of trust punctuated by relatively brief periods of control.

During the development process the price level of the vendor for Oodi work had increased significantly. The price of a working day for the specification (September 1996) was 521€, while the daily rate for specification work during maintenance contract (February 2000) was 756€. This amounted to a 45% increase. For programming, the increase of the daily rate was 21%. Estimating the respective amounts of specification and programming, the average increase was calculated to be about 30% over approximately three and a half years (September 1996 to February 2000). This made the client representatives think that the vendor's logic of action had changed from a cooperative, low-profit project to a more profit-oriented pricing policy. Therefore price control appeared to be an important issue. We discuss this in the next section.

One may think that the social process model of the history of our case is an over-simplification. However, as Robey and Newman (1996) have shown, it can be a basis for several different theoretical interpretations. Accordingly, the process

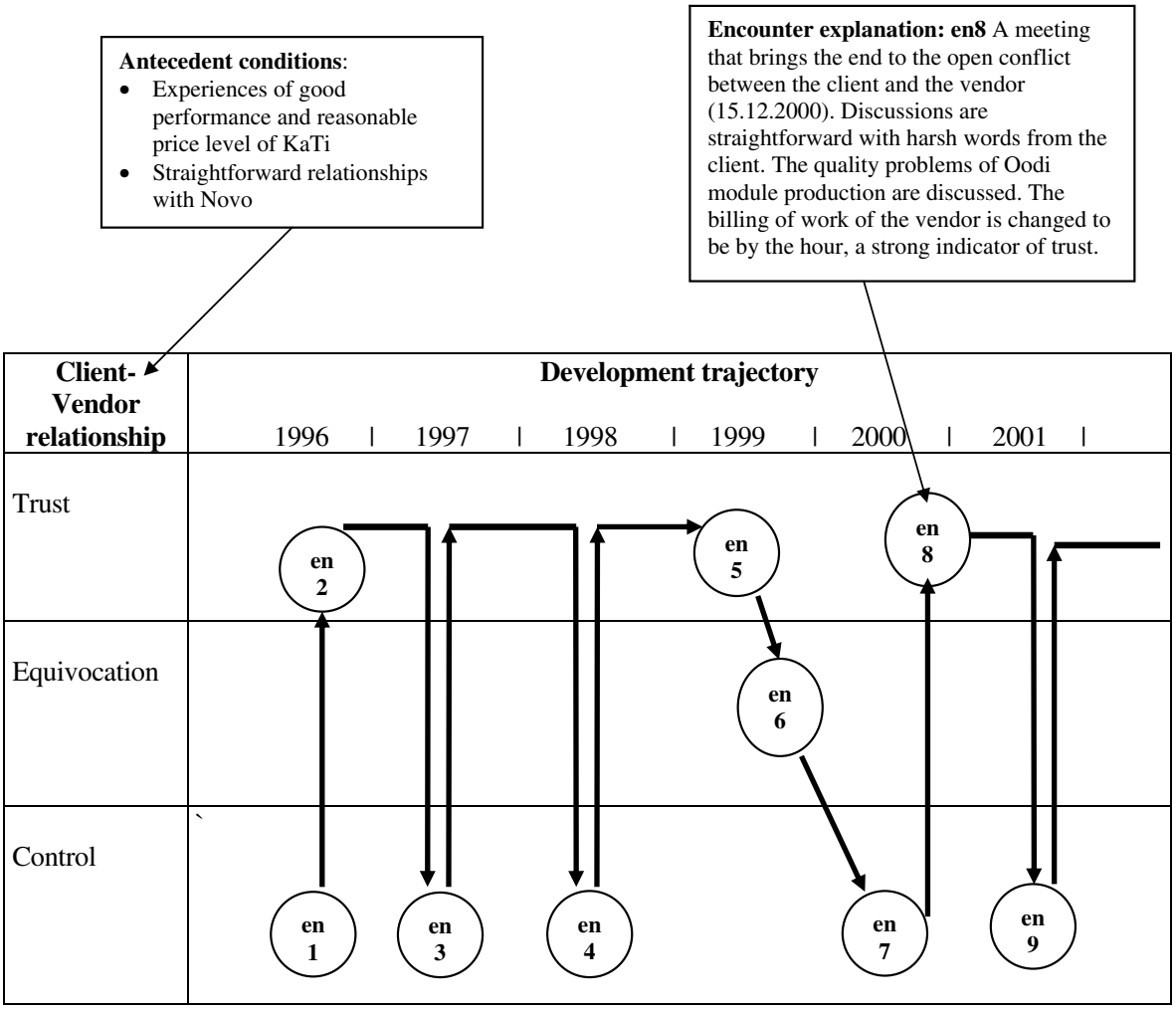

Fig. 2. The development trajectory of Oodi. En refers to encounters. (Episodes follow each encounter but are omitted from the figure for clarity.)

