Evaluation of "Organisational Culture" Change by Computer Aided Text Analysis

by

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ABSTRACT

The popularity of organizational culture as a management concept has recently received a fillip from the resurgence of the notion of organizational learning in the management literature. However, neither of these concepts is supported by the availability of adequate assessment devices for longitudinal organizational research. Following the development of Lotus Agenda® as an information sifting tool for evaluation of the consistency of annual reports with strategic plans, this paper introduces a Computer Aided Text Analysis (CATA) method of assessing the consistency of "espoused values" in corporate vision or strategic planning documents, compared with the responses of staff, within the target organization, to an organizational cultural inventory (the Competing Values Framework).

It is proposed that this approach to identifying a "culture gap" may provide a method of measurement of changes in organizational culture as an indicator of organizational learning. In this way it is possible to test for consistency between the espoused values, or paradigm, of management thinking, and the reports of the perceived culture coming from the staff. The purposes of this approach were to validate the CATA method against the ratings of judges of the same documents, as well as to compare the values in use (indicated by staff survey of organizational culture) with the espoused values identified in strategic documents from the same organization.

The present paper reports a study of the application of CATA to the evaluation of the intended culture change in strategic documents of five Australian public sector organizations. High concordance was found between the CATA and three human raters of these documents when analysed by paragraphs. Some agreement was evident when aggregate data was used. But when the CATA data were compared with the staff responses to perceived shared values in the organization, there were some diametrically opposite indications of organizational culture. This seems to indicate a "culture gap" in the organization, between the espoused values (in the corporate documents) and the perceptions of the staff who responded to the survey.
Introduction

According to the Secretary of the central agency of the Australian Government responsible for the Financial Management Improvement Program (FMIP), "One of the most exciting developments in recent years has been the growing emergence of an evaluative culture." (Sedgewick, 1994, p. 22) For more than twelve years, the Commonwealth Department of Finance presided over a whole of government reform process, including establishing a system of program evaluation and accountability for outcomes. Sedgewick (1994; 1995) has argued that the high incidence of program evaluation and "benchmarking of international best practice" are indications of a culture of continuous improvement. An "evaluative culture", was described as an attitude, a body of technology and "incentives", which lead to a questioning by managers and ministers of the effectiveness, efficiency, and appropriateness of government programs (Sedgewick, 1994, p. 20).

Of course these comments were made more than a year prior to the overwhelming electoral victory of the Liberal (conservative) party of Australia, which set about radically 'down-sizing' the public sector. This leaves in doubt the continuity of methods and the commitment to the culture of organizational learning (see Sharp, 1996c).

Nevertheless, the proposition (put forward by senior central agency bureaucrats) that in Australia over the last ten to thirteen years, the Australian Public Service (Commonwealth government administration) has been trying to create a "culture of evaluation" as part of a general programme of continuous performance improvement and organizational learning. Questions are asked here about how public sector organisations can evaluate organizational learning. How would they be able to demonstrate the claimed cultural change? How would the effectiveness of a whole of Government program of organizational cultural change be evaluated? The intention is not to review the various evaluation studies conducted through the Australian Government's Evaluation Strategy, nor its reviews of its own progress in achieving reforms. Rather, it is proposed that we need an "Organisational Culture Consistency Meter" (Sharp, 1993b; 1996c; Sharp, Stanwick & Baulderstone, 1996). This analytical system would draw on learning theory to provide an index of organizational learning which identifies organizational culture gaps between espoused values and values in use, as an indicator of the probability of organizational learning (see Sharp, 1994d; 1996c). With such a tool we can better understand the measurement of change and the refinements of methodology of evaluation required to be able to assess the effectiveness of organisations attempting goals of this kind.

In attempting to operationalize the theory and measures of such proposed changes, a new method of organisation culture gap analysis has been developed (Sharp, 1993b; 1996c; Sharp, Stanwick & Baulderstone, 1996). It uses Computer Aided Text Analysis (CATA) of the key strategic documents of the organisation to identify the "espoused culture" of the organisation, which can be compared with a survey of the organisation's staff, based on the Competing Values Framework (CVF), but modified specifically for use in the public sector, as an indicator of "values in use". This paper will report some preliminary research findings which suggest that the culture gap technique has some
potential to identify if there are indications of the potential direction of organizational learning or organisation culture change in the public sector.

**DEFINTIONS AND SCOPE**

**Scope**

There have been a number of overviews of the Australian Commonwealth Government's steps to implement its management improvement objectives through a concerted, whole of government approach to evaluation training and practice (Amies, 1994; Sedgewick, 1994, 1995). The Task Force on Management Improvement of the Management Advisory Board and the Management Improvement Advisory Committee of the Commonwealth (MAB-MIAC, 1993) have already extensively reviewed the specific initiatives intended to create a culture of evaluation. It is not the intention of this paper to re-visit these reviews. Similarly, the ideological and political issues have been debated extensively elsewhere (see Corbett, 1996; Parliament of Australian, 1990; Power, 1990; Pollitt, 1995; Weller & Lewis, 1989).

