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Sandra Cormack

Lismore City Council, New South Wales, sandrac@liscity.nsw.gov.au

Aileen Cater-Steel

bUniversity of Southern Queensland, caterst@usq.edu.au

Jeretta Horn Nord

cOklahoma State University

G. Daryl Nord

cOklahoma State University

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Resolving the Troubled IT-Business Relationship from a Cultural Perspective

Sandra Cormack^a, Aileen Cater-Steel^b, Jeretta Horn Nord^c and G. Daryl Nord^c

^aLismore City Council, New South Wales, Australia
sandrac@liscity.nsw.gov.au

^bUniversity of Southern Queensland, Australia
caterst@usq.edu.au

^cOklahoma State University, USA

Abstract

This research investigates the effects of the culture of the information technology (IT) group on the relationship between business and IT professionals within two Australian organisations, one a public sector organisation, and the other a private company. The IT groups in these two organisations had many similar themes of culture. Both organisations reported a troubled IT-business relationship. This research investigates the effects of the themes of IT culture that surfaced in each organisation on six essential ingredients of an effective IT-business relationship, providing some suggestions for management to consider to improve their troubled IT-business relationship.

Keywords

IT culture, IT-business relationship, cultural chasm

INTRODUCTION

The importance of healthy relationships between organisational groups is widely recognised as a key factor that can lead to a significant improvement in organisational performance (Henderson 1990; Selig 1991; Jackson & Wilson 1999). More so in the information age we live in today, it is vital that the IT group works effectively with the rest of the business if organisational success is to be achieved (Jackson & Wilson 1999). However, a quick scan of the IT literature reveals that a troubled relationship exists between business and IT professionals. 'IT does not have a harmonious relationship with the rest of the business' (Ward & Peppard 1996, p. 38). 'IS Departments are still at war with users' (Aslop 1996, p. 30). The pervasiveness of the troubled relationship between business and IT professionals is highlighted by Scott Adams, author of the popular 'Dilbert' cartoon, who points out that one of his favourite themes is the 'inability of executives to come to terms with technology' (Creedy 1997, p. 47).

The consequences of such tensions in the IT-business relationship are damaging. The absence of an effective relationship can limit the successful use of IT in organisations (Grindley 1992; Ross et al. 1996). Also, the troubled relationship can be a drain on the productivity and competitiveness of an organisation (Wang 1994). Therefore, it is extremely important that closer links need to be established between business and IT professionals (Broadbent et al. 1993; Peppard 2000).

Despite many attempts, few organisations have managed to successfully resolve the troubled relationship between business and IT professionals (Ward & Peppard 1996). In fact, tensions in the IT-business relationship have become self-perpetuating. Repeated project failures, project delays, and cost overruns are the cause of much frustration regarding technology, and can destroy the credibility of the IT group (Doll & Ahmed 1983; Wang 1994). In turn, these credibility problems reduce the status and influence of IT, which may create further difficulties in aligning priorities, gaining management co-operation, responsiveness, involvement and securing resources (Doll & Ahmed 1983; Black 1997). As a result, management becomes less willing to work with IT, leading to an uncomfortable relationship (Keen 1991). Once the IT group has lost its credibility, restoring business confidence in the IT group may take considerable time. An IT group with low credibility may continue to experience low status and influence for several years (Doll & Ahmed 1983).

In continued attempts to improve the IT-business relationship, the focus of recent research has moved towards investigating the 'human' element of IT (Wang 1994; Aslop 1996). The cultural differences between business and IT groups are now being blamed for the troubled relationship between business and IT professionals (Keen 1991; Ward & Griffiths 1996; Ward & Peppard 1996). The IT culture is such that it may lead to behaviour that is dysfunctional to the rest of the organisation (Keen 1991; Ward & Peppard 1996). This *disconnect* between

business and IT, also referred to as a *culture gap* (Grindley 1992) and *cultural chasm* (Keen 1991), is defined as ‘a conflict, pervasive yet unnatural, that has mis-aligned the objectives of executive managers and technologists and that impairs or prevents organisations from obtaining a cost-effective return from their investment in information technology’ (Wang 1994, p. 1). Exploring the cultural systems of groups provides a means of understanding intergroup relations (Baker 1980; Dubinskas 1992).

From a review of the literature, little research investigating the troubled IT-business relationship from a cultural perspective was found. The objective of this research was therefore to investigate the effects of the IT culture on the IT-business relationship. Through an awareness of the cultural characteristics of IT that contribute to tension in the IT-business relationship, IT and business professionals can adjust their behaviour and culture accordingly, promoting cooperation, not conflict, between the two groups. Cooperation between business and IT professionals will in turn, contribute to a healthier IT-business relationship, leading to successful outcomes for business.

RESEARCH MODEL

To investigate the effects of the IT culture on the IT-business relationship, theories and models from the organisational behaviour literature relating to organisational culture and intergroup relationships were reviewed.

