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UNDERSTANDING THE CEO/CIO RELATIONSHIP

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ABSTRACT

The need for top management involvement in the exploitation of IT is a recurring theme of information management. Previous research has suggested that this involvement is linked with a two way relationship between CEO and CIO. This paper reports on an exploratory research study which set out to identify the determinants of a successful two way relationship. CEOs and CIOs were interviewed in-depth in fourteen large organizations based in the UK. The paper describes an explanatory framework which links the quality of the CEO/CIO relationship to identify attributes of each of the parties, and of their host organization.

1. INTRODUCTION

In discussion of the planning and implementation of Information Systems, authors have regularly highlighted the importance of CEO involvement. Jarvenpaa and Ives (1991) have noted how often the CEO’s leadership features in the case study literature. The research studies of Lederer and Mendelow (1987) and Watson (1990) have suggested that a direct, two-way, relationship between the CEO and IS Executive is critical to strategic IS planning (SISP), supporting the finding of Raghunathan and Raghunathan (1989).

However, a direct relationship should be seen as an enabler, not a guarantee of success — relationships can be problematic. Henderson (1990) argues that IS executives need to make conscious investments in building partnership with business general management. Articles in business and professional magazines (for example Rothfeder and Driscoll 1990, Carlyle 1989) record how turbulent such relationships can be. This paper describes an exploratory research study into the factors which may drive the quality of the relationship between the CEO and the CIO.

2. METHODOLOGY

“Relationship” is a nebulous concept, not easily amenable to traditional forms of empirical research. Relationships can be expected to be a complex product of multiple factors, including business context variables, individual backgrounds/values/cognitive styles, professional skills and contributions. There are also problems of access to meaningful data, especially from busy CEOs; Jarvenpaa and Ives had to discard much of the data from their questionnaire survey of CEOs because of a low response rate and the lack of differentiation in responses to structured questions.

It was therefore decided to conduct an exploratory study which would allow in-depth investigation of a wide range of variables during personal interviews with CEO/CIO pairs. Fourteen UK-based organizations were selected for study, with the characteristics summarized in Figure 1. The sample was structured across industry sectors to allow for different information intensities (Porter and Millar 1985) in state and private ownership to capture further potential differences in management regimes. In seven of the fourteen cases, interviews were held at corporate level, but three of these seven (Transportation, Retail, and Utility) were single business corporations. Therefore ten sets of interviews were focussed on a single business unit context, with four sets exploring CEO/CIO relationships at group level. The organizational units represented were mostly large or very large: four of the CEOs were responsible for annual revenues in excess of $5 billion; only one managed an annual revenue of less than $200 million. Interviews with CEOs lasted for an average of one hour, while those with their IS Executives took upwards of one and a half hours.

The interview process was semi structured, using a combination of open questions, categorizations, and Likert-type scales. The interview design was guided by the overall model depicted in Figure 2, which was constructed to capture the propositions of various prior authors as well as the extensive previous experience of the researchers.

CEOs were asked about their career backgrounds, the business environment with particular reference to the level of change desired or experienced, the potential contribution
of IT to achievement of business critical success factors, their personal experience of IT and their general view of the role of IT in organizations. Interviews with IS executives probed their perceptions of CEO attitudes, business needs and management style, IT achievement and potential, as well as gathering data on the IS executive's background, position in the organization, and conceptual view of IT. Both parties were asked to assess the current quality of their relationship and to contrast it with other executive relationships they had experienced. Finally, IS executives were asked to provide data on the role they adopted within the organization's management team, using a test instrument devised by Belbin (1981).

3. RESULTS

Given the small size of the sample, it is inappropriate to test the hypothesis implied by the model of Figure 2 through conventional data analysis. Indeed, the whole purpose of the study was to build insights using the depth rather than breadth of the data, leading potentially to stronger hypotheses which could be tested by subsequent work.

The first step in our analysis was therefore to place each relationship into one of three categories — loosely labelled as "excellent," "Fair," and "Poor." The positioning was based principally on the direct evaluations of the relationship by the interviewees, moderated in some cases by conflicting evidence identified elsewhere in the interview. On this basis, five organizations were seen to enjoy an excellent relationship, five more were in the fair category, and in four cases the strong dissatisfaction of at least one of the interviewees led to a categorization of poor. Interestingly, each of the five in the top category represented a different industry sector — Distribution, Financial Services, Retail, Transportation, and Utilities. Two of the top five relationships were at Group level, but in each case the number of reporting business units was small, and the Group IT Director owned all of the organization's IT resources.

