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12-31-2002

Understanding Information Systems Outsourcing: why multiple perspectives are essential

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Abstract

Over recent years, many forms of inter-organisational collaboration have gained in popularity. IT outsourcing is a particular form of collaboration and, while cost savings and other benefits forecast in the early days of the outsourcing boom have not always eventuated, the approach has retained much of its popularity. It is becoming increasingly apparent, however, that we still have some way to go in understanding how outsourcing arrangements actually work in practice. In particular the many failed ventures indicate that managing these partnerships is no trivial matter. Here, we report on an IT outsourcing venture, where interface management's failure to take into account the needs of one of its most successful Divisions destroyed a major source of that Division's competitive advantage – its information systems support function. We describe how that Division developed and attempted to employ a system dynamics model to protect its operations and functions. We then use a further model based on the same paradigm to illustrate how power/ political considerations meant that its efforts were always likely to fail.

Keywords

Outsourcing, organisational power and politics, system dynamics

INTRODUCTION

> *…Unless and until we are willing to come to terms with organisational power and influence, and admit that the skills of getting things done are as important as the skills of figuring out what to do, our organisations will fall further and further behind. The problem is, in most cases, not an absence of insight or organisational intelligence. Instead the problem is one of passivity.*
>
> (Pfeffer, 1992:12)

As an array of organisational collaborations gain momentum in popularity, it is becoming clear just how difficult it really is to manage complex relationships between partners and, more specifically, it appears that alliances are much easier to form than to manage. This paper outlines how, in the rush to align with others, management often unthinkingly destroys the very basis of competitive advantage residing in previous organisation designs and work practices. We report on a recently completed study of an IT outsourcing venture, in which the particular needs of one of the outsourcing company's most strategically important and highly successful Divisions were neglected during both the establishment of the venture and in the detailed interface planning phase. The impact on the Division's IT operations – a major source of its success – was devastating. Moreover, our study graphically illustrates the effect that dysfunctional political activity can have on the crucial issue of the retention and cultivation of the intellectual capital residing in expert personnel.

Alongside a more traditional concern with issues of structure and human resources management, sometimes enlivened by acknowledging the cultural domain, over the last decade there has been a rising interest in the dimensions of power and politics to explain some of the richer and often intangible aspects of organisation processes and behaviour. This is hardly surprising given increasing organisation problems related to distribution and inequities of power, competition for resources, the link between power, authority, and leadership, and especially the challenge of the ongoing dynamics of organisational change that threaten traditional power bases. As Buchanan and Badham (1999:1) put it:

> *There is clearly enhanced scope for political manoeuvring in a less well-ordered and less disciplined organisational world. There is also clearly a greater need for a critical understanding of the shaping role of political behaviour in such a context.*

We have also moved from a romantic view of power as personal attributes, through a modernist approach that associates power with structure and position, to a postmodern view that understands power being about relationships. There is also the acceptance of the ways in which current change management is inextricably linked with power and politics in increasingly complex, uncertain and ambiguous organisational environments. As Mintzberg (1983) emphasised some time ago, being an effective change agent implies a willingness and capability to engage in the political process of organisation change. On the other hand, it is equally important to recognise the interdependency of the cast of characters in change and the power and politics enmeshed in their actions and interactions.

While these changes in theoretical and practical developments have occurred they have largely focussed on micro-individual and team relationships within organisations. What hasn't been widely discussed is the nature of such power and politics from both a strategic and tactical perspective across organisations in partnering and collaborative relationships. This includes both the more positive and negative faces of power and politics.

Space limitations do not permit a detailed presentation of our study. Briefly, the approach adopted is pluralistic (rather than unitary), multidisciplinary, largely qualitative and inductive. Semi-structured interviews, group-based model development and observation were major tools. Instead of the traditional economics or strategy approach, the authors employed an inter-organisational field approach (Osborn and Hagedoorn, 1997) coupled with a systems dynamics perspective. We do acknowledge the difficulty, however, of capturing soft or behavioural variables central to collaboration, given the complexity and multidimensionality of inter-organisational relationships (Parkhe, 1993).

Our paper is organised as follows: in the following section we briefly review some theoretical issues surrounding inter-organisational collaboration. The second and third sections contain our case study narrative and a system dynamics view of some crucial aspects of the outsourcing operation respectively. We then present an extended model, developed to highlight power/ political impacts. Finally, we present our conclusions.