described above can have different interpretations. For example, it can be argued that the increased control exercised by the client was the outcome of a poorly defined service level agreement in the contracts. Another competing interpretation could be related to misplaced trust, indicating that the process should have begun with tight controls that would have been relaxed if the vendor appeared worthy of trust. According to this interpretation, the client thought that the trust perceived in the benevolent behaviour of the vendor generated via the preliminary projects (auditorium reservation, budgeting, and the dental clinic) would carry over to Oodi and admissions module development. Contrary to this belief and to the surprise of the client, the behaviour of the vendor apparently changed to one which was more self-oriented.

It is also possible to see the time between encounter 1 to encounter 5 as a period of control. This view was expressed by the vendor project leader Charles.[14] He wrote

> "It might be possible to interpret that the matter is on the way around, meaning that the period 1996–2000 had been an era of control. In the control phase, all the work was contracted by accurately pre-fixing the results, project plans and work amount estimates. Also the contract prices were bargained. There were also outside controllers like CCC, Uniface, Oracle."

Still another and somewhat intriguing interpretation for diminishing trust and increasing control could be related to the openness of the vendor, as perceived by the client. Kern and Willcocks make a similar point (2002, p. 12):

> "Honesty, on the other hand, became crucial when things went wrong and there had to be a working context that permitted admittance that there truly was an issue that required urgent attention. If this level of closeness was evident then, according to the interviewees, trust was truly said to exist in the relationship."

A lack of openness was evident on at least two occasions. The first one was related to the dispute about the immaterial rights of the admissions module (see footnote 16). The second occasion was the change of web application tools from Uniface to Java and WebLogic. A vendor programmer mentioned in a meeting with client representatives that a couple of vendor programmers had pointed out to the vendor project managers that it was not possible to develop a functioning web application with the tools they had.[15] According to the programmers, the managers told them to go on developing the system and that they would prove to the client that it would work. Only when the problems were apparent in spring 2000, were the tools changed. Time was wasted in a critical period because of this lack of openness. This was another indication that the increased control was because the client began to suspect that the vendor was not open enough in the relationship.

5. Discussion

You will recall that our motivation for this paper was the analysis of the dynamics of the client vendor relationship from the inside. The aim was to increase the general understanding of IS outsourcing processes by showing how the client oscillated between trust and control when trying to gain confidence that the Oodi project and its costs were on the right course.

Relating the results to our motivation, a straightforward interpretation of the dynamics of the social process model in Fig. 2 would be as follows. During episodes 5, 6 and 7 the Oodi process changed from fixed-price (product) delivery to service delivery.

The change from product delivery orientation to service orientation made a significant difference to the roles of the client and vendor project management. In product development, especially if the case is a fixed-price delivery, the client is inclined to demand as many features as possible for the product. The vendor would try to keep the amount of work as low as possible and deliver only what has been explicitly agreed. When the work is billed by the hour, the roles are reversed. Now the vendor is willing to do as much work as is possible, and the client "gatekeeper" (Heiskanen and Similä, 1992) should see that no unnecessary features are developed and that the budget is adhered to.

The main price level control method used by the client was to try to preserve the right level of competition. During the base contract period of Oodi development (1997–2002) this possibility had been in the background. Also other means to control the vendor were used only marginally. A rare example was in encounter 4, the Oodi programming contract bidding with the principal vendor. There the client hired a mediator to evaluate the vendor's bid.

The power basis of the client has been weak because of the lack of two critical resources. First, the client representatives did not check the Oodi specifications diligently. This led to a change in the pricing of Oodi from fixed-price delivery of prespecified software to billing by the hour in making modifications and enhancements to the software in 1999. The second issue was the scarcity of managerial capacity. An example of this was the first author's negligence in writing a contract for the admissions module.[16] Moreover, no efficient safeguards against vendor price increases were included in the contracts:

[14] This view is in Charles's e-mail to the first author in 29.11.2001 when he commented on the event list that was sent by the first author in 22.10.2001 to him and two other vendor representatives.