It is important to note that an excellent CEO/IT Director relationship does not necessarily equate in the short term with leadership in the exploitation of IT — although one might expect it to correlate with progress in exploitation. Three of the organizations represented by our top five have been selected by independent commentators as leading IT users in their respective sectors, while two would be seen as moving into leadership from a weak initial position. On the other hand, one of the poor relationships was in an organization that has been regularly cited as outperforming its competitors in the use of IT. This may represent limited consolation to the CIO concerned, who is now searching for new employment.

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Figure 1. Study Organizations

Figure 2. Interview Decision Model
CEO ATTRIBUTES

- General Management and/or Marketing Background
- Change-oriented leadership
- Attended “IT Awareness” seminars
- Experienced IT project success
- Perceives IT as critical to the business
- Positions IT as agent of business transformation

ORGANIZATIONAL ATTRIBUTES

- Personal/informal executive style
- Executive workshops on strategic issues
- CIO accepted into executive team

CIO ATTRIBUTES

- Analyst background and orientation
- Promotes IT as agent of business transformation
- Contributes beyond IT function
- Accurate perception of CEO views on business and IT
- Integrates IT with Business Planning
- Profile stresses consultative leadership and creativity

Figure 3. Attributes of Excellent CEO/CIO Relationships

In order to generate the hoped for insights, the second step in the analysis was to contrast the data from the five excellent situations with the four poor ones, looking for attributes which were consistently and distinctively present in the excellent relationships. Such common attributes were indeed identified in those five organizations, and they are summarized in Figure 3. The attributes are not of course totally absent from the fair or even the poor relationships. However, case by case analysis demonstrates that at least some of these attributes are missing from each of the fair relationships, and many of them are missing from each poor relationship. The attribute set is at least a consistent basis for explaining the relationships found in these fourteen organizations.

4. DISCUSSION

4.1 The CEO Attributes

All five CEOs with excellent relationships had career backgrounds in marketing or general management. Of the nine CEOs with less successful relationships, another four came from marketing or general management; the remaining five had spent their previous careers in production or process engineering. Without, of course, suggesting that only CEOs from marketing or general management can enjoy successful relationships, it can be argued that such backgrounds are helpful on a number of counts. They encourage a focus on business strategy and an organization-wide perspective which will be important when a wide variety of IT-based projects are considered. Such people may also be expected to place more value on relationships generally, and to be more prepared to work at them. They would be classified by Hambrick and Mason (1984) as “output” oriented, interested in innovation and opportunity, versus the “throughput” orientation of those from production and process engineering, who may be more focussed on efficiency and automation. Jarvenpaa and Ives report an association between the CEO’s functional background and the progressive use of IT.

The five CEOs within the excellent relationships group also demonstrated a track record of leading organizations through periods of change. This was not a major discriminator in our sample, since almost all of the organizations interviewed were confronted with a turbulent external environment and pressures for change. However, it was clear that in at least one case the conservatism of the CEO was seriously damaging his relationship with the CIO because initiatives for IT-use consistently represented more change than the CEO would countenance. One experienced CIO (Seddon 1988) has described how his whole approach to SISP came to be dominated by considerations of the change orientation of business management.

Attendance at IT executive seminars, plus some personal association with successful IT projects, were further common attributes of the CEOs with excellent relationships. By contrast, only three of the nine in the other categories shared these attributes. Lederer and Mendelow (1987) found that IS executives regularly suggested education as a means to improve communication with top management and to facilitate SISP. At the Oxford Institute of Information Management, where we have specialized for eight years in running IT Executive Seminars for top management teams, we have personal experience of how significant these events can be in changing attitudes toward IT. Looking at the personal experience of successful IT projects within the top group, our study can be seen as providing support for the finding by Jarvenpaa and Ives that “Executive participation” influences “Executive involvement” which is defined by Barki and Hartwick (1989) as a subjective psychological state. On the other hand, it should be stressed that personal use of IT by CEOs was not a discriminator in our sample. Only one of the CEOs with an excellent relationship was a hands-on user, compared to all four of those with poor relationships.

CEOs were each asked about the critical success factors for their business and about the existing and potential contribution of IT to those success factors. In their responses to a subsequent five point scale question on the importance of IT to their business, the CEOs with excellent relationships averaged 4.8 — well above the average of 3.6 for the other nine CEOs. It can be argued that the CEOs in the top group were influenced by the information intensity of their businesses (Porter and Millar 1985). However, information
VISION TO AUTOMATE — role of IT to replace expensive, unreliable human labor, or at least transform its productivity, with sophisticated robots, systems, etc.; promise of IT to save money, improve quality, make organization more effective.