CHANGE, COLLABORATION AND THE 'DARK SIDE'

Inter-organisational collaboration and cooperation, whilst not new to this decade, has been revisited by scholars and practitioners, fascinated by its energetic adoption as a means of gaining competitive advantage. Cooperative relationships may be defined as those special affiliations between at least two organisations, aimed at pooling resources, having joint activities, and grounded in a strategic base designed to enhance competitive advantage. Such relationships should, ideally, be guided by a sound respect for organisational autonomy and individuality, and emphasise some type of long term or permanent commitment. They range from very tight approaches, such as joint ventures, to broader strategic alliances and more arm's length, extremely loose, forms of collaboration. What appears necessary and sufficient for strategic alliances per se is retention of independence, sharing of benefits and performance control, and maintaining ongoing contributions to one or more strategic areas (Yoshino and Rangan, 1995).

Cooperative strategies are changing the very face of organisational life, especially in high-technology organisations. Furthermore, what is evident in the burgeoning growth of inter-organisational collaboration, is its increasing complexity and the way it alters the very nature of business, competition, organising and management, both nationally and internationally.

Collaborative ventures move beyond mere economic rationalism and formal transaction processes. As complex, multi-tiered social systems, they involve social and political dimensions – both intra and inter-organisational, and the vital nexus between organisation and external environment (including government). Not surprisingly then, some of the central planks of effective organisational collaboration reside in issues of appropriate coordination approaches, trust, communication, and the vitality of interpersonal relationships. The role of cultural compatibility is also important (More and McGrath, 1996).

Kumar and Thibodeaux (1990) have emphasised that when change is major and transformative, the political awareness and facilitation that is appropriate at more micro-departmental and sub-systems changes, must be matched with actual political intervention involving key stakeholders and an array of political tactics – both overt and covert. In the case study outlined in this paper, the major change initiative was that of outsourcing, utilising specialist IT suppliers to supposedly do a more efficient job than that formerly done in-house by Gigante.

While dominant rationales for outsourcing follow the old adage of ‘stick to your knitting’ re: central core competencies, achieving critical mass, and the like (see e.g. Caddy *et al.*, 2001), the practice really took off in the 1990s, following hard on the heels of the reengineering boom. Drawn on by the lure of major savings, what Deal and Kennedy (2000) refer to as ‘corporate amputation’ continues apace, with major firms such as DuPont, J.P. Morgan and Lucent Technology outsourcing their IT businesses. Many specialist employees with scarce competencies are also riding high in this environment.

Yet there is a dark side to this form of change and inter-organisational collaboration. Some employees lose their jobs and many organisations lose their valuable in-house skills and control of their destinies. For many the bubble of savings bursts to reveal illusion and inefficiencies. No wonder, then that Deal and Kennedy (2000) believe that the since the late 1970s, the single most culturally destructive management trend is that of outsourcing, especially in its dysfunctional impact on participation, loyalty, and organisational commitment.

From a theoretical perspective there is much to be done, although the pace of research in this area has certainly accelerated over the last few years. As Ebers (1997:15) suggests: *“…we still have some way to go before we can claim that we sufficiently understand when, where, why, and how organisations form which kinds of inter-organisational relationships and to what effect.”* Moreover he emphasises the importance of two under-researched yet important areas – possible costs and dynamics of such relationships, areas touched on in this paper.

CASE STUDY: AN IT OUTSOURCING VENTURE

Gigante is a large Australian company involved in the development and provision of IT products and services. The company operates mainly in its local Australian market where it is one of the dominant players. In 1992, recognising the need for a much greater presence in the international arena, it took over a much smaller player, *Cowboys Inc.,* who were already operating very successfully in what was, essentially, the same business. Although presented to the public as an amicable merger, the marriage was, in effect, a hostile takeover. One immediate impact of this was that many of *Cowboys* best and most experienced technical and managerial staff walked out the door in the first 12 months following the merger.