From this review, a model for understanding organisational culture was selected for this research, to be applied to understand the culture of the IT group in an organisation. This model, derived by Johnson and Scholes (1993) and as illustrated in Figure 1, suggests that the culture of an organisation can be understood by examining six elements of culture: organisation structure, stories and myths, symbols, rituals and routines, control systems and power structures.

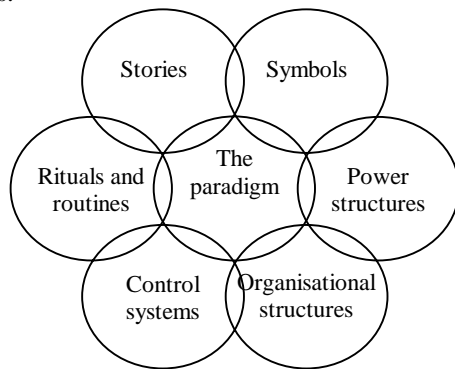


Figure 1: The cultural web of an organisation

Similarly, a model for assessing the effectiveness of the IT-business relationship was selected from the literature and applied to assess the health of the IT-business relationship. This model, developed by Henderson (1990) and illustrated in Figure 2, shows six essential ingredients of a healthy IT-business relationship. For an effective long-term relationship, three key ingredients were identified: mutual benefits, commitment to the relationship, and predisposition. An effective day-to-day relationship also required three key ingredients: shared knowledge, dependence on distinctive competencies and resources, and organisational linkages (Henderson 1990, p. 10).

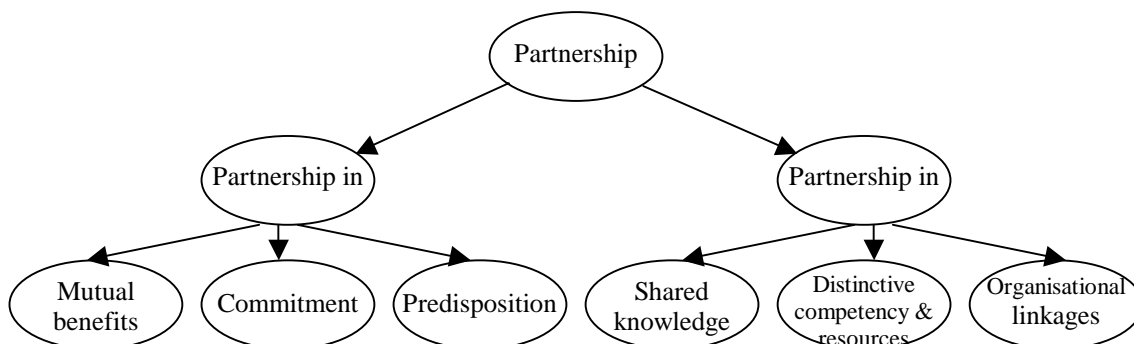


Figure 2: Six determinants of a partnership

Having selected a model to be applied to understand the IT culture and a model highlighting six essential ingredients of a healthy IT-business relationship, the model for this research was developed. This model, depicted in Figure 3, shows the six elements of IT culture and their effects on the six essential ingredients of a healthy IT-business relationship.

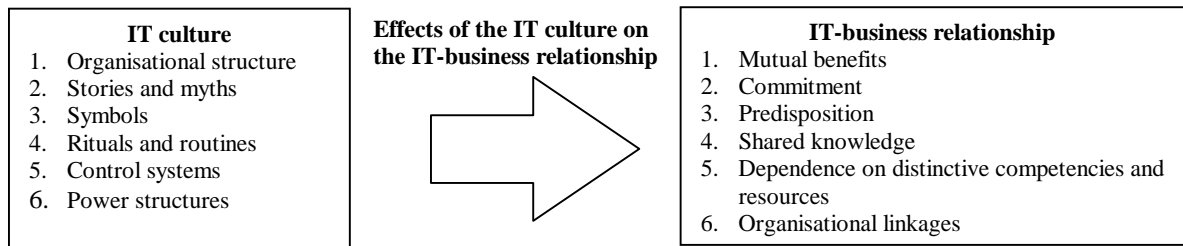


Figure 3: Research Model

METHODOLOGY

A case study approach was applied to test the research model. Semi-structured interviews were conducted with nine business and four IT professionals in two Australian organisations, to provide insights into the effects of the IT culture on the IT-business relationship. One organisation was a public sector organisation and the other a private sector company. These two organisations had similar organisational structures and were intentionally selected to determine if there were any differences in public and private sector organisations regarding the IT culture and the effects of the IT culture on the IT-business relationship.

The public sector organisation, a State Government authority comprised of approximately 6,500 employees of whom approximately 80 were IT professionals, was responsible for providing a range of services to the public. About two thirds of the IT professionals were located in head office with the remaining one third distributed in business units and regional offices throughout the state. Four business managers and two IT managers were interviewed in this organisation.

