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**SWP 2195 RECONCILING THE IT/BUSINESS  
RELATIONSHIP: A TROUBLED MARRIAGE  
IN NEED OF GUIDANCE**

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# Reconciling the IT/Business Relationship: A Troubled Marriage in Need of Guidance

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*Over the past 30 years the relationship between the IT organisation and the rest of the business has been a troubled one which few organisations have managed to satisfactorily resolve. This 'gap' has been explained by the cultural differences existing between the two. Yet despite the criticality of IT to the business little attempt has been made to explore this further and much of the writings and research on the subject are dispersed, progressing little beyond the centralisation/decentralisation debate and offer little by way of guidance. Much of the literature is concerned with issues of control of resources rather than managing the relationship. Some organisations have chosen to rid themselves of the problem through outsourcing but recent debate has raised the question of the long term consequences of short term decisions which are based on an historical problem. Yet often the 'trouble' has no foundation beyond a level of perceptions. This paper attempts to understand and interpret the problems in the relationship, to describe the gap, to understand the reasons why it exists, and to offer some advice.*

Since it was first used in organisations the focus of information technology has shifted from being a technical concern to being recognised as a critical business issue. From the early 1980s information management through the use of IT has been seen as being crucial to competitiveness and taking on a strategic significance for organisations<sup>1</sup> and offering new competitive advantages.' Yet despite the undoubted criticality of IT to the business, the IT organisation<sup>3</sup> as the provider of IT resources and services has not had a harmoniously relationship with the rest of the business.

Perhaps a reason for this 'gap' is that IT in general and IT professionals in particular were often late coming into an organisation, The business already had its own value system and behaviour and in many instances the emergence of the IT organisation could be seen as being imposed on the rest of the business. In many **firms** the current IT organisation grew out of a specialised group of professionals dedicated to ensuring that the "computer" continued to function. The professionals staffing the IT function were more attracted to work with the technology rather than to contribute to the success of the business. In short, they are happiest working with computers and in fact, it could legitimately be argued that IT professionals do not give much consideration to the organisation they work in, perhaps one reason for the traditionally high-turnover of IT staff. If they do, it is likely to be in relation to the ability of the organisation to keep up with the latest technologies. There are no kudos to be gained in working for an organisation which is not state-of-the-art in the technology it uses. While it may not be challenging to work in a low-tech 'shop' it also that IT skills can become quickly outdated thus diminishing the 'marketability' of the IT professional. Indeed, perhaps the analogy can be made with that of actuaries who have are often seen as having more loyalty to the profession than to the institution where they work.

Of course the rest of the business has not helped. Many managers are technologically inept or averse and in a great many instances this is by choice: they run the business while the IT organisation provides them with IT solutions. The reputation which the IT organisation has attained has not helped matters. Many IT projects constantly come in over budget, over time and when eventually developed very **often** fail to satisfy user requirements. IT projects are treated as such and managed accordingly with little attempt to manage the benefits. Perhaps blame could be laid at how investments in IT are appraised. Even the traditional IS/IT planning process focuses **on** how the organisation can use technology and not how the business could best benefit **from** IT.

The picture painted is of two distinct worlds. One, 'the world of business and the never ending quest for competitive excellence. The other, the world of technology where there is similar striving for excellence, albeit technical excellence. Each treat each other with indifference. The ~~1993/94~~ Price Waterhouse IT survey reported that 79% of managers surveyed see IT as a support function.' Many IT organisations are happy with this situation: it gives them the licence to go away and experiment with the latest technologies.

~~Culture~~ is often used as a variable to explain the troubled marriage between the IT organisation and the rest of the business.' The concept of culture has been receiving increasing attention in the management literature since the early **1980s**, particularly in the area of strategy and managing and understanding change, particularly strategic change.<sup>6</sup> Yet detailed analysis of the cultural IT/business gap has yet to progress beyond the rhetoric. Any worthwhile analysis must go **beyond** addressing centralisation and decentralisation issues or discussing the merits or otherwise of outsourcing versus insourcing.

In the **IT** world today there is much talk and debate about legacy systems. Organisations also have a cultural legacy. This suggests that not only do you have to

manage the future but organisations also have to re-manage the past relationship. Like any relationship which is in trouble we need to understand the cause of the trouble, understand the various perspectives and perceptions and then decide how best to deal with it. Given that there is this gap, understanding its nature should help in identifying how it might be bridged. Must one party change or do both have to make some concessions? Many organisations have already decided to deal with the 'problem' by completely outsourcing the IT organisation. The wisdom of treating IT services as a commodity ~~service~~ best managed by a large supplier has been questioned.'

In this paper we first briefly review the concept of culture. We then assess the cultural aspects of the evolving role of the IT organisation from a number of different perspectives. The **changing** role of IS/IT in the business also has implications both for the organisation and its culture and these are examined. A number of different perspectives are presented which can help in interpreting the cultural gap. We then present a framework which we have found useful in gaining mutual understanding and determining the action required in an attempt to bridge the 'gap'.

## Culture

Culture has become a key concept in the nomenclature of today's manager. It is a term which is used as the excuse for many occurrences in organisational life. Yet if culture is a major influence on the behaviour of the organisation, there is a need for managers to manage the "cultural" context of the organisation in order to achieve required objectives.

Despite the widespread use of the term in today's management literature, the word culture in fact originates from social anthropology. It was studied during the late 19th and early 20th century of so called primitive societies, for example, African, Native American, and Eskimo which highlighted ways of life that were not only different from the more industrial and technically advanced parts of the US and Europe but were very often **different** among themselves. The societies' culture was deemed to explain the difference, or in a holistic sense, the qualities of any specific grouping of people that are passed from one generation to the next.

The notion of culture was popularised in the general management literature by Anthony Athos's *The Art Of Japanese Management*, William Ouchi's *Theory Z* and Peters and Waterman's *In Search Of Excellence*. In particular, Peter and Waterman's work focused on culture (or shared values as they referred to it as a variable, which could be manipulated just like structure or systems or style).

Organisational culture can be defined as the shared values and beliefs which take the form of rules of behaviour in a work group or organisation. At an elementary level, corporate culture can be viewed as 'the particular way things are done' in organisations. Culture will be influenced by many variables such as the 'baggage' people bring with them from their educational and social background or traditions and myths about the management style of the organisation, reporting structures, etc. It is shaped by numerous pragmatic actions over time based on what does and does not

work. These beliefs and assumptions lie within a cultural web which bonds it to the action of organisational life. In some sense it represents the organisation's social energy and personality and the assumptions and beliefs which it holds. Culture helps to concentrate individual energy in particular directions since the culture bottom line is expected behaviour of organisation members. Indeed, Smircich<sup>12</sup> proposes the view that organisations are cultures.