Despite this, *Cowboys* (now re-badged as Gigante’s *International Division)* continued to operate very successfully. Rapid response to new circumstances (particularly technological advances, new customer requirements and competitors actions) was the key to their success. Mainstream Gigante, largely because of the extensive scope of its operations and its size, was much more slow-moving, operating within a mechanistic, highly bureaucratic organisational structure. In contrast, International displayed many of the characteristics of the smaller, organic structural paradigm. In particular, communications lines were flexible and uncluttered and scant regard was paid to formal policies and procedures. International was able to operate within this preferred mode largely because of its General Manager who, apart from being highly respected and well liked by his team, was regarded as an astute politician, intolerant of any outside interference in his Division’s operations. Thus he was able to act as an effective buffer between International and the mainstream organisation. The Division's geographical remoteness, plus minimum overlap between its operations and the rest of the organisation, also contributed to its independence.

Nowhere was this style of working more evident than in International's IT operations. Rapid changes to production lines, the customer base and specific customer demands meant that billing, orders and customer management systems had to be updated frequently and quickly. Typically, a salesman working offshore would place an urgent call to the IT Manager and: 1) request information required to finalise a quote; and 2) advise of system changes required to support his prospective customer's particular product demands. Unless the quote information was provided overnight and the necessary system changes made within a month (at the outside), it was highly likely that the deal would fall through. These sales support requests were given top priority by the *IT Department*, activities were carried out 'on-the-fly' and, despite (or because of) its small size (12 people), the Department had compiled an excellent and admirable record in meeting its deadlines. As such, it was considered to be a major source of competitive advantage for International and was generally held in high regard by colleagues – in sharp contrast to IT Departments in most organisations (OASIG, 1996).

This idyllic state of affairs came to an abrupt end in 1997 when Gigante entered into an outsourcing deal with *Worldwide Information Technology (WIT).* A major player in IT outsourcing, WIT had a hierarchical organisation structure, a predominately bureaucratic mode of working and a culture similar in many respects to that of Gigante. (The reader might well ask why an established and experienced player in the IT arena should outsource much of its IT operations to another company operating in the same general business domain? This is a question worthy of a study in its own right but a detailed investigation is beyond our scope here.)

In this environment, the very features that were the essence of International's strengths and successes now were jeopardised. In particular, to have any systems maintenance or enhancement work undertaken, work orders had to be prepared, and estimates and program specifications had to be developed. All these were then passed upwards through three layers of interface management on the Gigante side, then downwards through a similar number of layers on the WIT side and, finally, each work order had to be vetted by WIT's Legal Department. Control, hierarchy and formal communication dampened the highly innovative culture – the previous emphasis on flexibility and freedom, the horizontal and informal.

Unconsulted prior to the establishment of the outsourcing arrangement or during the preparation of detailed operating procedures (which were far from complete in a number of important respects), International found itself in a very difficult position. With the procedures as they stood, there was no way that its sales force or other operations management and staff could continue to receive the level of IT service they had become accustomed to and required: its staff lacked both the skills and the will to prepare the necessary documentation and to negotiate their way through the system; unacceptable delays were intrinsic in the procedures themselves; and the final blow came when their champion (the General Manager) was promoted to an offshore position. Their problems were exacerbated when the General Manager's replacement displayed little understanding of the problems that outsourcing had generated and less inclination to tackle them (or even discuss them!). Moreover, he failed to comprehend the destruction of 'the rose among the thorns' of the organisation.

Those in the IT Department have displayed considerable vigour in trying to obtain a better deal for the Department, its systems and its Division. Essentially, they have simply refused to relinquish control over their systems to WIT and the various parties involved in interface management, and have continued to enhance and maintain their systems themselves. The IT Manager, however, recognises that his resistance will inevitably have to end and is devoting most of his energies to securing a better deal for his Division, plus improved interface procedures. Moreover, while this state of affairs persists, International are not only wearing the cost of their own internal staff performing *actual* work on their systems, but are also paying WIT for that portion of their staff performing *nominal* work on International's systems!

Perhaps the most depressing aspect of the whole case study, however, is the impact that the outsourcing venture has had on the International IT Department's morale. Effectively, a vibrant (if unconventional) IT group, providing their customers with timely and excellent service, has been shattered – in our view, probably beyond repair. Some staff have already resigned (rather than take up the offer of moving across to WIT); most others are actively seeking alternative employment; and the IT Manager, while continuing to fight his rearguard action, is exhibiting some (understandable) signs of depression and even contemplating a move into academia – if nothing else, he will have a wealth of first-hand information with which to entertain his students!