The second organisation, a private travel company, had been operating for approximately 80 years. This company had over 30,000 employees of whom approximately 800 were IT professionals. Seven interviews were conducted in this organisation, five with business managers and two with IT managers.

Summary details of the two organisations along with the position titles of the business and IT professionals interviewed are presented in Table 1. Interviewees displayed candour in their responses to the semi-structured interview questions and provided rich descriptions of the implicit and explicit cultural themes of the IT group in their organisations. Each interview ran for approximately one hour.

Organisation	Business professionals	IT professionals
Public sector organisation 6,500 employees 80 IT staff	CEO Deputy CEO Director, Communication Centre Audit Manager	IT Director Project Manager
Private sector organisation 30,000 employees 800 IT staff	General Manager Projects Office General Manager Commercial Systems General Manager Passenger Revenue Accounting General Manager Engineering and Maintenance General Manager Australian Sales	General Manager Systems Delivery General Manager Infrastructure and Operations

Table 1: Business and IT professionals interviewed

Data from the semi-structured interviews were recorded, transcribed and loaded into Nudist, a qualitative data analysis software program. Interview transcripts were reviewed for themes and patterns related to the health of the IT-business relationship, the six elements of culture, and the effects of the IT culture on the IT-business relationship. These effects were determined by reviewing each theme of IT culture against the indicators of the six determinants of the IT-business relationship. Having determined the effects of the IT culture on the IT-business relationship, weaknesses in the IT-business relationship were then derived. Throughout this analysis, extracts from interviews are used to support the findings and are referenced by the organisation (G for public sector; P for private sector), interviewee role (B for business professionals; IT for IT professionals) and interview number. For example, ‘There’s no leadership’ (G:B1) is a quotation from the public sector organisation, first business professional interview. To maintain the privacy of individuals, the interview numbers do not match the order in which positions are listed in Table 1.

IT-BUSINESS RELATIONSHIP

Many comments were made by the business professionals in the public sector organisation to suggest that the IT-business relationship was not healthy, as exemplified by the following quotations. ‘They [IT] are

unresponsive, not timely, and not understanding of the business environment and some of the solutions being sought' (G:B1). 'I asked for a typewriter and five years later I got an office automation system. All I wanted to do was type, and I didn't need an office automation system to do this. Now, I've got the latest and greatest office automation system which I don't have a use for and in the meantime I've had to hand write things for five years' (G:B2). Hence, the business people have taken a complacent view towards IT. 'Because of these long standing issues, a lot of people have become complacent about IT, and a blind eye is turned on both sides' (G:B1). As a result, '[business] people tend to accept that as part of the norm and then work around IT and work within their own capabilities ... and tend to solve their own problems' (G:B1). 'As a section providing a service, I think the overall impression is that they are not effective, in terms of meeting operational needs' (G:B3). 'Try as we might even through service level agreements, we do not get the response that we deserve, and the community deserves' (G:B3).

In contrast, the IT group in the public sector organisation were relatively happy with the systems and services they supplied. 'I suppose from a technology perspective they [the business] don't have a lot of problems. So I think we're doing fairly well. We've developed fairly sound strategies for things, we've got fairly robust systems in terms of the infrastructure' (G:IT2). 'The systems that we develop are trustworthy, stable, reliable, and meet the client's needs' (G:IT1). However, the IT group acknowledged that they could not always meet the needs of the business. 'It can be hard at times to meet the needs of the clients. Sometimes they have things that are critical that you just can't do for them' (G:IT1).

Both IT and business agreed that the IT group received unnecessary blame when things went wrong. 'They put up with the abuse they get, because when the system goes down, it's always the IT guy's fault. It's not the power surge or the hardware' (G:B4). 'They get discouraged, they get disillusioned, they get little feedback, they get criticised, they get ridiculed and their work environment is not enjoyable. There's no leadership and there's no acknowledgment of their worth' (G:B1).

A similar scenario emerged from the private company in relation to the IT-business relationship. The business group reported that the IT group had a poor track record. 'The IT group is aware that they are carrying a lot of baggage from the past, and that it will take a while to work through this' (P:B4). 'You've got a credibility gap that has emerged over time' (P:B4). 'IT thought they were connecting with the business but in reality they weren't' (P:B4). 'Business didn't understand what they were going to get, and the IT people didn't focus on the business needs. The IT people focused on getting the system in and that was it' (P:B2). 'They [IT] haven't been very successful in meeting the business needs' (P:B4). 'IT is seen as being expensive and not particularly service oriented, not particularly reliable and does not have a good track record at delivering anything' (P:B3).