Kotter and Heskett in their recent book *Corporate Culture and Performance*<sup>13</sup> propose that it is useful to think of culture at two levels which differ in terms of their visibility and their resistance to change (see figure 1). At the deeper and less visible level, culture refers to values that are shared by people in a group and that tend to persist over time even when group membership changes. At this level culture can be difficult to change, due in large to the fact that people do not recognise the values which they hold. At the more visible level, culture represents the behaviour pattern and style of an organisation that new employees are automatically encouraged to follow by their fellow employees. At this level, while difficult to change, it is less difficult than the deep-seated values.

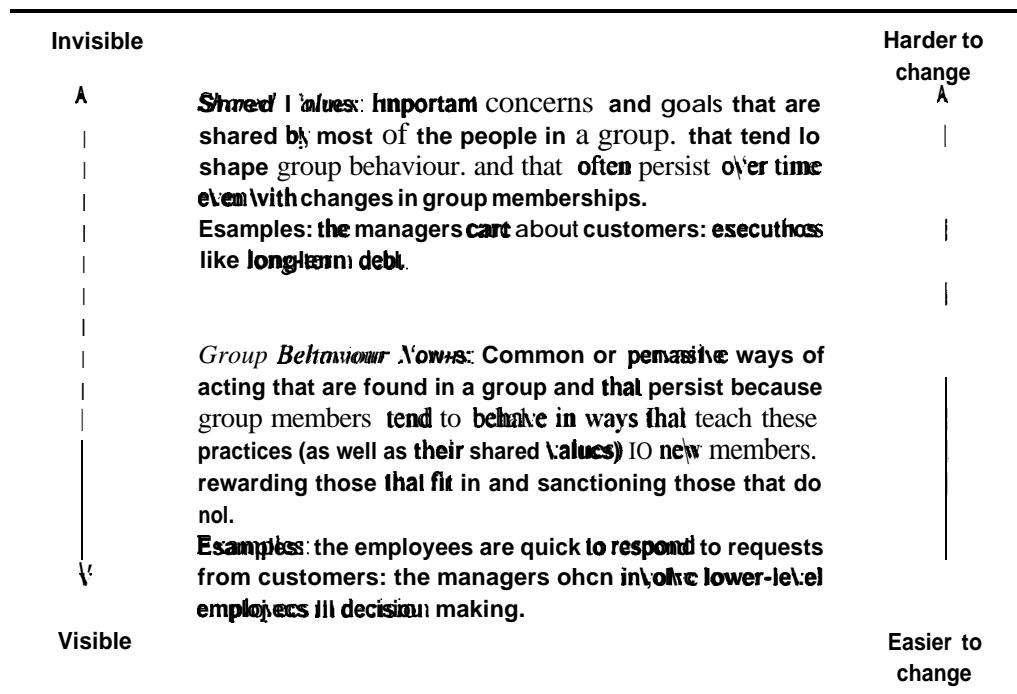


Figure 1 Culture in an organisation.

Source: J.P. Kotter and J.L. Heskett. *Corporate Culture and Performance*. The Free Press. 1992. p. 3.

The power of corporate culture should not be underestimated. When Digital Equipment Corporation moved its XSEL expert order-entry and configuration system from the US to Europe, it encountered considerable difficulties because of *cultural differences*. What was correct for sales people to do in the US was done by administrators in Europe. The calling off of the recent proposed merger between The Leeds Permanent and National & Provincial Building Societies was due to irreconcilable differences in culture between the two and their *"distinct approaches"*

to **business**.<sup>65</sup> The hostile bid by Paramount for Time Inc.. was blocked by arguments relating to the dramatic consequences the take-over would have for the *culture* of Time, which would have serious repercussions for the customers, shareholders and **society**.<sup>66</sup> In a 1993 study of business process re-engineering, Delphi Consulting reported that two-thirds of the respondents cited *cultural resistance* as the major challenge to succeeding at BPR. 17

## Sub-cultures

The view of organisations as a unified set of values makes problematic the recognition of different subcultures within organisations. Subcultures are groups of people whose culture differs from others or the organisation as a whole. This will be expressed in their holding of different expectations, values and goals. These values may be about seemingly superficial things such as preferred style of dress in that subculture, or their preference for being allowed to take their own decisions rather than being given strict guidelines. However, in an organisational context, these cultural differences may signify the potential for conflict and can pose obstacles to communication. Over long periods of time subcultures may generate behaviours or actions which are dysfunctional to the dominant corporate culture. Indeed, **Young**<sup>67</sup> criticises much of the literature on organisational culture as suggesting either a view of organisations as a single culture which ignores the existence of subgroups with different interests, or a collection of sectional groups who basically strive for their own gain.

The IT organisation is often seen as having its own culture, which can be quite distinct from the rest of the business. They often dress differently, have different codes of behaviours, have different goals for their departments, think in different time scales or have different types of educational backgrounds. Even 'jargon shock' signifies a difference between cultures.

There may be an implicit assumption that the thinking and **problem** solving styles of the IT professionals and users of their systems are similar. Very often, **IT** professionals fail to see the political nature of organisations and usually assume that all problems have a technical solution. IT professionals are trained to be highly disciplined, and this is reinforced by traditional systems development methodologies. They tend to have a low tolerance for ambiguity and often shy away from dealing with emotions. According to Rochester and Douglas<sup>68</sup> they have a strong task orientation and prefer neat, tidy, lasting solutions to problems. This can have major implications if there is a high-level of resistance to a new IT application. While communication between users and the IT professionals must be two way this must be reconciled with the project management dimensions: IT projects have milestones and targets must be met if system implementation is to be kept on schedule.

## Does culture have an impact?

A critical question relates to an implicit assumption made at the outset of this section and that is that culture ~~can~~ have an impact. The evidence would suggest strongly

that this is the ~~case~~<sup>20</sup> Kilmann ~~et al~~<sup>21</sup> distinguish three interrelated aspects of impact: direction, pervasiveness, and strength. -

The *direction* of impact is the course that culture is causing the organisation to follow. ~~The pervasiveness~~<sup>20</sup> of impact is the degree to which the culture is widespread, or shared, among the members of the organisation. The *strength* of impact is the level of pressure that a culture exerts on members in the organisation, regardless of the direction.

Kotter and Keskett's recent ~~studies~~<sup>22</sup> examining whether or not a relationship exists between corporate culture and long-term economic performance indicates four trends:

- Corporate culture can have a significant impact on a firm's long-term economic performance.
- Corporate culture will probably be an even more important factor in determining the success or failure of firms in the next decade.
- Corporate cultures that inhibit strong long-term financial performance are not rare; they develop easily, even in firms that are full of reasonable and intelligent people.
- Although tough to change, corporate cultures can be made more performance enhancing.

If one can draw any conclusions is that culture does have a powerful impact over the behaviour of an organisation. Equally, at a sub-group level, culture may lead to behaviours which is dysfunctional to the organisation. Given that the IT organisations and the rest of the business have different cultures, let us now explore its historical development, beginning with the changing role of IT in organisations.