VISION TO INFORMATE UP — the data and the transactions required to automate also allow clearer and more organized management views of the state and dynamics of the business. This can add further increments of performance through management's possession of new levers, micro as well as macro control of the business.

VISION TO INFORMATE DOWN — the data and transactions can provide a far fuller picture at "operator" level with members of the workforce gaining greater insights into their own activities. With looser job specifications and more emphasis on self management against objectives, this can lead to employee-driven performance improvement. The need for traditional control hierarchies is reduced.

VISION TO TRANSFORM — the organization and/or industry can be fundamentally changed through the use of IT, including the terms of "our" relationship with suppliers and customers and the boundaries among us. There will be opportunity for more local problem solving and lateral information sharing, more centralized and informed strategy and goal setting, more decentralized implementation and control.

Figure 4. Visions of the Role of IT

intensity is a subjective not objective concept and these CEOs had mostly taken a proactive view. For example, the CEO of the Transportation company (an airline) had arrived from a different industry and immediately elevated the CEO to be a direct report for the first time. The Retail CEO had identified IT as a strategic resource at least two years before his main competitors reached the same view. Equally, a case could be made that several of the CEOs with less successful relationships were rating the importance of IT to be less than some industry peers.

The single most powerful discriminator in our study was that labelled "CEO attitude to IT." We tested this primarily by inviting each CEO to position his view of the role of IT against the four "IT Visions" developed from CEO interviews by Schein (1989). Our description of these visions, as presented during interviews, is reproduced in Figure 4. All five CEOs in the excellent group aligned themselves with the "Vision to Transform" while only one of the other nine CEOs made the same choice. Since twelve of the fourteen CIOs also identified with the "Vision to Transform" (including all five in the excellent group), it becomes clear that excellent relationships only occurred when CEO and CIO shared the same conception of the role of IT. Interestingly, the CEOs with excellent relationships seemed to have reached the "Vision to Transform" by different routes. One pointed to a transformational experience in his previous role as COO of a car rental company, when he had inherited a project to make that company the first in the industry to introduce an IT-based reservation system; three CEOs described how they had been aggressively seeking growth in their sectors and had fastened on the innovative use of IT as the way to achieve the sought-for competitive advantage; the fifth CEO explained how he had been put through a series of educational experiences by his CIO to persuade him that IT was a strategic resource for a company in Financial Services. These contrasting examples support the implied hypotheses of Figure 2, that CEO personal experience of IT, CEO attitude to change, and CEO perception of industry relevance of IT are influencers (along with CEO career background) of the CEO attitude to IT. In fact, this part of our model can be seen as consistent with that developed contemporaneously by Jarvenpaa and Ives (Model 3). We have separated out CEO attitude to change, which they see as related to CEO age and subsume within "Executive Background."

4.2 Organizational Attributes

One of the problems potentially encountered by proposals for new ways of doing things enabled by IT is that senior executives who harbor territorial feelings perceive that their empires are threatened. This sort of difficulty may particularly be encountered in what Burns and Stalker (1961) would refer to as mechanistic organizations, where the top team is comprised of the heads of functional fiefdoms who come together at regular formal meetings to progress a formal agenda; it is less likely to occur when there is an integrated management team with close personal relationships and a consistent focus on the goals of the overall business (the organic organization).

We asked both CEOs and CIOs how new ideas were progressed and approved in their organizations. The consistent responses in the organizations enjoying excellent relationships were that individuals would make informal
contact with relevant peers to discuss ideas and build support before any formal decision making. This reflects the ‘Personal Informal’ style which Pyburn (1983) suggested was particularly effective in identifying new IS applications. A further characteristic of these organizations was that all had a culture of off-site workshops for the top management team to discuss strategic issues. These were the occasions when radical new business and IT thinking could be surfaced, debated, and progressed.

To complete the picture, the CIO in each of these organizations was positioned as a member of the top management team, attending the strategy workshops and well able to make the informal contacts with colleagues. Only two of these five CIOs were actually direct reports to the CEO. In the other three cases, the CEO had very few direct reports as a matter of style, but the recognized top management team extended to the next level which included the CIO; the CIO still had ready access to other members of the team, including the CEO. This emphasis on team membership rather than direct reporting is in conflict with Raghunathan and Raghunathan, who found that only direct reporting made a significant difference, but it is consistent with Watson’s study in the sense that two way communication between CEO and CIO was still achieved. In these three cases, the CIO’s immediate superior was concerned with shorter term issues in IT management (project progress, etc), while the CEO’s time was focussed on broader and longer term issues of IT use — Barki and Hartwick’s distinction between participation and involvement.