The following statements by the IT professionals interviewed confirm a troubled IT-business relationship. 'IT are fairly slow to respond, are not customer focused, are a big overhead, and are not particularly efficient' (P:IT2). 'There's a lot of tensions, that really by rights, ought not to be there' (P:IT1).

IT CULTURE

This section discusses each of the six elements of IT culture in the two organisations and the impact of these cultural elements on the IT business relationship.

Organisational structure

Organisational structure was operationalised by the positioning of the IT director in relation to the chief executive officer (CEO) of the organisation. In the private sector organisation, the IT director reported directly to the CEO, and this had a *positive* effect on the IT-business relationship with respect to *organisational linkages*, an essential ingredient of an effective relationship. However, in the public sector organisation, the IT director reported to the Corporate Services Manager, who then reported to the CEO. This positioning of the IT director had a *negative* impact on the IT-business relationship in terms of *organisational linkages*. 'She [the IT director] isn't part of the decision-making process in this organisation' (G:B4).

Stories and myths

Stories and myths were operationalised by success and horror stories told in the organisation about the IT group. In relation to success stories, the private sector organisation talked of one project that was an IT success story. 'We did one big project very well' (P:IT2). 'There was total dedication from the whole organisation to make it work' (P:B5). This success story had a *positive* effect on the IT-business relationship in relation to *predisposition*, as the business group had developed a degree of trust in the IT group because they successfully delivered this one project. In the public sector organisation, no IT success stories were shared by those

interviewed. 'Haven't heard a lot, haven't heard a lot' (G:B3). 'There's no real stories about them [IT] doing good things' (G:B4).

Both organisations reported many horror stories. In the public sector organisation, the horror stories related to the inability of the IT group to meet the business requirements on time. 'Over the last seven years IT has been reactive, unresponsive, not timely, expensive, not client focussed, and that's still there, but that perception's taken a second back seat now because people tend to accept that as part of the norm and work around IT and work within their own capacities and tend to solve their own problems' (G:B1). One project was given as an example. 'The project started back in '93 ... and it's still being upgraded and it's still not on-line and it's still breaking down and it still doesn't do what it's supposed to do and it's still costing more money than it was originally intended' (G:B1). 'We seem absolutely incapable of delivering an IT project on time, on budget for the organisation' (G:B2). These stories were confirmed by IT. 'Typically most of the IT projects continue to overrun' (G:IT2). A second horror story related to the Help Desk, or rather, 'Helpless Desk' (G:IT1), labeled as such because of IT's 'poor customer focus and lengthy delays in resolving problems' (G:B1).

In the private company, the horror stories also related mostly to IT's inability to deliver systems that met the customers expectations on time. 'Sometimes they deliver, sometimes they don't' (P:B4). 'IT are missing the expectations when they deliver business solutions, because business needs have changed, and because of the lengthy delivery times' (P:B4). Some systems 'were never implemented' (P:B5). Some systems were implemented, but 'the business got zero value out of them' (P:B4). 'IT has missed the boat. Business moved on. No one had the gumption to pull the plug and write the money off. Everyone stayed quiet. The money gets spent and the project supposedly meets its objectives' (P:B4).

In both organisations, horror stories told about the IT group had a negative effect on the IT-business relationship in relation to *mutual benefits*, *predisposition*, *dependence on distinctive competencies and resources*, and *organisational linkages*. Through IT not being able to deliver business solutions to improve business efficiency, mutual benefits were not achieved. Predisposition was affected as the business people lost faith in IT's ability to deliver. 'It's made everybody nervous' (G:B1). 'There is now cynicism as to whether IT is going to deliver based on track record' (P:B4). Dependence on distinctive competencies was also impacted upon, as the business became less dependent on IT. Finally, organisational linkages were also affected, as business people attempted to develop their own solutions. 'The lead-time [for IT to deliver] creates frustrations because a lot of these things are required in a timely fashion to support an activity. Then the business either drop the idea or they go away and start developing hybrid versions [of their requirements]' (G:B1).

In contrast, these horror stories also had a *positive* effect on the IT-business relationship in relation to *organisational linkages*, with business increasing their involvement in IT activities. 'Such experiences have driven us more enthusiastically to take control' (G:B2). 'I try and keep in good communication. Unfortunately it [IT support] only works on a people basis' (P:B5). Also, the IT-business relationship strengthened in the area of *mutual benefits*, with IT taking action to improve their services to clients by 'increasing the customer focus of the Help Desk staff' (G:IT1).

Symbols

Many symbols were identified in relation to the IT group in both organisations, including communication, staff turnover, characteristics and skills, business knowledge and physical location.