## **Cultural aspects of the evolving role of IT organisation**

There have been many analyses of the changing role of IT in organisations over the last 30 years, resulting in a number of "evolution" models. Most authors agree that there have been probably three distinct "eras" in this brief and rapid evolution. These can be summarised as the Data Processing, Management Information Systems and Strategic Information Systems ~~eras~~<sup>23</sup>. These descriptions emphasise the changing nature of the role of IT in terms of its use, its business contribution and the resulting management issues. However few studies have specifically dealt with the changing issues at the IT/Business boundary in the organisation. Much of the apparently relevant literature deals with the issue of control of IT, i.e. the issue of centralisation or decentralisation of IT resources in the organisation. Whilst clearly the organisational position of the IT people will affect their relationship with the business colleagues they "serve", the arguments tend to assume that who manages the resources determines the nature of the relationship. Again, little analysis has been done and it is often found that even when IT resources have been decentralised, there is an uneasy and uncomfortable relationship between the IT specialists and business



colleagues and managers. As mentioned earlier, it is interesting that the Price Waterhouse IT Review 1993/4 raises both issues of centralisation versus decentralisation of IT resources (and it describes the roughly equally balanced arguments for both) and the culture gap (which is associated with the 'increasing problems arising from legacy systems). It would appear that another cycle of argument about the merits of centralisation versus decentralisation may well obscure any reasonable debate of how to improve that IT/Business relationship, wherever IT resources are located.

The few writers who have addressed the cultural aspects of the role of the IT organisation and people in relation to the rest of the organisation, offer some valuable insight. Zmud<sup>24</sup> considered the changing type of activity performed by IT staff, arguing that during the 1980s it changed from a "manufacturing" based activity set to a "distribution" set. He proposed a different type of IT organisation structure to reflect the need to deliver services rather than develop and deliver products. Others including La Belle and Nyce<sup>25</sup>, Kee<sup>26</sup> and a summary article in *EDI/Analysier*<sup>27</sup> discussed both the merits of different organisational structures and the changing nature of skills required by IT specialists. But again little was said about the inter-relationship between IT and the business.

Hirschheim *et al.*<sup>28</sup> were more specific and began to address the relationship issues, albeit by **describing** the need for IT departments to respond effectively to changing demands from the "business". They described three stages of the evolving relationship:

1. **Delivery** - when IT services are mainly internal and their focus is on improving their ability to deliver and support the IT based systems. This does not imply delivering what the business needs!
2. **Re-orientation** - when IT attempts to develop good relationships with the main business functions (easier with some than others) and provides a variety of services to meet demands from the functions, albeit without regard to the business importance of those demands.
3. **Re-organisation** - when IT tries to develop an integral relationship with business management to ensure that the supply of services matches overall business priorities and responsibilities are shared and balanced between IT specialists and business managers.

Most mature organisations are probably struggling in the third of these states, but often encumbered by a cultural legacy, as well as systems legacy, inherited from the **first** two.

Another more detailed assessment of the evolving relationship was **described** by Galliers and Sutherland<sup>29</sup> who synthesised Earl's<sup>30</sup> planning model with Nolan's<sup>31</sup> six stage model and the well known "7S" model<sup>32</sup> for analysing the interacting management attributes, some of which clearly have a cultural dimension (style, skills, staff and shared values). Their conclusions, tested in a few organisations are essentially that

1. each of the attributes needs to change as the organisation becomes more dependent on its IT systems and more mature in its planning of them;
2. if any of the attributes is unsatisfactorily addressed in an early stage of the evolution, then the organisation will be less able (even unable) to achieve success in the later, more demanding, stages;
3. positive attributes developed in the early stages should not be discarded later since the organisation will have a legacy of products from the earlier stages and support;
4. for an organisation to succeed, without major hiatus or disruption of IT supply, it should address all 17 Soft Elements coherently at each stage before moving forward.

Table 1 summarised the six stages described by Galliers and Sutherland focusing on the conclusions with respect to "shared values" at each stage. In many organisations it is the transition from Stage 3 to Stage 4 that is perceived by business managers, that make the relationship changes required in Stage 4 onw difficult to achieve. The table emphasises perhaps the more negative aspects of the observed realities in Stages 4 to 6 in organisations than the desired, almost idyllic relationships described by Galliers and Sutherland as prerequisites for success.

Stage 1 "Ad Hocrac"	Very few, if any, shared values since the focus of IT is internal and they are unable or unwilling to seek a coherent relationship with the business. They relate more closely to IT suppliers
Stage 2 "Starting the foundations"	The "priesthood" of IT begins to develop and IT staff perhaps cultivate a unique culture based on technology worship - often seriously at odds with the business.
Stage 3 "Centralised dictatorship"	When IT management often reacts to business managers concern over "excessive spending" on IT and views of poor delivery performance by becoming defensive and exerting control over what it does to address the balance.
Stage 4 "Democratic dialectic & Co-operation"	IT specialists recognise the need to work in co-operation with business managers towards achieving business goals but still respect the business to co-operate with IT's set of values.
Stage 5 "Entrepreneurial opportunity"	Recognition in the business that IT can deliver its potential strategic benefits through innovative use often leaves the IT department looking after the legacy and struggling to provide any value to the newly "liberated" users.
Stage 6 "Integrated harmonious relationship"	Rarely achieved due to the difficulties and reconciling differing values, overcoming historical precedents and prejudice and requiring a new openness in all aspects of IT activity.

Table 1 Summary of Galliers and Sutherland's staged model

In the context of the rapidly evolving use of IT in the 1980s and the changing nature of the IT applications many organisations turned to outside suppliers to deliver the newer often more complex systems. This was in part due to the skills required, which perhaps did not exist in the internal IT function, and was often seen as necessary since the in house IT resources were fully occupied maintaining the old systems and had no time to work on the often "urgent" new systems. Whether or not the arguments were really valid, or the business managers preferred to work with other parties than the in house IT function, this caused further problems between IT specialists and the business. IT specialists could not fail to notice that the most interesting and often business significant work was now being done by outsiders. Although some IT staff probably did not mind - being happy to work within their old skill set - many resented this change and became further alienated from the business.

Up to this point, in the mid 1980s, organisations may have employed additional external resources to supplement their own staff in varying ways, but few got rid of their own staff as a result. Only in the late 1980's did "outsourcing" of IT resources become a seriously considered alternative, but it has been rapidly taken up by many organisations who are unhappy, for any one of a range of reasons, with their in house IT people. It appears that whilst it is rarely overtly stated, the original causes which make outsourcing eventually a preferred option, have been built up in the poor relationship between IT and the business. It could be observed that many IT departments were "culturally outsourced", often, due to their own actions, long before

an issue triggers consideration of physical outsourcing. It is then any easy and relatively painless step for management to announce the divorce!

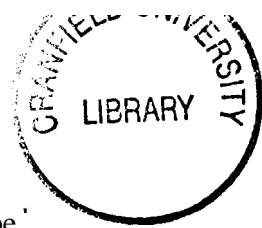
Many recent writers have recognised that most businesses have a far richer-choice of “sourcing” options for IT **products** and services than **10** years ago. This implies a further set of changes in the role of any in house IT function and also more complex decisions for business managers. Some organisations accommodate the problem by declaring the IT function a “profit centre” and demand that it earns a living from external and internal customers. This is effectively outsourcing by another means, making the relationship an “arms length”, customer-supplier business relationship, perhaps it should be called “shake it all about” sourcing! Yet research shows that they are often sub-optimal in terms of satisfying the hosts organisation’s **needs**<sup>33</sup> **Dearden**<sup>34</sup> argues that making IT a profit centre is the first step in ‘an inevitable journey to oblivion.