[15] This was witnessed in 23.10.2000 by several client representatives and recorded in an e-mail message sent to the first author.

[16] This admissions module was peculiar to HU's requirements and not strictly part of the Oodi software. The essence of the negligence was that the intellectual property rights over the software were not sufficiently large for the University. There was a disagreement between the client and the vendor of how the issue was handled in the leading group meetings of the admission module development. In a later contract the problem was remedied by the inclusion of a standard contract scheme as an appendix of the contract.

the vendor could use its normal price list when billing by the hour. It is possible to assume that the client deliberately restricted its bargaining power as Bakos and Brynjolfsson (1993) suggest, but that may not be the whole explanation.

Bachmann (2001, p. 351) claims that organisational actors often find it easier to bear the risk of open conflict than the risk of misplaced trust. The period from early spring 1999 to autumn 2000 was one of equivocation, not control from the client's side. This indicates that trust had not completely evaporated. Instead of arranging an open conflict in spring 1999, the client began to introduce changes to the software. The first author and some other client key actors were the intermediaries of this trust, but this trust was not shared by all client parties: some client actors demanded more aggressive actions towards the vendor during the period from summer 1999 to summer 2000.[17] An essential question has been the timing of the control measures. The client kept trust and showed patience and faith as long as it was necessary. Spring 1999 marked the possibility for the beginning of a period of control and also the possibility for a period of open conflict, because at that time the contract could have been cancelled because of the delayed delivery. However, the major periods of control were autumn 2000 and autumn 2001. Reflecting on the shape of the process indicates that the trust of the client was perhaps misplaced and control activities began too late.

In autumn 2000, during the first control period, it was unclear when Oodi or the admission module would be sufficiently functional and what the final cost would be. Therefore the most urgent goal of the client was to ensure that the applications would be finalised, and therefore the client decided to show trust in Oodi development but only equivocation towards the admission module development. The client also clearly expressed in October 2000 that they were not sure whether they would like to continue the cooperation, but try to find alternatives if the vendor's performance was not considerably improved. Thus the client tried to inform the vendor of their possibility of exit (cf. Alajoutsijärvi et al., 2000). The vendor showed consistent commitment to the development of Oodi. There were no symptoms visible to the client that the vendor would withdraw from the project (cf. Natowich, 2003).

The successful adoption of Oodi at the HSE in April 2001 showed that Oodi was a workable system after all. The performance of the admission module in summer 2001 was sufficient to prove that the application would eventually be successful. Consequently, during the second control period in autumn 2001, the client changed from applying performance controls to price controls. Both systems appeared now as "the right ones", but the client tried to ensure that it would not pay too much in the future. The analysis of our case gives support to the view that it is an important management issue to find a reasonable balance when the vendor wants profit and the client wants to control costs (cf. Cullen et al., 2005, p. 377).

The client was exercising control for Oodi in a different manner during the product development era (1996–1999) than during the service delivery era, 2001 and onwards (cf. Fig. 2). During the product era, trust was punctuated by short bidding encounters to control the price level of the vendor and to give confidence to the client. During the service era, control through competition was difficult or costly to arrange this way but the client tried to arrange continuous competition through the introduction of two additional software houses. The period in-between these two eras, from early 1999 (encounter 5) to autumn 2001 (encounter 9), seems to be a turbulent passage during which the eventual fate of the applications became apparent.

To conclude, the model in Fig. 2 portrays the dynamics of the contracting process in an easily read pictorial form. For example, the passage between encounter 5 and encounter 7 vividly describes the disappointment of the client, indicating the transition from a state of trust to one of tight controls.

6. Concluding remarks, further research

Using our method to analyse the dynamics of the client–vendor relationship from the inside of the process it was possible to gather data that revealed the pattern of how the client exercised trust and control differently during different times in order to be confident that the development process was in good shape. Through reflections of the past, we put forward an interpretation of the history in the form of a social process model. The model shows how the client increased control as much as it was possible within the contract, when it was realised that there were problems with the deliverables from the vendor. We also briefly showed that several additional interpretations could be generated from our data.

We believe that this case study gives novel insights into how to conceptualise trust and control in IS development contracts. Our case indicates that the (bargaining) power of the parties is a forceful factor underlying the choice possibilities of the act of the parties. We could show how the acts of the client were based on the varying amount of trust and control. Our conceptualisation of the relationship between trust and control was simple, based on the resource dependency view of the power bases of the parties. It would be interesting to investigate whether this simplicity of trust and control which are complementary sources of actions prevails in other cases of contractual IS development.