The IT professionals in both organisations were criticised for their poor communication skills, and more specifically, their tendency not to communicate. In the public sector organisation, there was a recognised 'break down in communication' (G:B1) between business and IT. 'IT problems were hushed up' (G:IT1). 'We receive little and delayed feedback from IT' (G:B1). The IT professionals agreed with these criticisms. 'Reasons for decisions and delays are not explained to the business' (G:IT1). 'I really think we [IT] need to be more open and honest with our customers' (G:IT1). In the private company, the IT group was perceived by the business group as being 'secretive' (P:B5). 'The big gap between IT and business has been, and is now, the fact that for some reason or other they don't talk openly to one another' (P:IT1). 'IT show no basic principles of courtesy in terms of ringing and advising when things are happening' (P:B4). The IT group recognised communication was a problem between business and IT, and were trying to improve their communication with the business. 'IT are trying, they talk the word [of business], but they don't know what it actually means' (P:IT2).

This failure to communicate effectively had a *negative* effect on the IT-business relationship in terms of *predisposition and shared knowledge*. Predisposition was affected as the business has less trust in IT. 'There is a perception that IT is holding the business back or causing problems for the business' (P:IT2). 'There's distrust on both sides, misunderstandings and they [business and IT] grow apart. They [IT and business] don't work together as they should do, as part of a team' (G:B4). Shared knowledge was affected as this lack of

communication prevents the business from understanding more about IT. 'I think one of the reasons why business doesn't trust IT is they don't understand it, because IT haven't been able to explain it simply' (P:B5).

High staff turnover in the IT group was an issue in both organisations. 'We have a huge turnover of people in this area' (G:B2). In the public sector organisation, people were always 'acting in positions, constantly trying to get other positions' (G:B3). 'We just haven't had consistence in the person appointed there' (G:B2). From a business perspective, this high IT staff turnover had a *negative* effect on the IT-business relationship in relation to *dependence on distinctive competencies and resources*. The business group became less *dependent* on the IT group, and there were less *organisational linkages*. 'If I had somebody in there who could be in there for two years as our IT Manager, I have no doubt whatsoever they'd be leading the charge and saying "this is what IT can do for you". We are missing the strategic technical input that we would have got had somebody been consistent there' (G:B1). 'Because of the changing chairs, often someone won't turn up, or if the person does turn up they're not adequately briefed on current issues and it's of little value to talk to that person' (G:B1). However, the IT group did not see the high staff turnover in the IT group as having any effect on the IT-business relationship. 'It's pretty well accepted and understood by clients that that [high IT staff turnover] will be the case' (G:IT1). 'The business understands that there is a huge learning curve [with new hires]' (G:IT1).

High staff turnover in the private organisation increased the dependence on contractors and had a *negative* effect on the IT-business relationship in relation to *mutual benefits, predisposition, shared knowledge, and organisational linkages*. High staff turnover impacted on the ability of IT to meet the needs of the business, affecting mutual benefits. Subsequently, IT earned a poor track record, affecting the attitude of the business towards the IT group. Also, there was a loss of shared knowledge when IT people left the organisation and took this knowledge with them. 'As the business changes you need to make changes to the information systems. However, many of the people who worked on the original systems have moved on, and you have to bring in someone else who spends three or four months understanding how it works before they have the knowledge to make the change' (P:B5). Also, organisational linkages were hindered as staff left. 'There's no continuity. Nobody really knows how the system operates. People roll in and roll out all the time and sometimes they don't even finish the projects and the business ends up wearing the cost' (P:B2). 'Frustration levels of business increase because they are dealing with different people and I think it doesn't help that knowledge gap. What happens is the knowledge goes when they go, and you end up with this constant gap there, rather than building up a knowledge base that can be useful' (P:B4).

The IT people in both organisations were recognised for their technical skills. In the public sector organisation they were described as being 'technically highly skilled' (G:B3), 'very, very focused, very focused' (G:B3), and 'very logical and they're very analytical and they're very applied' (G:B1). In the private company the IT people were also described as 'very logical in their thinking' (P:B5). 'I think they are technically very proficient. I think in general the IT people are on top of current and new technology' (P:B1).

This technical and analytical focus had a *positive* impact on the IT-business relationship in relation to *predisposition* and *dependence on distinctive competencies and resources*. In relation to *predisposition*, the business trusted IT because of the technical competency of the IT people. 'They [IT] seem to manage the technical aspects well. The technology works most of the time' (G:B2). In relation to *dependence on distinctive competencies*, the business could depend on the IT people because of their technical competency. 'To be that focused is very, very good in a very technical sense, because it means often that you get very high quality work and you get people who won't be swayed from the task' (G:B3).

The IT professionals in both organisations, although praised for their technical skills, were heavily criticised for their lack of people skills and business knowledge. '[Lack of] people skills is one of the downfalls of the IT world in here' (G:B3). 'I think they [IT] are more into getting the system to go, rather than thinking about how the system will fit in the operation of the business' (G:B4). 'IT often don't appear to show any regard for broader business requirements or business outcomes and don't care terribly much about how IT should, and does in fact in the real world, interact with other parts of the business' (G:B3). 'IT folk have issues understanding the big picture strategies of what it is the end users actually want' (P:B4).