Venkatraman and **Lohi**<sup>35</sup> consider this changing nature of the IT function whereby it moves from managing a technical or product portfolio to a “relationship portfolio”. They suggest that the IT function should focus on managing its relationship with its “customers” (in the business) and its suppliers (in the IT industry). It needs to clearly define its “locus of competence” or value adding capability between the two and also to fulfil a new role in enabling the development of inter-organisational systems between the firm and its trading partners. They contrast this new role with the skills and values of a traditional IT organisation but also argue that simplistic outsourcing leaves a competence gap inside the organisation.

In a similar vein **Moad**<sup>36</sup> argues that the changing nature of the technology infrastructure, especially ‘mainframe’ to ‘client server’, is causing the creation of the “Virtual IS Organisation”. He suggests that the IT resource is becoming dispersed and **de.facto** includes business people and external resources which need to be co-ordinated within and outside the organisation via some as yet unspecified process! In many ways his views are similar to von **Simon**<sup>37</sup> who described a more structured version of how to manage a ‘centrally-decentralised IS organisation’. But in both cases the implicit rationale is about control of activity and resources and adapting to a changing IT environment rather than to establish, († an effective relationship. Moad does point out that many IT organisations are uncomfortable with this new concept and many of them attempt to regain control of the dispersed components of the virtual organisation through an insistence on managing the new technology infrastructure.

One final viewpoint that is worth considerin, († in this section, and a view that perhaps offers more insight into the culture gap problems than most, is that described by **Hedberg**<sup>38</sup>.

Table 2 summarises Hedberg’s three stage view of how organisations mature with new technology from the point of view of the technologist. Whilst the particulars are interesting in themselves the table perhaps explains in a simple way why organisations have found it exceedingly difficult to fully integrate the IT function. In Phase 1, the technologist is exploring or pioneering, attempting to exploit the technology and the rest of the business is the normally unwilling subject of this haphazard and uncertain exploration. Not a satisfactory start to the relationship. Eventually the technologist



(and the rest of the business!) realises the limits of the technology and care has to be taken to avoid unacceptable effects on the rest of the organisation - the technologist becomes defensive - again not a very equal or mutually responsible relationship. Finally in the third phase the technology can clearly deliver strategic change if managed well, but the technologist is seen as the agent of that change - a source of potential revolution in the organisation. Once more this is a threatening role which is difficult to accommodate comfortably. Hence even if the technologist has the wit to recognise these changing roles and can acquire the skills needed, almost by definition he or she is an intruder or even a threat to the rest of the organisation. The natural reactions of any organism in such circumstances is to

- a) pretend its not there
- and/or
- b) reject it as soon as possible!

Phase	Mission	Purpose of application	Organisational impact	The technologist	Nature of design
Phase 1	To design	To exploit the technology	By surprise	"Frontier skills"	Exploratory
Phase 2	To design carefully	To minimise social impact	By mistake	Tailor	Defensive
Phase 3	To design deliberately	To change organisation	011 purpose	Agent of change	Strategic

Table Maturing with technology (after Hedberg)

## Implications of the changing contribution of IT to business success

Perhaps the easiest way of describing the changing contribution is through the application portfolio concept.<sup>39</sup> Most organisations' IT based systems have evolved from a support role through key operational to strategic (to some extent at least) and for a stage of their life cycle some were of a high potential nature (even if the potential was not realised). Figure 2 describes the basic portfolio and overlays an interpretation of the results of Earl's work on planning approaches<sup>40</sup> and Parsons' work on implementation methods - the rationale is described by Ward.<sup>42</sup> The resulting sets of planning and implementation "best fit" synthesis has implications for the relationship of the IT function to the business - it needs to forge different management and operational relationships if it is to succeed in all types of IT application based on required business contribution.

Crescenzi<sup>33</sup> used the 7S attributes to analyse why a majority of "Strategic Systems" investments failed (only 5 out of 30 were described as successful in an Index Group Study). His overall conclusions - the details of which are shown in Table 3 - was that the range of attributes of IT departments and staff which are appropriate in a reactive, problem solving, job shop environment are quite inappropriate when the projects require a proactive, creative change driven approach. This is not really surprising but it is surprising that in 8.3% of the sample (25/30) this was not recognised before the project failed!

Success	S	Failure
Top down management. Focus on business goal evolution and development.	<b>Strategy!</b>	Focus on systems and technology!
Team	<b>Structure</b>	Hierarchy!
Selling and educating about ambiguity.	<b>Skills</b>	Technical only. Structure/inflexible approaches
Reward risk taking and intuitive justification.	<b>Systems</b>	Discourage risk taking! Financial justification.
Loose, flexible	<b>Style</b>	Specific duties and roles
Visionary champions accommodate different views in small team	<b>Staff</b>	"Superstars" in teams - different views not accommodated
Unselfish share ideas and accept imperfection.	<b>Shared values</b>	Separation of user/IT technical staff (perfection).

**Table 3** Strategic information systems: success and failure by the "seven Ss". (After Crescenzi).

Further work by the Index group attempted to describe this in terms of the whole portfolio and an adapted version is shown in figure 3. This has similar implications to the description of the essential attributes required by the "project manager" for developments in the different segments of the portfolio-'-' shown on figure 2. It would be easy to debate the words used in figure 3 and no doubt better terms can be used but there is some correlation with Galliers' view of the changing nature of the 7S's, albeit that his is a view of historical evolution and the other reflects the "current" situation in organisations.

However the comparison does reinforce the assessment that most IT departments' and their staffs attributes normally align more closely with those that seem appropriate in the key operational and support segments.

It should not be **surprising** therefore that unless the IT department culture adapts to the different environment implied by the strategic and high potential types of applications, the more the business functions will take on the responsibility for them and reject IT involvement. It is more likely, after all, that business people will possess the types of attributes needed in the top half of the matrix. Equally the IT function is likely to have a skill-set and mind-set determined by the current portfolio, which will be dominated by a legacy of key operational and support systems.

Viewed from this standpoint, slightly different if complementary conclusions can be drawn, compared with the previous section.