Here the focus is on the assessment of the progress of these major initiatives and the degree to which changes in organizational culture can be detected, and interpreted as intended aspects of organizational learning. On these matters of the progress of reforms, there were still a number of concerns expressed in the MAB-MIAC report about organisational culture related issues:

"The evaluation strategy has been operationalised into a set of procedures that agencies have grown accustomed to, and they are undertaking a great deal of programme evaluation activity. An irony here is that, once again, there may have been a tendency to focus on the procedures, not the results. Everyone is doing evaluation, following the procedures laid down. The success of the process is being measured in process terms... not in terms of program outcomes. ...In sum, the reforms are only half-complete. ... many of the changes already put in place are still taking effect and, even with no further direct initiatives, will lead to further improvements in agency performance in due course."

(MAB-MIAC, 1993, pp. 472- 473)

This paper raises the questions of how would a Government really know if it had succeeded in changing the culture of the public sector; and would researchers know if this was sufficient indication of organizational learning.

**Organisational Culture and Paradigm: Values and Beliefs in Action**

Organisational culture is variously described as the sum of the *shared values* and the related beliefs which are identifiable in a particular organisation (cf Quinn & McGrath, 1985; Rousseau, 1988; Schein, 1985). A concept which seems to complement organisational culture, and give researchers a better guide to disentangling the operational aspects for study is described by the term "paradigm" (Mohrman & Lawler, 1985; Lawler, 1989; Johnson, 1992) which will be familiar as it derives from Kuhn's (1962) analysis of the belief systems common among researchers. These shared beliefs are the essential core of corporate memory (see Sharp & Lewis, 1993; Sharp,
1996b), but also give some indication of the "espoused culture" of the top management of the organisation (Mohrman & Lawler, 1985; Lawler, 1989; Johnson, 1992; Storey, 1992).

A number of models (e.g., Johnson, 1992; Schein, 1985) suggest that there are various levels of identification aspects of organisational culture (i.e., the tangible level of culture is identified by the artifacts, the "sub-conscious" levels are the values and ontological assumptions). The point being that the visible or overt levels of the culture (e.g., logos, mottos, corporate annual reports) are thought to be creations of the organization commensurate with its shared values and the related beliefs articulated by its spokespeople. The process of organizational diagnosis can use the inference from the artifacts, such as corporate plans, about the organization's mission and values, and the corporate annual reports may be an indication of the organization's paradigm and beliefs.

One of the paradigms which has recently been evolving in the Australian public sector (Cuttance, 1995) has been an investment in (Total) Quality Management as a guiding model for management improvement.

**TQM: Not just a production process**

Total Quality Management (TQM) has become a major philosophy for Management of the internal context of organizations in Japan, USA and more recently Australia. Indeed, it is part of a wider movement to promote continual learning and innovations in Management and organizations (Cuttance, 1995). It also presupposes changing the mental models of managers and the way they evaluate themselves, their organizations and their staff. Indeed, TQM involves the ongoing careful collection and use of information in the evaluation of performance of the organization against its own innovations and its understanding of what the clients' needs.

The success of the whole quality strategy of the public sector depends on building, and gaining agreement to, a model of quality which will enhance performance management improvement. According to Cuttance (1995) four generations of quality management systems have evolved, the latter models have been based on theories of organizational learning and program evaluation. A similar view is expressed by Senge (1990) who coined the terms:

"adaptive learning" (Senge, 1990) which is based on
"single-loop learning" (Argyris & Schon, 1978)
supposedly because it merely builds on existing information and experience in order to cope better with the world.

and

"generative learning" (Senge, 1990) which is based on
"double-loop learning" (Argyris & Schon, 1978)
supposedly because it generates new ways of viewing the world and the organisation and programs in it, its problems become opportunities; it is a creative approach to strategic management and evaluation.

It has been argued that both approaches are necessary for organisational learning (Senge, 1990), and that both approaches need evaluation techniques (Leeuw et al., 1994; Rist & Joyce, 1995), but the generative learning has greater strategic significance.
(Senge, 1990). Not only does Management have to develop generative learning to the benefit of all concerned, but also the organizational culture has to be consistent with this innovative orientation.

Similar terms used by a number of authors bring the need for a look up table of equivalent usages, as in Table 1.