This lack of business knowledge had a *negative* effect on the IT-business relationship as it demonstrated a lack of *shared knowledge*, as the IT people did not understand the business work environment. 'They are focussed on bits and pieces more than looking at the big holistic picture' (G:B1). 'They [IT] have a totally different mind-set about how information should be used or what it's used for. Their outputs are their deliverables along their process. They come down and tick off your system, "now I've done that", and "now I'm doing this"' (G:B3). Also, *commitment* of the IT group to the business was lacking. The focus of the IT group on technology suggests commitment to their own industry as opposed to the organisations for which they work. 'Sometimes you get the impression that no matter what level IT people are at, they want to focus solely on IT solutions, and not only IT solutions, but IT as the solution' (G:B3). 'They [IT] are still of the professional technical mind-set.

They see themselves as part of the profession, the technical area, not as part of the business management organisation' (G:B2).

Both organisations had a decentralised IT structure, with a core group of IT people located centrally and the remainder co-located with their business counterparts. From a business perspective, this structure had a *positive* effect on the IT-business relationship in relation to *organisational linkages*, as the business group had access to their own IT resources without having to compete for resources. 'We have aligned here a group of people whose priorities we can determine. We can say "I need you to work on this project"' (G:B2). 'Alignment with business has been very good' (P:B3). 'We put all the programmers out with the business areas. That then removed straight away this tension between the business groups and the core systems delivery function. Since then, the relationship has improved, but we've still got a long way to go' (P:IT1). A *positive* effect on the IT-business relationship was also noted in relation to *shared knowledge*. 'The advantage of the decentralized model is that because they are out there they understand what's going on and they see what's coming their way. They are in better position to change their own set of priorities and start delivering what the business units really need' (P:IT2).

Conversely, this decentralised structure was a source of confusion for both business and IT professionals. The responsibilities of the decentralised IT staff had not been clearly defined and communicated. 'There's no real driving, there's no real set direction in which IT is going because of these various pockets [of IT]' (G:B4). 'We don't know who they [IT] are reporting to, and they don't know who their bosses are and where their loyalties lie' (G:B4). This confusion was confirmed by IT. 'It can be difficult sometimes having dual reporting. There's obviously often conflicts of priorities' (G:IT1). Additionally, organisational linkages were loosely defined. 'You've got fragmentation of facilities, of experience, and of targets' (G:B4). 'I don't think the interface [between the IT groups] is as clearly defined as it should be' (P:B2). This lack of a clear interface affected business efficiency, thus affecting *mutual benefits*. 'Decisions that had to be escalated to corporate IT delayed the business' (P:B4). 'The groups could avoid responsibility by finger pointing responsibility to other groups' (P:B4). 'They have lost their power because they are not all conglomerated together, so you've got little groups of between 20 and maybe 100 scattered all over the organisation and they are not particularly strong' (P:B3). Also, there were too many unnecessary *organisational linkages*. 'I would love to have one supplier and a service level [agreement] with that supplier' (P:B3). 'I get frustrated because I just have to go to so many different places, you occasionally get mad. That is kind of frustrating' (P:B3).

Rituals and routines

Rituals and routines were operationalised by the standards and procedures that the IT group had introduced into the organisations. Both organisations reported the Help Desk procedure and systems delivery procedure.

The Help Desk procedure in both organisations was a source of frustration for the business, having a *negative* effect on the IT-business relationship in relation to *mutual benefits* and *organisation linkages*. Mutual benefits were not achieved, as business problems were not quickly resolved by the IT group. Also, organisational linkages were reduced due to lengthy delays and also business people avoiding the Help Desk. 'I try to bypass the Help Desk, because they put you in a queue and they get back to you in two or three days' (G:B1). 'The Help Desk is under-resourced, it's overworked, it's not customer-focussed and it's not timely' (G:B1). 'The Help Desk was absolutely useless. I had to wait two days. Nothing would happen, nobody would come to see you. You'd ring up again' (P:B2). 'The basic principles of courtesy in terms of ringing and advising when things are happening, basic communication, pro-activeness, and those types of things that make a big difference, are just not there' (P:B4).

The requirements gathering phase of the systems development procedure was the source of frustration for both business and IT groups in both organisations. This had a *negative* effect on the IT-business relationship in relation to *dependence on distinctive competencies and resources*. The IT group could not depend on the business to specify its requirements. 'Business doesn't always know what they want and they keep changing their mind all the time, and IT have got to put up with this' (G:B4). 'The biggest issue is getting the business people to think about what it is they want and then forcing them to write that down or enunciate it in a way that it is clear' (P:IT1). The business is 'too general' (P:IT1) in specifying their requirements, and then turn around to IT and say "Well, why aren't you delivering?"' (P:IT1). However, the IT group acknowledged the difficulty in specifying business requirements. 'It is a difficult thing to clearly state what it is you want when you are making something new' (P:IT1).