In the remainder of the sample, four of the nine CIOs with less successful relationships were neither direct reports nor members of the top management team. These individuals certainly expressed frustration at their exclusion from the top level of briefing and debate about the business.

4.3 The CIO Attributes

With the exception of one who had moved out of IT for a period, the CIOs enjoying excellent relationships had spent their entire careers within the IT domain, moving through systems analysis to the management of systems development and overall responsibility for the IT function. Another pattern in their career histories was a learning orientation: asked to describe which parts of their careers they had enjoyed most and least, they consistently seemed surprised at the question and insisted they had enjoyed virtually everything. Several went on to volunteer what they had learned from each stage of their careers, illustrating some of the high “Growth Need Strength” first detected in IT professionals by Couger and Zawacki (1980). The success of these CIOs challenges the popular wisdom (at least in the UK) during the second half of the 1980s, which suggested that business line managers should be transferred into the top IT management posts. Five such transferees were among the nine CIOs experiencing fair or poor relationships.

Despite (or maybe because of) their IT-centered careers, the CIOs in the top group all subscribed to Schein’s “Vision to Transform.” What distinguished them more from their colleagues was the vigor of their views and the extent to which they promoted those views. One in the top group stated, “I do not want to run a DP department, I want to transform this business.” His expressed career ambition was “to take over the human resources function so that I bring together both the key levers for change” (he has since been granted his wish). Without expressing it quite so strongly, his peers in the top group shared this fascination with the achievement of business change. Each of them had incorporated transformation concepts into a formal IT mission statement that was widely publicized inside the IT function and elsewhere in the organization. These CIOs’ emphasis on communication and promotion was in sharp contrast to their four colleagues with poor relationships who either had mission statements stressing cost and service or no mission statement at all. A selling orientation in IS executives is one by the emphases coming from the study of Lederer and Mendelow (1988).

The business orientation of CIOs was further tested when their CEOs were asked which of the statements in Figure 5 were applicable. Statements 4 to 9 were designed to test various aspects of business orientation. On these, the CIOs enjoying excellent CEO relationships were all given perfect scores, with the CEO usually emphasizing statement 8, “Contributes beyond the IT functional role.” Each of the other nine CIOs were seen to be lacking at least some of the business orientation qualities. On the other hand, several of these nine were rated more highly than two of the top group against statements 1 to 3, which relate to aspects of managing IT resources. The appropriate balance of strengths for successful CIOs apparently matches the popular conception (for example, Bock, Carpenter and Ellen 1986): the softer skills and business orientation are vital, while weaknesses in operational management can be tolerated provided competent subordinates are in place.

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<th>1 Manages consistently within budget</th>
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<tr>
<td>2</td>
<td>Can be relied on to deliver on commitments</td>
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<td>3</td>
<td>Good manager of his/her own people</td>
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<td>Good relationships with other members of the executive team</td>
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<td>5</td>
<td>We talk the same language</td>
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<td>Sensitive to business priorities</td>
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<td>Identifies with the business</td>
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<td>8</td>
<td>Contributes beyond the IT functional role</td>
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<tr>
<td>9</td>
<td>Good ambassador for the business</td>
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Figure 5. CIO Qualities

Another common attribute of those CIOs with excellent relationships was their remarkable perception of and congruence with their CEOs’ views. Looking across each pair
of interviews, there were ten points at which we could directly contrast CEO and CIO responses including

- their separate statements of the business critical success factors
- their separate descriptions of the executive management style
- the CIO's predictions of how his CEO would rate — the importance of IT (five point scale)
  — the role of IT (Schein's vision statements which none of the interviewees had seen before)
- their separate ratings of
  — IT achievement versus competition (in each major application area)
  — IT spend versus competition (five point scale)
  — the quality of their relationship (five point scale)

The congruence achieved in the excellent relationships, and the sometimes startling lack of it within the less successful ones, might be considered as either cause or effect. The partnership model proposed by Henderson suggests that shared knowledge is a critical factor which results from access plus a conscious investment in learning. At the very least, shared understanding must serve to reinforce a successful relationship.

In a similar fashion, the integration of business and IT planning achieved by CIOs in the top group can be seen as both enabled by and supportive of their successful relationships. These CIOs used a combination of what Earl (1990) calls the business-led and the organizational approaches to SISP. Both approaches are seen by Earl to be potentially successful in linking IT investment to critical business issues, but their viability would be in question without the business understanding and relationships which these CIOs have achieved.