**TABLE 1: Stages of Development of Quality and Evaluation Systems**

<table>
<thead>
<tr>
<th>Type of learning &amp; Equivalent</th>
<th>Stage of Evolution of Quality Management</th>
<th>Aspect of Evaluation</th>
</tr>
</thead>
<tbody>
<tr>
<td>quality @ stage 1 (compliance)</td>
<td>1. - fitness to standard</td>
<td>e.g., auditing</td>
</tr>
<tr>
<td>quality @ stage 2 adaptive learning</td>
<td>2. - fitness to need</td>
<td>problem solving &amp; decision making</td>
</tr>
<tr>
<td>quality @ stage 3 generative learning</td>
<td>3. - fitness to latent need</td>
<td>strategic, preventative</td>
</tr>
<tr>
<td>evaluation @ stage 1 (monitoring)</td>
<td>performance indicators</td>
<td>benchmarking</td>
</tr>
<tr>
<td>evaluation @ stage 2</td>
<td>evaluation of efficiency &amp; effectiveness</td>
<td>accountability</td>
</tr>
<tr>
<td>Strategic evaluation @ stage 1</td>
<td>evaluation of appropriateness</td>
<td>evaluation of strategic planning</td>
</tr>
<tr>
<td>Strategic evaluation @ stage 2</td>
<td>&quot;customer focus&quot;</td>
<td>evaluation of needs for services; e.g., &quot;citizen's charter&quot;</td>
</tr>
<tr>
<td>Strategic evaluation @ stage 3</td>
<td>&quot;empowerment&quot; evaluation</td>
<td>customers as partners in evaluation</td>
</tr>
</tbody>
</table>

The term "strategic evaluation" has been coined in order to highlight the importance of the role of types of evaluation in assessment of needs as a strategic link between policy, planning, goal setting and program implementation. Such evaluation approaches which make this strategic link include "appropriateness" evaluation (Sharp, Roffey & Lewis, 1993) and "empowerment evaluation" (Fetterman, 1994).
VALUES IN THE PUBLIC SETOR

Espoused Values in the APS

One of the tests of whether there are values conducive to a "evaluative culture" in the Australian Public Service is to review the pronouncements of the central agencies. Figure 1 shows the official statement of the core values of the APS, as promulgated by the Commonwealth's Management Advisory Board-Management Improvement Advisory Committee (MAB-MIAC, 1993, p. 5). According to the core public service values include a close focus on results, highest standards of probity, integrity and conduct, accountability and Continuous improvement. Obviously, most of these "motherhood" statements have implications for program evaluation. But the question is whether these statements of policy can be demonstrated to be implemented. To test this it is important to review other key documents and to observe these values in action.

FIGURE 1

<table>
<thead>
<tr>
<th>CORE PUBLIC SERVICE VALUES: According to MAB/MIAC</th>
</tr>
</thead>
<tbody>
<tr>
<td>&quot;... A close focus on results:</td>
</tr>
<tr>
<td>- pursuing efficiency and effectiveness at all levels; and</td>
</tr>
<tr>
<td>- delivering services to clients conscientiously and courteously. ...</td>
</tr>
<tr>
<td>The highest standards of probity, integrity and conduct:</td>
</tr>
<tr>
<td>- acting in accordance with the letter and spirit of the law;</td>
</tr>
<tr>
<td>- dealing equitably, honestly and responsibly with the public; and</td>
</tr>
<tr>
<td>- avoiding real or apparent conflicts of interest.</td>
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<tr>
<td>A strong commitment to accountability:</td>
</tr>
<tr>
<td>- contributing fully to the accountability of the agency to the Government, of the Government to the Parliament and of the Parliament to the people;</td>
</tr>
<tr>
<td>- fully supporting the administrative and legal measures established to enhance accountability; and</td>
</tr>
<tr>
<td>- recognising that those delegating responsibility for performance do not lose responsibility and may be called to account.</td>
</tr>
<tr>
<td>Continuous improvement through teams and individuals:</td>
</tr>
<tr>
<td>- striving for creativity and innovation; and</td>
</tr>
<tr>
<td>- making individual and team performance count.&quot;</td>
</tr>
</tbody>
</table>

Source: Management Advisory Board-Management Improvement Advisory Committee (1993, p. 5)

"Measures" of the Organisation's Espoused Values

Above it was proposed that the paradigm of an organisation's top management gives an indication of the espoused culture (see also Johnson, 1992). Johnson even suggests that the paradigm is the conduit for the representation of the external environment as it influences the internal organisational factors towards action.
Parker and Lorenzini (1993) point out, that such aspects of the organisational culture, as the beliefs about the external environment, can be investigated by content analysis of top management's public documents (see also Bowman, 1984; Fiol, 1989). It is proposed here, that if a standard unit of organisational culture could be applied to the beliefs and values expressed in an organisation's public documents as might be used in a survey of the staff on organisational culture, then it would be possible to provide an estimate of organisational culture change in organisations.