For practitioners, our case is an additional confirmation of the importance of writing contracts from the beginning in such a way that the client–vendor relationship is envisioned for a sufficiently long period of time. The reliance on previously generated trust is not enough; it must be augmented with proper contracts. The client should also secure that it has enough bargaining power and capabilities.

For research methods development, our case is an additional piece of research in the IS history tradition. The novel feature is the deep involvement of the authors in this process. In this paper, the authors have not used the vendor sources as research

[17] Indicative of these views are the e-mail messages received by the first author from a vice-rector of LTU.

material; vendor representatives checked the factual contents of the storylines, but their input for additional data or interpretations was otherwise scant. One possible avenue for further research is, as a complement to this paper, to write a research article that also presents the vendor's point of view. In previous cases (Heiskanen and Similä, 1992; Heiskanen et al., 1996; Heiskanen et al., 2000) we have attempted this which has been considered quite unique in IS research (Sabherwal, 2003).

This co-authoring issue has been occasionally discussed with the vendor, but no actions have been taken yet. In this way it would be possible to get a self-correcting mechanism for the interpretations of the past, which is customary in "traditional" history writing. For example, the change that the client perceived in the attitude and behaviour of the vendor, i.e. the move to a more profit-oriented view towards the client, may have emerged because of the changes in the roles and identities of the vendor executives. We also hope that in further research we would be able to identify and analyse the relationships between the different groups of actors within the client and show how this set of relationships conditioned the relationship management towards the vendor. We will also be producing further research on the later period of developing Oodi from 2001 to 2005.