1. It is **simplistic** to argue that "the business comes first and IT people must understand that", implying that IT should adopt values etc. which are determined solely by the rest of the business. But this would deny the fact

<b>STRATEGIC</b>	<b>HIGH POTENTIAL</b>
<p>Applications which are critical to achieving future business strategy.</p> <p><u>PLANNING APPROACH</u> (Earl)  “Organisational” or  “Business” Led</p> <p><u>IMPLEMENTATION APPROACH</u>  (Parsons)  “Centrally Planned”</p> <p><u>PROJECT MANAGER</u>  “Developer”</p>	<p>Applications which may be important in achieving future business strategy.</p> <p><u>PLANNING APPROACH</u>  “Business” or  “Technology” Led</p> <p><u>IMPLEMENTATION APPROACH</u>  “Free Market” or  “Leading Edge”</p> <p><u>PROJECT MANAGER</u>  “Entrepreneur”</p>
<p>Applications on which the organisation currently depends for success</p> <p><u>PLANNING APPROACH</u>  “Method Driven” or  “Administrative”</p> <p><u>IMPLEMENTATION APPROACH</u>  “Monopoly”</p> <p><u>PROJECT MANAGER</u>  “Controller”</p>	<p>Applications which are valuable but not critical to success.</p> <p><u>PLANNING APPROACH</u>  “Administrative”</p> <p><u>IMPLEMENTATION APPROACH</u>  “Scarce Resource” or  “Free Market”</p> <p><u>PROJECT MANAGER</u>  “Caretaker”</p>
<b>KEY OPERATIONAL</b>	<b>SUPPORT</b>

**Figure 2: The Applications Portfolio and Implications**

<b>STRATEGIC</b>		<b>HIGH POTENTIAL</b>	
<b>Business Development Climbers</b> <b>Business + IS/IT Organisation Concensus</b> <b>Flexible Proactive/Iterative Team</b>	<b>Shared Values</b> <b>Staff Skills Style Systems Strategy Structure</b>	<b>Business Innovation Hunters/Seekers</b> <b>Business/External Entrepreneurs</b> <b>Discretionary Proactive/Creative 'Skunk Works'</b>	
<b>Business Stability Engineers</b> <b>Managing Detail Prescriptive Mandatory</b> <b>Reactive/Defensive Functional</b>	<b>Shared Values</b> <b>Staff Skills Style Systems Strategy Structure</b>	<b>Business Efficiency Implementors</b> <b>Problem Solving Acceptance</b> <b>Restrict Discretion Process Improvement</b> <b>Job Shop/Service</b>	
<b>KEY OPERATIONAL</b>		<b>SUPPORT</b>	

(after Index Group, with modifications)

**Figure 3: Changing the 7 'S's**



that in some aspects at least, the IT skill and mind sets have to satisfy the need for stability and efficiency in key operational and support systems. Here the traditional IT values need perhaps to be adopted more wholeheartedly by the business if the optimum contribution is to be achieved from the organisation. Hence whilst there is an undoubted need for the IT people to change significantly, as below, there is likely to be a need for change of attitude in the business to accommodate the inevitable consequences of extensive business use of IT. Reconciliation is needed of both the perception and reality of the relationship.

2. In the newer "future critical" areas for the use of IT in the business the values of business development, innovation and consequent change have to be shared successfully within the relationship. Here the IT community cannot argue that others must become reconciled to its view. It is the business managers who will, inevitably, decide what is to be used for and the IT specialists must adopt ways of working, which enable the business to succeed. In the process they must also provide the knowledge to enable the business managers to make informed judgements about IT feasibility, not tell the business managers what will and will not work, or how it must be done. In the strategic and high potential segment the "IT process" is of secondary importance to the business development and change process. All this implies that IT specialists adopt a different set of values, or else in many instances the IT department will be rejected as a partner in favour of outsiders, who can appear to adjust their value set, like chameleons, to any set of surroundings! Once rejected from the strategic quadrant of the matrix the IT function will probably have to fight a rearguard action across the whole matrix, justifying its value added everywhere.

The long term consequences of the IT function not being able to understand the realities and perceptions applying to these new areas will be that the organisation will be reliant on outside suppliers for success in its pursuit of its business strategy. Therefore whilst it is incumbent on the IT people to change, it is the responsibility of organisational management to create the climate for that change. For other business as a whole will probably suffer in the long term.

Whilst these conclusions are reasonably obvious in many ways, achieving reconciliation in this increasingly pressured environment, requires new ways of thinking on both sides of the relationship and ways of thinking which are not immediately perverted by the troubles of the past.

### **Routes towards gaining mutual understanding of the situation**

Culture and issues surrounding culture are difficult to define and understand. Dealing with fuzzy, intangible things like 'mindsets' is a complex task, yet the Peters and Waterman work referred to earlier was clear in its suggestion that culture is a variable which could be manipulated. The message from their work is "excellent" organisations exhibit a particular type of culture which any aspiring excellent company should seek to emulate.

While this might be a logical implication, of critical concern is the extent to which management can influence members values which are necessary for the survival of the organisation and how influential are traditions and beliefs about how things have been done in the past in influencing current action. Sounding a word of caution, Fitzgerald<sup>45</sup> has argued that those who urge direct management of corporate culture largely fail to appreciate that the deep-seated values, beliefs, and assumptions underlying that culture can rarely if ever be engaged by such an approach. He proposes that 'we can't talk intelligently about changing cultures until we understand how to change underlying values.' Despite this reservation we suggest that it is **useful** to explore the cultural context of the IT/business relationship from a **number** of different viewpoints.

## Perceptions

The perspective of culture as shared meaning has been suggested.<sup>46</sup> This view is linked to symbolic **anthropology**<sup>47</sup> and when applied to organisational analysis, culture is conceived as a pattern of symbolic discourse needing interpreting, reading or deciphering.

Perception is a critical variable in examining culture because people's behaviour is based on their perception of what reality is and not reality itself. Perceptions will also play a leading role in how individuals react to and enact and changes in culture. Adopting this basic premise in examining resistance to change, for example, is to take the perspective of the individual and attempt to understand change, a view shared in disciplines such as anthropology and ethnography. Human behaviour is guided by the constructs and meaning which individuals use to interpret their surrounding. Thus this hermeneutic approach involves the mutual understanding of different peoples 'frame of reference' which guide their meaning. For example, while business strategy is developed in response to what senior management perceive the competitive environment to be, research shows that even managers from the same firm can perceive their environment quite differently and will therefore seek to implement different strategies to meet competitive challenges.

## Roles

A key task in examining the IT/business relationship is to examine the roles performed by the IT organisation. At this basic level, the Price Waterhouse **study**<sup>48</sup> referred to earlier, showed that there is a **rift** between the IT organisation and the business concerning what exactly is the **role** and function of the IT organisation. Both have a different interpretation of what these roles entail or should entail. For example, providing infrastructure services scores most, mentions among IT **executives** and the rest of the company. yet there is no agreement as to what these services will entail.

IT directors are unsure amongst themselves whether the role of the IT organisation is primarily to be engaged in a process that brings about business change, or to be the implementor of the consequences of change or merely to facilitate the activities of

others. This dilemma of lack of agreed role clearly impacts the IT/business relationship and caused continuous confusion and uncertainty. In a recent paper **Earl<sup>19</sup>** called for the business to be put back into IT. The phenomenon of business process re-engineering (BPR) is perhaps further recognition of the poor contribution which IT is making to the business and calls for a rethink in how IT is applied in organisational settings.