A SYSTEM DYNAMICS VIEW

In arguing their case, International's IT Department felt that they needed some quantitative support. Intuitively, they were certain that outsourcing would have a major negative impact on their bottom line but needed some means of demonstrating this. We were consulted and suggested they develop a system dynamics model. Once the basic rationale and approach (and, especially, the simulation capabilities of the *ithink* software employed) were outlined, the IT Manager readily agreed to our suggestion and the model presented in Figure 1 was developed. Note that, for the purposes of this paper, the model presented is somewhat simplified.

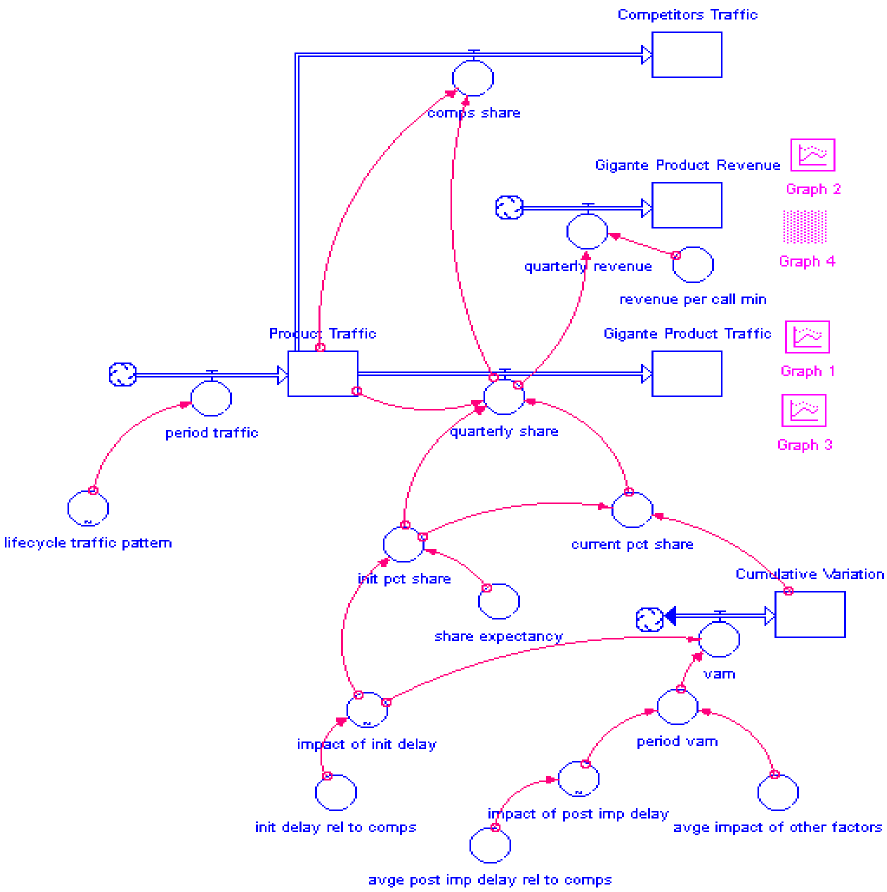

Figure 1: Stock and Flow model of impact of delays on market share and revenue

International, as its name implies, operated in a global marketplace. It was one of only eight companies marketing a very limited range of high-tech communications products – mostly to medium-to-large, distributed organisations. Each product was designed for (essentially) the same communications function and, at any given point in time, one product tended to dominate the market (while other products were towards the beginning or end of their lifecycles). The model presented in Figure 1 could be applied to any member of the product range but was parameterised using the dominant product and, of course, International's operations relative to this particular product only.

At the time development of our model commenced, International had a 20% market share of the dominant product. Among the eight players, this placed it equal second overall but it was rapidly increasing its share – mostly at the expense of its two major rivals. Our clients were convinced that, within three months, they would be the clear leader – and, indeed, the trend seemed to suggest that this was a reasonable assumption. No other player had more that 12% of the market. For the most part, International's excellent performance was due to the superb IT support its sales staff received (discussed in the previous section).