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References

Adler, P.S., 2001. Market, hierarchy and trust: the knowledge economy and the future of capitalism. Organization Science 12 (2), 215–234.
Agar, M., 1996. The Professional Stranger: An Informal Introduction to Ethnography. Academic Press, New York.
Alajoutsijärvi, K., Möller, K., Tähtinen, J., 2000. Beautiful exit: how to leave your business partner. European Journal of Marketing 34 (11/12), 1270–1289.
Allen, D., Kern, T., Mattison, D., 2002. Culture, power and politics in ICT outsourcing in higher education institutions. European Journal of Information Systems (11), 159–173.
Applegate, L., Montealegre, R., 1991. Eastman Kodak Company: Managing Information Systems through Strategic Alliances. Case 9–192-030. Harvard Business School, Boston, MA.
Argyres, N.S., Liebeskind, J.P., 1999. Contractual commitments, bargaining power, and governance inseparability: incorporating history into transaction cost theory. Academy of Management Review 24 (1), 49–63.
Ayas, K., Zeniuk, N., 2001. Project-based learning: building communities of reflective practitioners. Management Learning 32 (1), 61–76.
Babar, M.A., Verner, J.M., Nguyen, P.T., 2007. Establishing and maintaining trust in software outsourcing relationships: an empirical investigation. The Journal of Systems and Software (80), 1438–1449.
Bacharach, S.B., Bamberger, P., Sonnenstuhl, W.J., 1996. The organizational transformation process: the micropolitics of dissonance reduction and the alignment of logics of action. Administrative Science Quarterly (41), 477–506.
Bachmann, R., 2001. Trust, power and control in trans-organizational relations. Organization Studies 22 (2), 337–365.
Bakos, J.Y., Brynjolfsson, E., 1993. Information technology, incentives and the optimal number of suppliers. Journal of Management Information Systems 10, 37–53.
Barley, S., 1990. Images of imagining: notes on doing longitudinal field work. Organization Science 1 (3), 220–247.
Bernard, H.R., 1989. Research Methods in Cultural Anthropology. Sage Publications, Newbury Park.
Caron, R.J., Jarvenpaa, S.L., Stoddard, D.B., 1994. Business reengineering at CIGNA corporation: experiences and lessons learned from the first five years. MIS Quarterly 18, 233–250.
Chisholm, R.F., Elden, M., 1993. Features of emerging action research. Human Relations 46 (2), 275–299.
Choudhury, V., Sabherwal, R., 2003. Portfolios of control in outsourced software development projects. Information Systems Research 14 (3), 291–314.
Clark Jr., D.C., 1992. Corporate systems management: an overview and research perspective. Communications of the ACM 35 (2), 61–75.
Coghlan, D., Brannick, T., 2001. Doing Action Research in Your Own Organization. Sage Publications, London.
Copeland, D.G., McKenney, J.L., 1988. Airline reservations systems: lessons from history. MIS Quarterly 12, 353–370.
Cullen, S., Seddon, P.B., Willcocks, L.P., 2005. IT outsourcing configuration: research into defining and designing outsourcing arrangements. Journal of Strategic Information System 14, 357–387.
Das, T.K., Teng, B., 1998. Between trust and control: developing confidence in partner cooperation in alliances. Academy of Management Review 23 (3), 491–512.
Das, T.K., Teng, B., 2001. Trust, control, and risk in strategic alliances: an integrated framework. Organization Studies 22 (2), 251–283.
Denzin, N.K., Lincoln, Y.S. (Eds.), 2000. Handbook of Qualitative Research. Sage Publications, London.
Dibbern, J., Goles, T., Hirschheim, R., Jayatilaka, B., 2004. Information systems outsourcing: a survey and analysis of the literature. The DATA BASE for Advances in Information Systems 35 (4), 6–102.
Feeny, D.F., Willcocks, L.P., 1998. Redesigning the IS function around core capabilities. Long Range Planning 31 (3), 354–367.
Fitzgerald, G., Willcocks, L., 1994. Contracts and partnership in the outsourcing of IT. In: DeGross, J.I., Huff, S.L., Munro, M.C. (Eds.), Proceedings of the Fifteenth International Conference on Information Systems, Vancouver, Canada, pp. 91–98.
Galliers, R.D., Markus, M.L., Newell, S., 2007. Exploring Information Systems Research Approaches. Routledge.
Gallivan, M.J., Depledge, G., 2003. Trust, control and the role of interorganizational systems in electronic partnerships. Information Systems Journal 13, 159–190.
Gersick, C.J.G., 1991. Revolutionary change theories: a multilevel exploration of the punctuated equilibrium paradigm. Academy of Management Review 16 (1), 10–36.
Gummersson, E., 2000. Qualitative Methods in Management Research. Sage Publications, London.
Handy, C., 1999. Understanding Organizations. Penguin Books, London.
Hardy, C., 1994. Managing Strategic Action. Sage Publications, London.
Heiskanen, A., 1994. Issues and Factors Affecting the Success and Failure of a Student Record System Development Process, a Longitudinal Investigation Base on Reflection-in-Action. Doctoral Dissertation at the University of Tampere. The University of Helsinki.
Heiskanen, A., 1995. Reflecting over a practice, framing issues for scholar understanding. Information Technology and People 8 (4), 3–18.