One of the roles of the IT organisation is the development of information systems. Many view information systems development (ISD) as a technical process. Most development methodologies promote the distinction between IT and the rest of the business. Once requirements have been specified the IT professional retreats, and the contact between the two groups is minimal. This view has been challenged by a number of scholars who present systems development as a form of social action. Hirschheim et al.<sup>20</sup> hypothesise that ISD can be more effectively understood by applying seven basic **building** blocks of social action theories, knowledge, power, subjective meaning, human interests, consensus, conflict, and resistance. They suggest that it is the interplay of these seven elements which make up the fundamental basis of systems development.

## Metaphors

One of the problems we face in both **studying** and working in organisations is their complexity. There are just too many factors and their relationships are too complex or ambiguous for us to understand in their entirety. To understand and make sense of the world we need to **simplify** it and draw a conceptual line around the bits we are interested in and, within that line, what we wish to examine. To do this we consciously and subconsciously use metaphors and analogies to help focus our thoughts and understanding. This use of metaphor implies “a **Way of thinking** and a **Way of seeing** that pervade how we understand our world generally” and can provide interesting ways of ‘reading’ organisations as part of an interpretative epistemology.<sup>32</sup> **Boland<sup>33</sup>** argues that **metaphors** are not just **colorful** ways of expressing ourselves but underlie the ways in which we can think and act, and thus we “cannot not use metaphors.”

Drawing insights from a variety of disciplines including organisation behaviour, sociology, cybernetics, management theory, and political science. **Morgan<sup>34</sup>** considers a wide range of different approaches to the study of organisations. His eight images view organisations as machines, organisms, brains, cultures, political systems, psychic prisons, flux and transformation, and instruments of domination.

Morgan considers that in talking about culture we are really talking about the process of reality construction that allows people to see and understand particular events, actions and utterances in distinctive ways. This has echoes of **Weick's<sup>35</sup>** concept of ‘enactment’ which describes the subjective way in which we draw meaning from previously lived experiences and thus determine our attitudes to ongoing activity. We suggest that one reason for the perceived culture gap is that the IT organisation and the business subscribe to different metaphors, Each has a different **Weltanschauung**. Perhaps the IT organisation treats the rest of the organisation like a machine to be

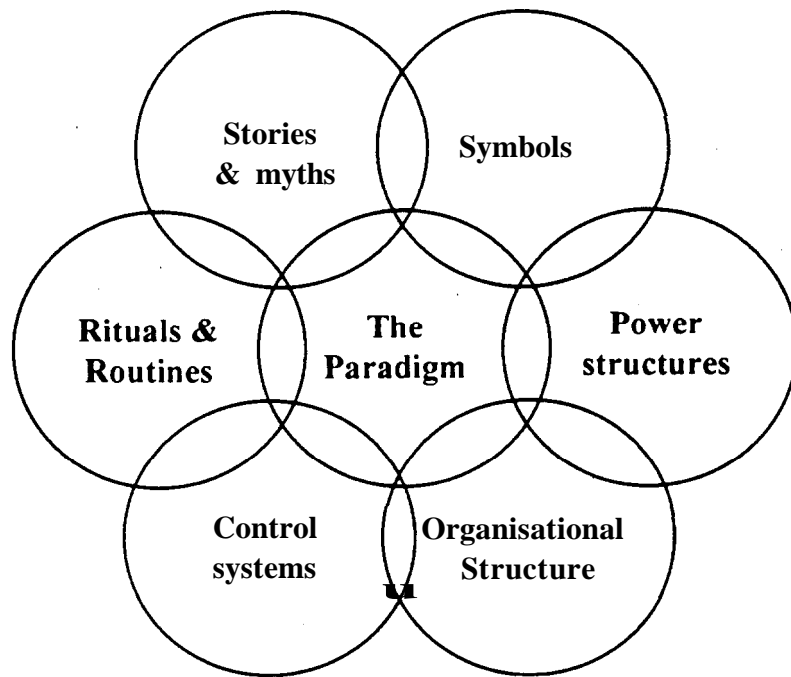
manipulated in a similar way to how they view the other machine which **they** work with, i.e. the computer. Expected outcomes are related to seen to be predictable. The business, on the other hand, subscribed to a different metaphor, perhaps more to do with flux, and therefore expect the IT department to be as adaptable and accommodating as possible.

## A framework for understanding

Until both sides recognise that there their is a problem the gap is likely to remain. When one speaks about culture, much of the discussion as invariably at a level of abstraction which makes it **difficult** to articulate any response. The cultural web framework developed by Gerry **Johnson**<sup>66</sup> has proved valuable in understanding the cultural aspects of business performance. Devised to assess the inter-related components of a whole organisation's cultural attributes in the context of its business environment, it is also a powerful tool to enable the business and the IT organisation articulate and understand the cultural gap that exists between them.

The web is based on the premise that while individuals may hold **different** sets of beliefs, there is at some level a core set of values, beliefs and assumptions commonly held throughout the organisation which Johnson refers to as the ~~paradigm~~<sup>paradigm</sup>. The paradigm governs and influences an organisation's view of itself and its environment. We suggest that the business and IT organisation subscribe to **two** different paradigms. Through their respective paradigms each creates a relatively homogeneous approach to the interpretation of the complexity that the organisation faces. Since it evolves through time and is reinforced by history, it provides a repertoire of actions, and responses to the interpretations of signals. which are experienced by members and seen by them as demonstrably relevant.

The paradigm is hedged about and protected by a web of "cultural artefacts", composed of three "hard" and three "soft" components through which the organisation promulgates, deliberately or unintentionally, its core beliefs. Power and organisational structures and the control systems reflect how the organisationally should work and can be defined and described in rational, objective terms. The other three - symbols, stories and myths, rituals and routines - are less rational and **reflect** what people inside and outside the organisation actually see and often remember most about the way the organisation conducts itself This web is illustrated in figure 4 and below we briefly describe each of these artefacts.



**Figure 4** The cultural web.

Source: G. Johnson. *Managing strategic change - strategy, culture and action. Long Range Planning*. Vol. 25. No. 1. pp. 28-36. 1992.

### *Stories and myths*

In every organisation there are stories, some true, others either variations of the truth or simply myths. Examples are the big IT failures, the products that flopped, the legendary leaders and mavericks. In particular, new employees hear stories about those who broke the cultural norms and the consequences of their actions. Most have evolved over the years and have become part of the organisation's folklore.

### *Symbols*

All organisations has its symbols, although they are often so much ingrained in day-to-day life that they may not be recognised. The dress code, job titles, executive parking spaces, the MD's Rolls Royce are all symbols. At one particular insurance company there were 5 different categories of restaurants and as one progressed up the management hierarchy the quality of both food and dining room surroundings improved, considerably. Symbols also include company specific language which reinforces entrenched attitudes, like addressing directors as 'sir'.