During modelling, a number of critical success factors were identified. Of these, there was almost universal agreement that the two most vital were: i) the delay in getting into a new (product) market; and ii) delays in responding to customer requirements after release of a new product. These are included in Figure 1 as the converters, *init delay rel to comps* (initial delay relative to competitors) and *avge post imp delay rel to comps* (average post-implementation delay relative to competitors). These determine both the initial and current market share *(init pct share* and *current pct share)* and, together, these are used to calculate International's market share for any quarter, *quarterly share).* Using this and freely available data on product traffic and lifecycle patterns, quarterly and cumulative traffic (market share) and revenue can easily be calculated (for both International and its competitors). The model was built up using data from obsolete products and those nearing the end of their lifecycle. It was validated (to the extent possible) against the performance of the (current) dominant product to the latest point in its lifecycle for which figures were available. Key simulation outputs (revenue and market share figures) were shown to closely match actual product performance.

Having developed the model, we were then able to run various forms of sensitivity analysis. For example, Figure 2 illustrates the impact of variations in initial delays relative to competitors on market share (with graphs 1-5 corresponding to 4 weeks faster, 2 weeks faster, no difference, 2 weeks slower and 4 weeks slower respectively). A number of other graphs were produced as a result of our analyses and, collectively, these dramatically demonstrate the impact of both types of delay on International's market share and revenue: i.e. the modelling exercise produced precisely the type of 'ammunition' the IT Department was seeking.

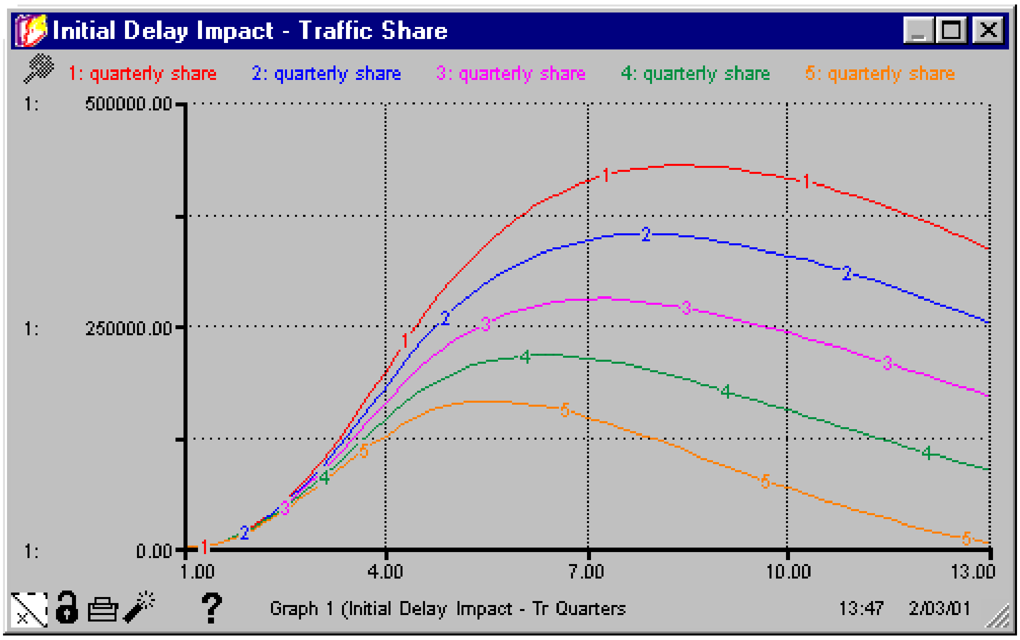

Figure 2: Delay impact on traffic share

As noted, however, the IT Department's attempts to utilise these results have met with little success. In retrospect, there was always a fair chance this would eventuate, given that key decision makers were not included in the model building process (Vennix, 1996). Vennix's advice is sound and, in an ideal world, key stakeholders would always be involved in the development of important decision support models. The reality, though, is that, in many modelling situations, this is simply not possible. For example, in the case under review here, the size of the organisation, stakeholders' other responsibilities, stakeholders' geographical dispersion and severe internal and external pressures on Gigante at the time of the study, all mitigated against our attempts to get 'buy in' and active participation from the more influential decision makers. Moreover, even if we had managed to realise our desired levels of participation, we doubt it would have made a great deal of difference to the eventual outcome: i.e. other factors - notably power/ political considerations were always going to make life very difficult for both International and, particularly, its IT Department. We turn our attention to these factors in the following section.