In the private company, the IT group had recently introduced a systems delivery method. 'One of the reasons why you've got the system delivery methodology in place is because IT wasn't delivering' (P:B4). Feedback from business professionals indicated that this method had been well received. However, it was noted that still more effort was required to promote and enforce this method, and this had a *negative* effect on the IT-business

relationship in relation to *shared knowledge*. 'The training is very, very, good, except the IT folk are doing the training and not the business. I think the business also needs to be trained in their roles. It's only half the equation. The methodology will help, but it won't solve the problem because the business needs to be in the driving seat, and I don't think they are' (P:B4). 'In some respects I think they probably don't force the methodology enough. Certainly in terms of development methodology which has only recently been rolled out, I would say that they need to be even more strenuous in terms of enforcing that upon people' (P:B3).

The public sector organisation mentioned a third ritual and routine, and that was related to the confines of Government policy. This bureaucracy had a *negative* impact on the IT-business relationship in relation to *mutual benefits* and *commitment*. Mutual benefits were not achieved, as funding was restricted. 'I think it's the nature of Government organisations, the availability of funding. I'm sure that if we were a revenue based private sector organisation, we'd have done it [met the business needs] by now' (G:IT1). Additionally, Government policies distracted the IT group from focusing on core business activities and being committed to the goals of the organisation. 'Government requirements continually take them away from their core objective of supporting their clients' (G:B1).

Control systems

Control systems were operationalised by the control of IT group activities and expenditure. In the public sector organisation, there were many different perceptions held about who controlled the activities of the IT group. 'It [IT control] really resides with [the CEO]. He provides the strategic direction. He is the person accountable under the legislation for IT' (G:B1). Others perceived that the control of IT rested with the Information Steering Committee (ISC). The ISC, comprised of the senior executives of the organisation, had been established in an attempt to have a coordinated and business focused approach to IT activities across the organisation (G:IT2; G:B1). However, it was noted that 'they [the ISC] struggle to do that' (G:B1). The ISC forum was described as being 'ad hoc, and not working effectively' (G:B1), and the role of the ISC had become 'more of a minder of what's going on now, rather than planning for what's going to happen in the future' (G:IT2). Also, the IT director was perceived to control the strategic direction of IT in the public sector organisation. 'Our IT Manager puts her hand up and says "yes, we can do this", and "no, we can't do that"' (G:B2). Another business person interviewed believed that 'IT want to run it, but aren't allowed to run it' (G:B4). In summary, there was no clearly defined control of the activities of the IT group in the public sector organisation.

This lack of clearly defined control of IT had a *negative* effect on the IT-business relationship in relation to *mutual benefits* and *organisational linkages*. Without control, development happened chaotically, organisational goals were not met, and mutual benefits were not achieved. Also, organisational linkages were reduced as people worked in isolation of the IT group. 'Business develop their own solutions, which is problematic in itself. People get involved without a full understanding. You then get hybrid versions of solutions which do not match up to a corporate approach' (G:B1). Also, the IT group did not communicate with the business people. 'IT people go off and make decisions or assumptions without checking back with the business' (G:B1).

In the private company, the control of IT was fragmented. 'IT has drifted probably for 18 months without clear direction. There has been some strategy but the actual connect [of business] with IT hasn't been there, so IT has been really driving quite a bit of IT. That has now substantially changed in a fairly short period of time and IT is being driven by senior management now' (P:B4). 'Up until now, accountability has been left with IT' (P:B4). 'I think we're in the situation where there's fragmented control and it's one of the big problems' (P:B1). 'Philosophically if you talk to everyone they all go "yeah it's driven by the business". However, in practice there's still a long way to go before business actually does [drive IT]' (P:B4). 'The business and IT strategic plans are still to be aligned' (P:IT2). To help with this alignment, the private company had recently introduced a planning process. 'We're currently involved in an IT alignment project which is to verify that IT projects meet business objectives' (P:B1). 'That's where the portfolio planning process comes in which is still embryonic' (P:IT2). 'The main purpose of that group [portfolio planning group] is to work with all the different parts of [the private company], understand what the strategic direction is, and then ensure that the projects they are planning to do over the next couple of years map to that' (P:IT2). This portfolio planning process has had a *positive* impact on the IT-business relationship in the areas of *commitment*, *shared knowledge*, and *organisational linkages*. Commitment improved through the portfolio planning process initiative. Shared knowledge between business and IT improved through the joint involvement of business and IT in this planning process. Organisational linkages between business and IT strengthened through business taking control. 'Large chunks of IT are now being driven by the business areas, and the business areas themselves are becoming better educated in IT' (P:IT2).