The final piece of data collected from CIOs concerned their team role profile. Behavioral researchers (Belbin 1981; Hambrick 1987) have directed attention to the importance of balance in top management teams to enable successful team process. Belbin's work identified nine different types of team contribution which in various combinations could bring to a team an appropriate mix of leadership, creativity, evaluation and implementation. A typical individual provides two or three such contributions to a team and with conscious effort may be able to provide two or three more. While Belbin makes no association between team roles and functional roles, we looked for and found some evidence in our study of a pattern of team roles for CIOs. The results must be treated with some caution, not only because of the small sample size but also since we were limited to collection of self-perception data without corroboration of the CIO's team behavior from colleagues. Nevertheless, the data suggests some interesting potential insights, with the profiles of the CIOs enjoying successful relationships differing quite sharply from their less successful peers.

Each of the five in the top group had a profile in which three strands were prominent:

- consultative leadership (Chairman/Coordinator type) that stresses communication and relationships, achieving good group process
- entrepreneurial leadership (Shaper type) that provides drive and commitment
- creativity, either through lateral thinking (Plant type) or through networking/scanning (Resource Investigator type)

Only one of these strands — consultative leadership — was common in the other nine CIOs; their profiles were otherwise dominated by some combination of the four evaluation/implementation roles — roles that were conspicuously absent from the profiles of all but one of the top group of CIOs.

This team role data is in fact consistent with many of the themes emerging from the interview data. The top group of CIOs are confirmed as interested in ideas, with a strong drive to achieve change, but the communications and relationship capabilities to bring others down the path to change. They are more clearly differentiated from their less successful peers (on both team role and interview data) than are their CEOs. Belbin's methodology may well prove to be a helpful tool in developing a further understanding of the CIO's task in achieving successful integration into the management team.

4.4 Qualities of the Ideal CIO

An additional advantage of an interview methodology is the collection of qualitative data that is volunteered to illustrate the interviewee's response to the formal question. The research produced further material in this way. Synthesizing and paraphrasing this softer data provides a potential profile of the ideal CIO. The profile may be idealized, such an individual may never exist, but it is an opportunity to review the combined views of some very experienced CEOs and CIOs. Components of the profile, some of them by now familiar, are:

- Honesty, integrity, sincerity, openness: "As CEO, I can stop worrying about looming IT catastrophes because this CIO will be as open about problems as he/she is about triumphs."
- Business perspective, motivation, language: "This CIO discusses (in English!) how we might achieve what I want — not (in technobabble) why we can't achieve what I want; he/she doesn't patronize me by saying 'it's all very complicated and would take a long time to explain (to someone like you)'"
- Communicator, educator, motivator, leader, politician, relationship builder: "I'm fed up with all of my
executives complaining about IT, I can't tell whether their complaints are valid; I need a CIO who can conciliate and defuse and explain instead of confront — someone who eventually can even enthrone the executive team."

- Continuously informed on developments in IT, able to interpret their significance to the business: "I can stop worrying that a competitor might preempt us, or that I shall suddenly discover we are spending twice as much on IT as we need; this CIO can be relied on to choose the right technology, and won't suggest that each new IT product heralds a new world order."

- Change oriented team player, catalyst to business thinking: "As CEO, I need someone who is a sharp creative thinker across the business, not committed to any of the company's traditional power bases; I need an ally and a sounding board when I'm thinking of the future of the organization."

5. CONCLUSIONS

This study set out to explore a wide range of ideas associated with CEO/CIO relationships and to gain some tentative insights into how those ideas might fit together. The study sampled a small number of organizations but was unusual in achieving substantive direct inputs from CEOs of large corporations.

Where the study overlapped with previous work, its findings were mostly consistent with that work. However, the study highlights a number of ideas and issues.

- It identifies Schein's vision statements as a potentially powerful way of categorizing the CEO's attitude to IT.

- It suggests that attitude can be altered through some (planned or unplanned) action which affects the CEO's personal experience of IT, his/her perception of the industry relevance of IT, or his/her attitude to the level of business change.

- It challenges the findings of some earlier research by suggesting that CIO membership on the top management team may be more important than direct reporting.

- It introduces to this arena a potential method of classifying and researching the contribution of the CIO to the top management team.

As a framework for identifying issues for further research and practice, the structure of Figure 2 makes a helpful contribution. The one additional idea introduced by the data may be difficult indeed to operationalize and research — it relates to the emphasis placed by CEOs on the integrity/honesty/openness required in a CIO.

6. ACKNOWLEDGMENTS

The authors would like to express their thanks to the KPMG IMPACT program for their funding of this study and to the CEOs and CIOs who gave generously of their time.

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