INTERNATIONAL'S INFLUENCE ATTEMPT: A WIDER VIEW

Gigante's International Division (and, particularly, its IT Department) could clearly see the devastation the outsourcing decision would wreak on their business. In their attempts to alleviate the impact of this decision, they employed rational arguments. As we have seen, however, much decision making in organisations is not rational. In this instance, International's concerns were dwarfed by a much bigger 'game' and, here, their lack of any real political 'clout' counted very much against them. In the causal-loop diagram presented in Figure 3, we have attempted to represent some of the major influences we detected as part of this wider game.

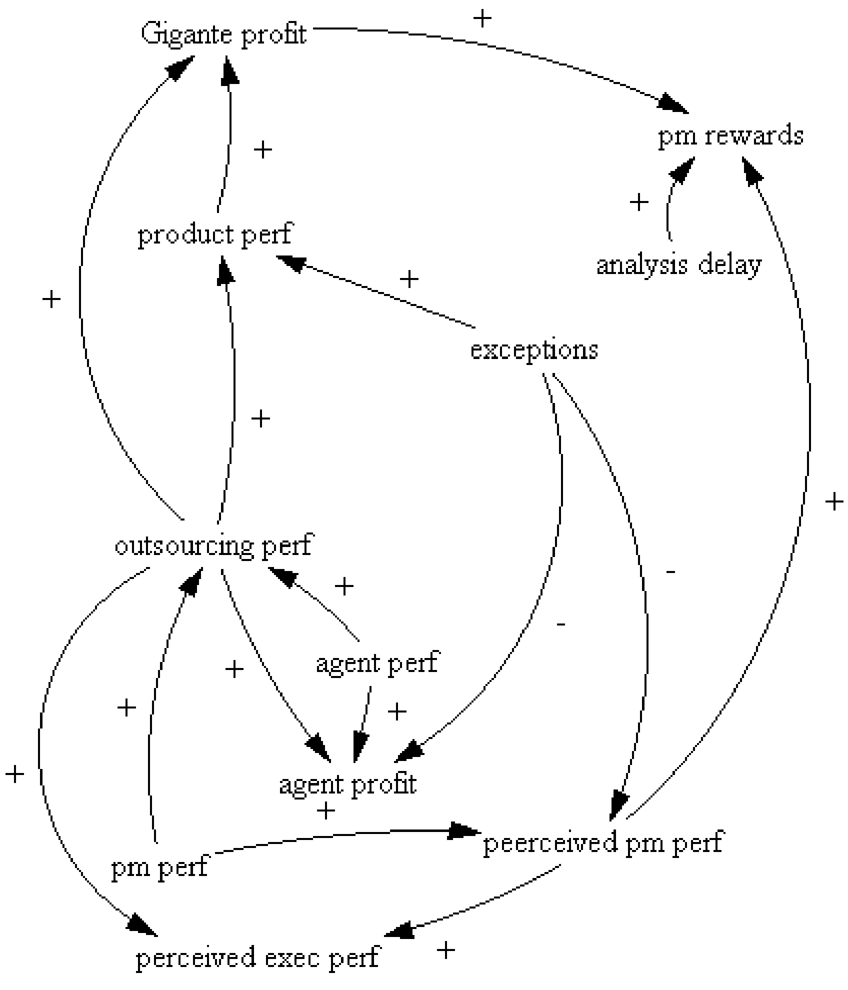

Figure 3: Impact of allowing outsourcing exceptions

Organisations enter into IT outsourcing agreements for many reasons. During this study, we heard considerable conjecture as to the 'real' reasons behind the Gigante/ WIT deal, but press reports at the time consistently nominated major cost savings as Gigante's principal motive for entering into the contract (one of the largest IT contracts ever signed by an Australian company).

A special Program Management team (abbreviated as *pm* in Figure 3) was formed to manage Gigante's side of the alliance. From Figure 3, it can be seen that their performance had a major effect on the success of the outsourcing venture. Furthermore, since most of Gigante's products require substantial IT support, outsourcing operations had a significant impact on product performance and this, in turn, directly influenced Gigante's bottom line. In addition, the direct link from *outsourcing perf* to *Gigante profit* indicates that outsourcing, in itself, was expected to contribute to profit through greatly decreased IT costs. Thus, this portion of the diagram effectively mirrors Gigante's official outsourcing policy and views.