### *Rituals and routines*

Rituals are those aspects of organisational life which hold a special significance and may include the monthly board meeting, the annual company barbecue, or the need for partners in some consultancies to sign off anything that goes to a client. In many instances they serve no purpose other than being a part of a ritual which may at one time have had relevance. Robey and Markus<sup>97</sup> argue that elements of the system design process can be interpreted as rituals which enable actors to remain overtly rational while negotiating to achieve private interests.

### *Control systems*

Organisations have particular control systems to monitor and encourage performance. Pay and reward systems, budgetary control systems and the management hierarchy are all examples of such systems and serve to highlight what is valued by the organisation. The historical relationship between IT and the finance department has produced almost a double set of controls for IT and financial management.

### *Organisational structures*

Organisations do have formal structures which do have an impact on behaviour. Functions, departments, geographically based business units, product-based business units, flat management hierarchies, large bureaucratic hierarchies, are all examples of how the structure of an organisation can impact the paradigm. The position of the IT organisation in the organisational structure and the structure of the IT organisation itself are often designed to manage IT not support the business.

### *Power structures*

Power is concerned with where influence resides, particularly where it can reduce uncertainty. Because the power structures tend to reinforce the paradigm they are often targets for change. This is particularly different given that those who may be required to change often hold the power.

### **Changing culture**

In attempting to change their culture many organisations manipulate the “hard” elements of the web, i.e., the power structures, the control systems and the organisational structures, neglecting to address the more intangible elements. Indeed, by treating the problem as an centralisation or decentralisation issue or in-considering the outsourcing route, this is exactly the scenario. All elements of the web must be examined and acted on if cultural change is to take place and this change translated into tangible actions and results.

For example, Morgan<sup>88</sup> argues that managers can influence the evolution of culture by being aware of the symbolic consequences of their actions and by attempting to foster desired values. In one particular engineering company the IT department was viewed as a support service to the business and was looked upon as the “mover of boxes”. When a new IT director was appointed he immediately outsourced this “movement of boxes” to give a clear message to the rest of the organisation that the IT department was involved in more value-added work. This symbolic gesture sent a powerful message to the rest of the organisation and had the immediate effect of changing the perception which the business held of the department.

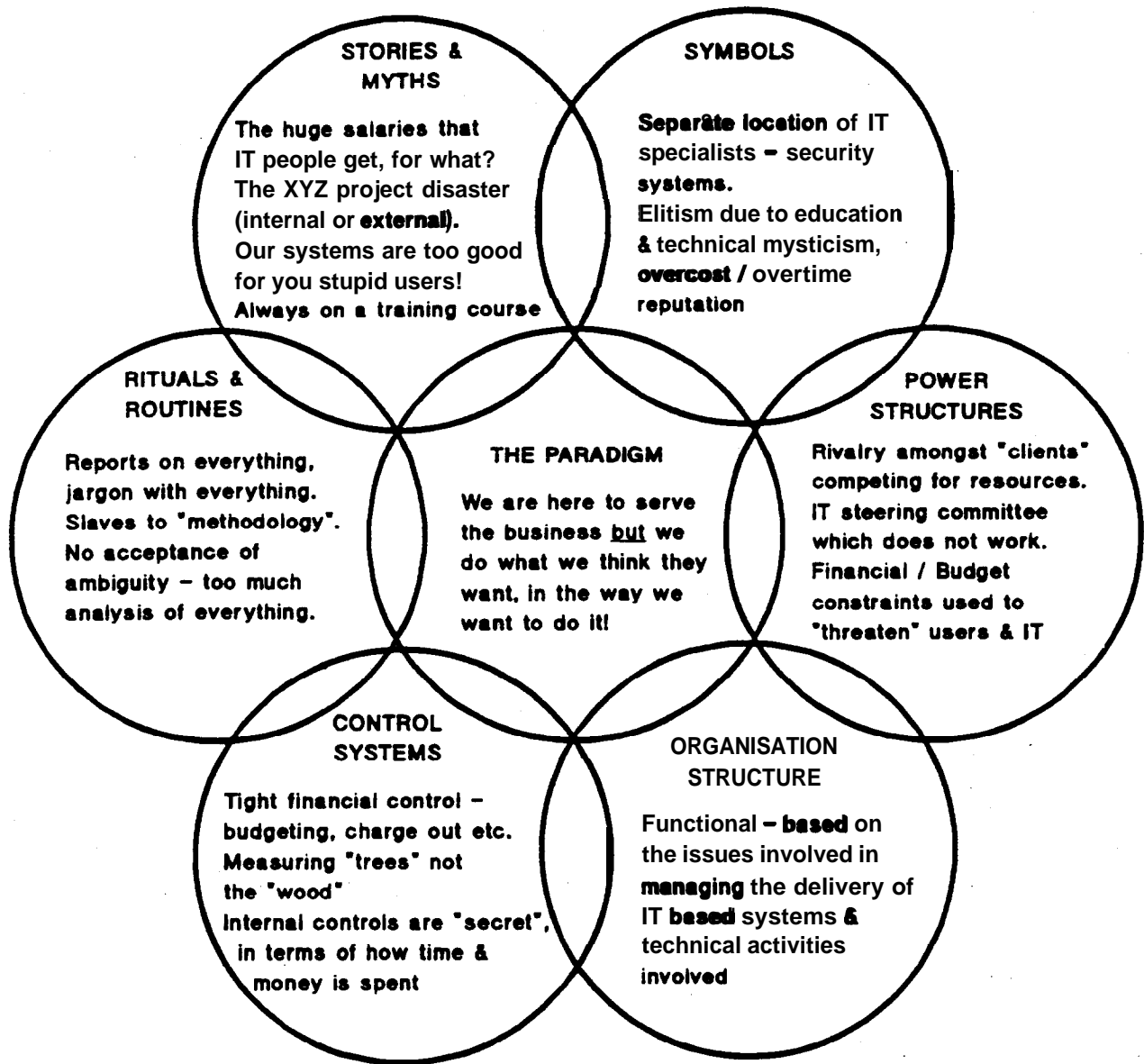
### **Cultural audits**

The web can be used as a powerful tool in order to conduct an audit of the culture of an organisation. It can highlight both the hard and softer influences on the corporate culture. An example of using the technique to describe the views a business had of its IT department, obtained from a “customer survey” is given in figure 5.

Clearly the business did not think highly of its IT department. In fact the management of the IT department had been working hard restructuring the IT organisation, improving the control of activities and getting line managers involved in decision making about IT. However, the symbols, stories and rituals as perceived from the “customers” had changed little over time - the management was unaware of these and the impact that had on its ability to work effectively in the business. This is partly to be expected given that IT managers are generally logical, rational thinkers and they therefore focus on the more rational elements of the web. Even when these are made more effective, the other components will colour both internal and external perceptions of the function, based on past performance. Unless conscious efforts are made to change these elements of the web to make them consistent with the intended paradigm the organisation will not be more successful. This takes time and in the process it is necessary to “unmake” history, eradicate old perceptions as well as create the required future. Traditionally IT management have not focused their attention on these softer aspects of their relationship with the business, resulting in the IT department’s contribution being less valuable and less valued than it could and should have been.