Heiskanen, A., Assinen, P., 2003. Learning cycles, organisational back talk, and the persistence of theories in use: lessons of information systems development in a university administration context. Knowledge and Process Management 10 (3), 183–193.
Heiskanen, A., Newman, M., 1997. Bridging the gap between information systems research and practice: the reflective practitioner as a researcher. In: Kumar, K., DeGross, J.I. (Eds.), Proceedings of the Eighteenth International Conference on Information Systems, Atlanta, Georgia, December 15–17, 1997, pp. 121–131.
Heiskanen, A., Newman, M., 1998. The dynamics of IS procurement, case study of a budgeting and financial reporting system. In: Baets, W.R.J. (Ed.), Proceedings of the 6th European Conference on Information Systems, Aix-En-Provence, 3–6.6.1998, pp. 839–852.
Heiskanen, A., Newman, M., Saarinen, V., 1998. Innovations in fiefdoms: developing a common student information system in six Finnish Universities. In: Larsen, T.J., Levine, L., DeGross, J.I. (Eds.), Proceedings of the IFIP Working Groups 8.2 and 8.6 Joint Working Conference, Helsinki, December 10–13, 1998, pp. 455–469.
Heiskanen, A., Newman, M., Similä, J., 1996. Software contracting: a process model approach. In: DeGross, J.I., Jarvenpaa, S., Srinivasan, A. (Eds.), Proceedings of the Seventeenth International Conference on Information Systems, Ohio, USA, pp. 51–62.
Heiskanen, A., Newman, M., Similä, J., 2000. The social dynamics of software development. accounting. Management and Information Technologies 10, 1–32.
Heiskanen, A., Similä, J., 1992. Gatekeepers in the action structure of software contracting: a case study of the evolution of user–developer relationships. ACM Computer Personnel 14 (1 and 2), 30–44.
Hevner, A.R., March, S.T., Park, J., Ram, S., 2004. Design science in information systems research. MIS Quarterly 28 (1), 75–105.
Hirschheim, R., Heinzl, A., Dibbern, J., 2006. Information Systems Outsourcing. Springer, New York.
Jasperson, J., Carte, T.A., Saunders, C.S., Butler, B.S., Croes, H.J.P., Zheng, W., 2002. Review: power and information technology research: a metatriangulation review. MIS Quarterly 26 (4), 397–459.
Järvinen, P., 2007. Action research is similar to design science. Quality & Quantity 41, 37–54.
Keil, M., 1995. Pulling the plug: software project management and the problem of project escalation. MIS Quarterly 19 (4), 421–447.
Keil, M., Robey, D., 1999. Turning around troubled software projects: an exploratory study of the deescalation of commitment to failing courses of action. Journal of Management Information Systems 15 (4), 63–87.
Keil, M., Robey, D., 2001. Blowing the whistle on troubled software projects. Communications of the ACM 44 (4), 87–93.
Kern, T., Silva, L., 1998. Mapping the areas of potential conflict in the management of information technology outsourcing. In: Baets, W.R.J. (Ed.), Proceedings of the 6th European Conference on Information Systems, Aix-En-Provence, 3–6.6.1998, pp. 612–627.
Kern, T., Willcocks, L., 2000. Exploring information technology outsourcing relationships: theory and practice. Journal of Strategic Information Systems 9, 321–350.
Kern, T., Willcocks, L., 2001. The Relationship Advantage. Oxford University Press.
Kern, T., Willcocks, L., 2002. Exploring relationships in information technology outsourcing: the interaction approach. European Journal of Information Systems 11 (1), 3–19.
Koh, C., Ang, S., Straub, D.W., 2004. IT outsourcing success: a psychological contract perspective. Information Systems Research 15 (4), 356–373.
Lacity, M.C., Hirschheim, R., 1993. Information Systems Outsourcing: Myths, Metaphors and Realities. Wiley, Chichester, UK.
Lacity, M.C., Willcocks, L.P., 1998. An empirical investigation of information technology sourcing practices: lessons from experience. MIS Quarterly 22 (3), 363–408.
Lacity, M.C., Willcocks, L.P., Feeny, D.F., 1996. The value of selective IT outsourcing. Sloan Management Review, 13–25.
Langfield-Smith, K., Smith, D., 2003. Management control systems and trust in outsourcing relationships. Management Accounting Research 14, 281–307.
Lasher, D., Ives, B., Jarvenpaa, S., 1991. USAA–IBM partnership in information technology: managing the image project. MIS Quarterly 15 (4), 551–565.
Mason, R.O., McKenney, J.L., Copeland, D.G., 1997a. Developing an historical tradition in MIS research. MIS Quarterly 21, 257–278.
Mason, R.O., McKenney, J.L., Copeland, D.G., 1997b. An historical method for MIS research: steps and assumptions. MIS Quarterly 21, 307–320.
McFarlan, F.W., Nolan, R.L., 1995. How to manage an IT outsourcing alliance. Sloan Management Review 36 (2), 9–23.
McKenney, J.L., Mason, R.O., Copeland, D.G., 1997. Bank of America: the crest and trough of technological leadership. MIS Quarterly 21, 321–353.
Miles, M.B., Huberman, A.M., 1984. Qualitative Data Analysis, a Sourcebook of New Methods. Sage Publications, Beverly Hills.
Mintzberg, H., 1983. Power in and Around Organizations. Prentice-Hall, Englewood Cliffs, NJ.