However, other important factors were also at work. In particular, Gigante's executive, the Project Management team and the outsourcing agent (WIT) all stood to gain (and lose) much from the outsourcing venture and links from Project Management team and agent performance to rewards/ profit are clearly identified in Figure 3. In this context, it is easy to see that *exceptions* (exemptions from the outsourcing arrangement) could clearly not be tolerated. That is, apart from reducing the agent's profit, every exception allowed was likely to have a damaging impact on general perceptions of Project Management team performance. Thus, Project Management implemented a policy to the effect that *exceptions would not be allowed under any circumstance* – no matter what benefits specific cases might have for individual products (and the systems and personnel that supported these). To complete the picture, outsourcing can be a very risky business (Aubert *et al*., 2001) and there were many (inside and outside Gigante) who doubted the wisdom of this particular venture. Consequently, perceptions of the performance of Gigante's executive were closely linked to both the outsourcing operations themselves and the Project Management team.

Looked at in a (seemingly) rational light, the decision not to exempt International and their systems from the outsourcing deal seems bizarre – ensuring as it did the eventual destruction of International's leadership in their particular product market, plus the additional loss of a number of committed, scarce and valued IT specialists. If we view the situation from a power/ political perspective, though, the events that transpired begin to make sense.

Pfeffer (1981; 1992) argues that while organisations have corporate (official) goals, individual parties within these organisations have (unofficial) local goals: where there is a clash between corporate and local goals, local goals generally take precedence. Pfeffer (1981) goes on to define *power* as 'a force, a store of political influence through which events can be affected', while *politics* 'involves those activities or behaviours through which power is developed and used within organisational settings'. In short, power is 'a property of the system at rest' while politics is 'power in action'. Pfeffer's stores of influence are *power sources* and, in his earlier work (1981:97-135) he discusses the more significant of these within a very neat classification scheme. Using this scheme, we may investigate the impact of a decision to allow outsourcing exceptions on the power sources of the three parties discussed earlier in this section. Our results are presented in Table 1.

Clearly, all parties stood to lose substantially. The Project Management team and the agent would have lost (shared) control over the provision of important resources (International's systems and IT personnel) to the organisation at large and, in addition, the agent would have received less funds for its services. Furthermore, without control over these systems and specialist personnel, the two parties' total level of expert knowledge (a vital source of power in organisations) would have suffered. Gigante's executive, however, would have been largely unaffected (in a direct sense) with respect to these power sources.

Perhaps, most interesting of all are the final three power sources in Table 1 and the fact that all parties would have suffered here. As Pfeffer (1981:54-57) has argued, reputations are built upon perceptions and, as noted previously, allowing exceptions would have had a major negative impact on perceptions of Project Team performance. Actual performance also has an effect on *perceived pm perf* and both these factors are clearly identified in our causal-loop diagram. The link between perceptions of Project team and Gigante's executive performance is also identified. However, in Pfeffer's scheme, there is also a clear link from perceptions (of both power and performance) to prestige and extending our model to specify this additional relationship is a relatively simple exercise. Finally, where an organisation unit or group has a strong, united, common view on issues, they derive power from consensus (Pfeffer, 1981:122-124). Pfeffer emphasises that this is a particularly formidable power source but one that can easily be dissipated by significant change. Allowing exceptions would certainly fit into this category.

	Project Management	**Gigante Executive**	**Outsourcing Agent**
Resource provision	-	0	-
Resource dependence	-	0	-
Expert knowledge	-	0	-
Consensus	-	-	-
Reputation	-	-	-
Prestige	-	-	-

A '-' means a negative impact, a '0' means no impact and a '+' means a positive impact

Table 1: Potential impact on power sources of a decision to grant International an outsourcing exemption on the Project Management team, Gigante's Executive and the Outsourcing Agent

CONCLUSION

While collaboration strategy is not the answer to all organisational ills, it can be an effective tool, although its success relates to a number of key variables touched on in this paper, the critical one being that of managing organisational power plays and political activity effectively.