In both organisations, the business controlled IT expenditure. In the public sector organisation, the CEO was responsible for IT expenditure. 'Ultimately I control the money. So I control the agendas that we have in the organisation and therefore, if there is to be a project which I have allocated a budget for and that budget

overruns then they've [IT] got to come to me for more money' (G:B2). Similarly, in the private company, the responsibility for expenditure rested with the chief executives. 'It's the business areas that say, "well I want to spend this amount of money in this area over the next 2 years" ' (P:IT1). 'The Chief Executives decide on how much to spend on systems delivery every year and they employ as many people as they feel that they want to and spend as much on IT as they want to' (P:IT2). This control of IT expenditure had a *positive* effect on the IT-business relationship through strengthening *organisational linkages*.

Power structures

Power structures for this research were operationalised by three types of power: interdependence, expert, and position power. The IT group in both the public sector and private company had low interdependence power because they were not meeting the immediate needs of the business. 'IT are struggling to meet the demands of the business' (G:B2). 'IT isn't responsive' (P:B5). This lack of interdependence power had a *negative* impact on the IT-business relationship in relation to *mutual benefits*, as mutual benefits were not achieved due to IT not being able to meet the needs of the business.

The IT group in the public sector organisation had diminishing expert power. 'People in businesses know more about IT than they used to, and they get a little impatient sometimes with IT because IT can't deliver. They [IT] come up with all the excuses. Before the PC we had big systems, and IT had all the control. With the PC coming onto the market, they lost that control' (G:B4). 'In the early days of computing IT had control, as all the computer stuff went into IT' (G:B3). 'Clearly there was this "you'll do it our way" which rankled everybody up in here as you can imagine' (G:B2). However, 'with business becoming more knowledgeable about computers and their application, they have lost this control' (G:B4). This increased knowledge by the business resulted in the IT group experiencing diminishing levels of expert power, having a *negative* impact on the IT-business relationship in terms of *dependence on distinctive competencies and resources*. Business people were less dependent on the skills and resources of the IT group.

In the private company, sections of the IT group were perceived to have power over the users. 'We tightly control some standards' (P:IT1). 'IT was actually acting effectively as an agent for the user so they were making assumptions about what the user actually wanted and there was a transfer of accountability across to IT. In other words, IT in some ways were basically taking over the accountability but never really did and there was high disconnect with business' (P:B4). This expert power was the source of frustration for the business, and had a *negative* effect on the IT-business relationship. The business group developed cynicism toward IT, weakening *organisational linkages*. 'I get frustrated because the systems are quite unstable. I get frustrated when it's not within my control. People in [the IT] empire from time to time have to upgrade and do stuff, and that causes me problems' (P:B3). 'In some cases we were actively saying "well you can go off and do the business side of it. You can actually implement it and tell us how to run the business"' (P:B4).

In relation to position power, the IT group in the public sector organisation had little position power. 'If they [IT] had a stronger person as Director of IT they would achieve more' (G:B4). 'They need a strong personality to run the Department. Somebody who can stamp their authority and stand up against some of the other Directors' (G:B4). 'It's not the weakness of IT as much as the strength of the other people and their relationship with each other. It was seen as a business project therefore the business people had scored it' (G:B4). This lack of power had a *negative* effect on the IT-business relationship in relation to *organisational linkage*, as this lack of position power suggests that IT is prevented from gaining access to necessary business resources. 'IT aren't able to control what's going on in the other departments' (G:B4). In the private company, having the IT director report directly to the CEO gave the IT group equal position power to other groups in the organisation.

SUMMARY

The above analysis highlights the cultural characteristics of the IT group associated with a healthy IT-business relationship. These include a direct reporting relationship between IT director and CEO, success stories, technical ability of IT professionals, decentralised IT structure and IT expenditure controlled by the business. Also highlighted by this research are those cultural characteristics of the IT group associated with tension in the IT-business relationship. These characteristics include an indirect reporting relationship between the IT director and CEO, horror stories, poor communication, high staff turnover, decentralised IT structure, Help Desk procedure and systems delivery process, lack of clear control of the IT group, low interdependence, expert and position power.

Relating the discussion back to the research model (figure 3), the ingredients of the IT-business partnership that are lacking due to the culture of the IT group are mutual benefits and organisational linkages. For practitioners, these insights serve as a useful starting point for managers with a desire to reconcile the troubled relationship between the two disparate groups of business and IT professionals, thus increasing organisational effectiveness.

CONCLUSION

This research provided insights into the association between the IT culture and tensions in the IT-business relationship through investigating the effects of six elements of IT culture on six determinants of the IT-business relationship. Prior to this research, it was implied that IT culture was largely responsible for tensions in the IT-business relationship. Through applying organisational theories on culture and relationships, and bringing these together to look at how the IT-culture affects the IT-business relationship, this research advances the position of previous research resulting in a clearer understanding of specifically how the IT culture is associated with tensions in the IT-business relationship.

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