### **Summary, conclusions, and issues for further research**

The push towards a new IT/business relationship has already been driven by the pace of technological change. The mainframe computer ensured that a central IT organisation existed. The PC revolution of the 1980s brought computing power to the desks of users. The organisation structure of the information centre rose to support end user computing. The rise of local area networks (LANs) added a new dimension. Standalone PCs could now be connected together and sophisticated applications developed in a multi-user environment. Distributed databases and more powerful hardware and software have taxed the ability of the ‘centralised IT organisation to service the needs of users.



**Figure 5: A "Classic" IT Department**

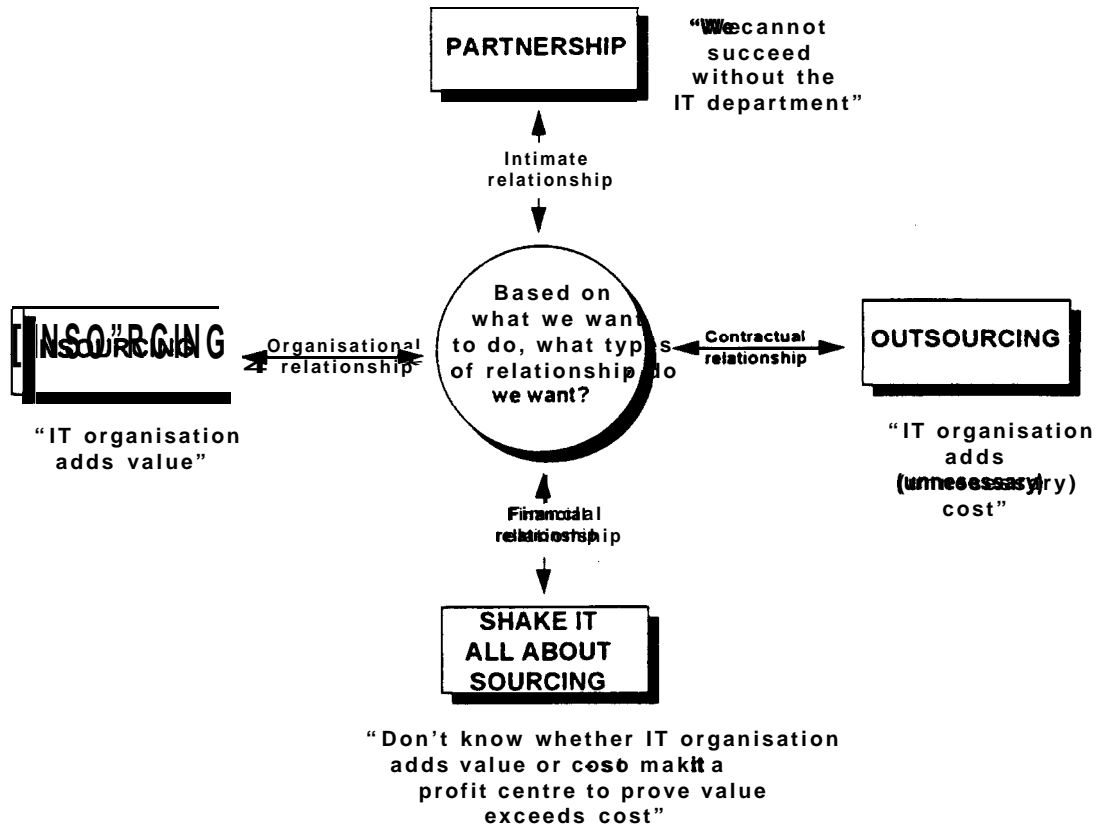


Therefore, in one dimension, technological developments are demanding a new relationship. With the rapid pace of technological advancement it is important that the organisations capability to maintain its knowledge of technological developments should not diminish. This very objective sows the seeds of a separate function performing this task, i.e., the paradox is complete - technology push is reinforcing the traditional IT/business divide. In many ways this has led to posing the question of whether the traditional organisation structure, with a separate IT function, is actually perpetuating the gap. The debate between centralisation and decentralisation of IT in the literature is indicative of this. Yet the kernel of this debate concerns the control of resources rather than managing a relationship.

To “improve” the service which the business is getting for the IT organisation, many have instituted Service Level Agreements (SLAs). Yet the very presence of such documents is a clear sign that there is distrust and it can become a mechanism for “structured blame” Such contractual obligations which may be viewed as a substitute for a harmonious relationship but end up being a barrier

The outsourcing option has further added to the confusion While outsourcing may originally have been seen as a low cost route to allowing an organisation concentrate on it's core competencies and let others whose competencies reside in the management and development of IT systems take care of them, the reality has been somewhat different. Without wishing to enter this debate, what it has done is raised the question of the long term consequences of short term decisions which are based on historical problems.

In figure 6 we summarise the choices which organisations make in regard to the relationship which can exist between the IT organisation and the business. At best, most only consider three, depending on how the business views IT. Perhaps due to the poor record of IT in delivering business benefit, many organisations see the IT organisation as adding cost, and therefore increasingly opt for the outsourcing route and a contractual relationship stipulating expected service levels. As we have argued earlier, this can be a painless exercise as the IT organisation is often “culturally outsourced” anyway. Even where IT is viewed as adding value, it is often deemed necessary to have some sort of organisational relationship in place. In most instances, however, the focus concerns the control of resources rather than managing the relationship with the debate progressin, ( little beyond issues relating to centralisation versus decentralisation



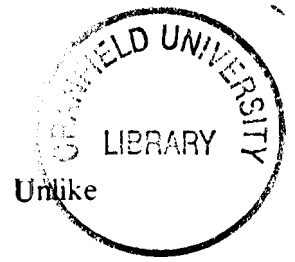
**Figure 6** Sourcing in a mixed economy.

It is interesting to note the lag which exists between the strategic management of IT and business strategic management. In the early 1980s, IT strategy and process reflected business strategy of the 1970s, i.e., formal planning. The focus in the late 1980s was on treating IT investments as products and managing accordingly. Many organisations use the application's portfolio, referred to earlier, to manage their investment in IT. This portfolio, which has its origins in the product-market domain, treats applications as products which make different contributions to delivering the business strategy. The late 1980s saw business strategic thinking move through the cultural loop resulting in strong appreciation of the role of culture in both strategy formulation and implementation.

In the 1990s business strategic thinking has moved to competency based strategies, emphasising the "behavioural aspect" of strategy. As we move towards the end of the 1990s, will the notion of competencies come to dominate how IT is managed? Many organisations have already outsourced- this competency and even if they haven't, because of the culture gap, these competencies are not recognised or exploited. There is a clear need for more focused research on the particular issues that create and reinforce the culture gap.

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Because of the culture gap and the opportunity to outsource IT more and more companies are choosing divorce rather than reconciliation which, if our logic above follows, will make the organisation incompetent in the future. Organisations must



however attempt to understand the gap before there can be any reconciliation  
Liz Taylor, there may be no second chances!

Unlike

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