What we find in this case study is a failure to learn from the process and to adjust collaboration with an elasticity that would allow organisational roses to bloom rather than be crushed underfoot by cooperative rigidities of structure, process, and regulatory ritual. Furthermore, we see considerable self-interest and a consequent disregard for the vital role played by individuals in collaboration processes. The results are that in accentuating rules and efficiency, strategies for innovation and organisational learning were forgotten. This rigidity, coupled with highly dysfunctional political activity, simply prevented realisation of new possibilities available in multilateral organisational collaboration (Luts, 1997). Certainly the case demonstrates many of the pitfalls and costs of inter-organisational collaboration, especially so far as stakeholders in Cowboys⁄ International were concerned. Delineating longer term benefits and overall organisational performance for Gigante may be more difficult to assess but will be eagerly pursued.

Finally, organisational change increases the 'turf warfare' of change management – and part of this includes the more macro dimensions of organisation prestige and reputation. In the realm of any organisation's corporate communication, the most critical function is that of the organisation's image and identity, important within the organisation but perhaps even more vital to the external community and many of its key stakeholders. Diverse stakeholders may have varying images of an organisation but reputation and identity should be consistent, a hallmark that distinguishes it instantly in a globally competitive environment where attracting the right customers, investors and employees is crucial. Image, identity, prestige and reputation are today hallmarks of the qualitative intangibles based in perceptions and hard fought for. They are part of an organisation's intellectual capital in the broad sense and can be irrevocably damaged even by one instance of poor management. Put simply, the organisation is the message and poor communication (arising, for example, from the politically-motivated turf warfare referred to above) can destroy it instantly!

REFERENCES

Aubert, B., Patry, M., Rivard, S. and Smith, H. (2001). "IT Outsourcing Risk Management at British Petroleum", Proceedings of the 34th Hawaii International Conference on System Sciences, Maui, 3-6 January, 2001.

Buchanan, D. and Badham, R. (1999). Power, Politics, and Organisational Change, Sage, London.

Caddy, I., Helou, M. and Keenahan, D. (2001). "Rolling the Digital Dice: Public Sector IT Outsourcing - Critical issues in Public Management and Policy", International Journal of Management Literature, Vol.1, No.1, pp. 67-79.

Deal, T. and Kennedy, A. (2000). The New Corporate Cultures, Texere, London.

Ebers, M. (1997). "Explaining Inter-Organisational Network Formation", in M. Ebers (ed), The Formation of Inter-Organisational Networks, OUP, Oxford, pp. 43-65.

Kumar, K. and Thibodeaux, M. (1990). "Organisational Politics and Planned Organisational Change", Group and Organisational Studies, Vol.15, No.4, pp. 357-65.

Luts, S. (1997). "Learning through Intermediaries: The Case of Inter-Firm Research Collaborations", in M. Ebers (ed.), The Formation of Inter-Organisational Networks, OUP, Oxford, pp. 220-237.

Mintsberg, H. (1983). Power in and around Organisations, Prentice-Hall, Englewood Cliffs, NJ.

More, E. and McGrath, G.M. (1996). Cooperative Corporate Strategies in Australia's Telecommunications Sector - The Nature of Strategic Alliances", DIST, AGP 009/96, Canberra.

OASIG (1996). "The performance of Information Technology and the role of Human and Organisational factors" Report to the Economic and Social Research Council, UK.

Osborn, R. and Hagedoorn, J. (1997), "The Institutionalisation and Evolutionary Dynamics of Interorganisational Alliances and Networks," Academy of Management Journal, Vol. 40, No. 2, pp. 261-278.

Parkhe, A.(1993). "'Messy' research, methodological predispositions, and theory development in international joint ventures", Academy of Management Review, Vol. 18, pp. 227-268.

Pfeffer, J. (1981). Power in Organisations, Pitman, Marshfield, MA.

Pfeffer, J. (1992). Managing with Power: Politics and Influence in Organisations, HBS Press, Boston, MA.

Vennix, J.A.M. (1996). Group Model Building: Facilitating Team Learning Using System Dynamics, Wiley, Chichester.

Yoshino, M. and Rangan, U. (1995). Strategic Alliances: An Entrepreneurial Approach to Globalisation, HBS, Boston.

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