Miranda, S.M., Kavan, C.B., 2005. Moments of governance in is outsourcing: conceptualizing effects of contracts on value capture and creation. Journal of Information Technology 20, 152–169.
Möllering, G., 2005. The trust/control duality: an integrative perspective on positive expectations of others. International Sociology 20 (3), 283–305.
Natowich, J., 2003. Vendor related risks in IT development: a chronology of an outsourced project failure. Technology Analysis & Strategic Management 15 (4), 409–419.
Newman, M., Pan, S., Pan, G., 2008. "Why can't we bet on ISD Outcomes? ISD "Form" as a Predictor of Success". In: Proceedings of ISD Conference, Paphos, Cyprus, August 25–27.
Newman, M., Robey, D., 1992. A social process model of user–analyst relationships. MIS Quarterly 16 (2), 249–266.
Nonaka, I., Takeuchi, H., 1995. The Knowledge-Creating Company. Oxford University Press.
Nonaka, I., Toyama, R., Konno, N., 2000. SECI, Ba and leadership: a unified model of dynamic knowledge creation. Long Range Planning 33, 5–34.
Nooteboom, B., 1996. Trust, opportunism and governance. a process and control model. Organization Studies 17 (6), 985–1010.
Ouchi, W., 1979. A conceptual framework for the design of organizational control mechanisms. Management Science 25, 833–848.
Patton, M.Q., 1987. Evaluation's political inherency: practical implications for design and use. In: Palumbo, D. (Ed.), The Politics of Program Evaluation. Sage Publications, Newbury Park, pp. 100–145.
Pentland, B., 1999. Building process theory with narrative: from description to explanation. Academy of Management Review 24 (4), 711–724.
Pettigrew, A., 1972. Information control as a power resource. Sociology 6, 187–204.
Pfeffer, J., 1981. Power in Organizations. Pitman Publishing, Marshfield, Massachusetts.
Raelin, JA., 2001. Public reflection as the basis of learning. Management Learning 32, 11–30.
Reed, M.I., 2001. Organization, trust and control: a realist analysis. Organization Studies 22 (2), 201–228.
Richmond, W.B., Seidmann, A., Whinston, A.B., 1992. Incomplete contracting issues in information systems development outsourcing. Decision Support Systems 8, 459–477.
Rivard, S., Aubert, B.A. (Eds.), 2008. Information Technology Outsourcing. M E Sharpe.
Robey, D., Newman, M., 1996. Sequential patterns in information systems development: an application of a social process model. ACM Transactions of Information Systems 14, 30–63.
Saarinen, T., Vepsäläinen, A.P.J., 1994. Procurement strategies for information systems. Journal of Management Information Systems 11, 187–208.
Sabherwal, R., 1999. The role of trust in outsourced IS development projects. Communications of the ACM 42 (2), 80–86.
Sabherwal, R., 2003. The evolution of coordination in outsourced software development projects: a comparison of client and vendor perspectives. Information and Organization 13, 153–202.
Sambamurthy, V., Jarvenpaa, S., 2002. JSIS editorial–special issue on trust in the digital economy. Journal of Strategic Information Systems 11, 183–185.
Sanday, P.R., 1979. The ethnographic paradigm(s). Administrative Science Quarterly 24, 527–538.
Schein, E.H., 1995. Process consultation, action research and clinical inquiry: are they the same? Journal of Managerial Psychology 10 (4), 14–19.
Schultze, U., 2000. A confessional account of an ethnography about knowledge work. MIS Quarterly 24 (1), 3–41.
Schön, D., 1983. The Reflective Practitioner, How Professionals Think in Action. Basic Books, New York.
Skolnik, M.L., 1989. How is the university differentiated from other societal institutions? The relationship between the university and society in the late twentieth century. Higher Education Policy 2 (3), 37–40.

Swinarski, M., Kishore, R., Rao, H.R., 2007. Vendor commitment in an asp outsourcing context: a comparative evaluation of the roles of power and partnership. Advances in Management Information Systems 8, 189–223.
Tushman, M., 1977. A political approach to organizations: a review and rationale. Academy of Management Review 2 (2), 206–216.
Van Maanen, J., 1979. The fact of fiction in organizational ethnography. Administrative Science Quarterly 24, 539–550.
Walsham, G., 1993. Interpreting Information Systems in Organizations. Wiley, New York.
Watjatrakul, B., 2005. Determinants of IS sourcing decisions: a comparative study of transaction cost theory versus the resource-based view. Journal of Strategic Information Systems 14, 389–415.
Whang, S., 1992. Contracting for software development. Management Science 38 (3), 307–324.
Whitten, D., Wakefield, R.L., 2006. Measuring switching costs in IT outsourcing services. Journal of Strategic Information Systems 15, 219–248.
Wicks, A.C., Berman, S.L., Jones, T.M., 1999. The structure of optimal trust: moral and strategic implications. Academy of Management Review 24 (1), 99–116.
Williamson, O.E., 1991. Comparative economic organization: the analysis of discrete structural alternatives. Administrative Science Quarterly 36, 269–296.