"Measures" of Staff Values

In order to operationalise these measurements, the standardised instrument chosen is the Quinn and McGrath (1985) Competing Values Framework (CVF) survey (Quinn & Rohrbaugh, 1983). It "measures" values in two dimensions, viz: flexibility - rigidity, and internal - external focus. The intersection of these two dimensions result in four cultures types. These are: the human relations model: (flexibility/internal); the open systems model: (flexibility/external); the rational goal model: (rigidity/external); the internal process model: (rigidity/internal).

The CVF provides a body of literature, and it has already been used in Australia by Stanwick (1991; 1993). It can also be used in content analysis of documents of organizations, by drawing on the work of Jewell (see Jewell, 1993; Jewell & Linard, 1992). He has shown through the development and application of PLANSPEC, that the information management capabilities of Lotus(R) Agenda are useful in analysing the semiotics of organizations as expressed in the corporate planning and reporting documents.

Using a new version of PLANSPEC, that we have developed at Flinders University, called CULTURESPEC, the items from an organisation's strategic plan and corporate reports appear as a cells in a spreadsheet-type analysis of information comparing them with regard to their relationships to the categories in the Competing Values Framework, to enable subsequent interpretation of that information in terms of the staff values survey.

In attempting to establish this technique it is useful to draw on work done and in progress by another researcher investigating organizational culture in Australia, John Stanwick, so as to cross-validate the computerised analyses with the findings of paper and pencil assessments of organizational culture. Stanwick (1991) has already gathered useful data on the organizational culture of a government department using the Quinn and Rohrbaugh (1983) CVF. Stanwick (1993) is currently developing another organizational culture instrument by correlational comparison with the CVF data obtained in other public sector agencies. The data collected from a few small samples from a state and a Commonwealth organisation, so far, indicates that the methodology is sensitive to at the two dimensions of the staff's values and can give us an indication of the process versus results orientation of the organisation and its staff. In other words, we are encouraged that we can "measure" the tendency of the culture to support evaluation approaches, at least in terms of the suggested direction of the MAB-MIAC concerns.

At present this project is at the pilot study stage in testing the methodology while beginning to investigate and document the organizational culture and changes in some
organizations which seemed to be affected by the macrocosmic changes of the last five to ten years. The research is being attempted in different kinds of organizations, viz: some which are process-oriented and some which have changed to be more outcomes oriented. The information obtained is being used to address the questions raised about the operationalisation of organizational culture.

The present concern with organisational diagnosis is focused on these internal relationships and the values of the management and the staff of the organisation. Perhaps the first of such relationships to begin the analysis with would be the "espoused" values and culture of top management and its connection with the "observed" culture as in the staff response to an organisational culture survey (or values survey). The form of such a relationship would presumably contribute to changes in organisational culture, as in planned change programmes the management are often urged to change or "set" the culture (see Deal & Kennedy, 1982, & 1983; Schein, 1985). These assumptions have important (and as yet uncertain) implications for the organisational memory or "corporate memory" (Sharp & Lewis, 1993; Sharp, 1995; 1996b) and "organisational learning" (see Sharp, 1993b; Sharp & Kiresuk, 1993) which cannot be addressed here.

ORGANIZATIONAL LEARNING AND PROGRAM EVALUATION

Like research into organization development, organizational learning research has not kept pace with the enthusiasm of the management practitioners. Both, research fields are dependent on inadequate methods of organisational diagnosis. Commonly seen as a consultant's tool used in "scouting" (e.g., Buchele, 1962; Deal & Kennedy, 1983) and in the initial stages of organization development (see Dyer, 1977; French, Bell & Zawacki, 1989; Kolb & Weisbrod, 1976; Levinson, 1972), organizational diagnosis methods have not enjoyed a reputation for rigour. Conversely, there are some who have pointed out the inadequacies of social and organisational research findings as guides for practitioners (e.g. Argyris, 1975). It is important to develop more sophisticated tools of organizational diagnosis not only for the practitioners but also to increase the range and depth organisational research. While there is a considerable body of research and anecdotal study of organization learning (Argyris & Schon, 1978; Senge, 1990) and organizational change (Dunphy, 1999), there is a dearth of organizational behaviour theory and research on methods of operationalizing organizational learning in relation to organizational effectiveness (OE) and organizational diagnosis (OD$_x$) methods per se. Although OE was once an emerging field (Cummings, 1982), it seems to have been left behind (see House & Singh, 1987; Schneider, 1985; O'Reilly 1991; Staw, 1984). Goodman, Atkin and Schoorman (1983) suggested there were insufficient grounds for attempts at theory building in the literature on organizational effectiveness. Morgan (1986) is one of the few recent reviewers to consider the development of the use of metaphor and the wider ontological and as a theoretical approach to OD$_x$.

Cameron (1986) pointed out that there is still a void between theory and practice in specification and assessment of organizational effectiveness, of which organizational

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2 This abbreviation, based on the common medical notation for diagnosis being D$_x$, has been introduced to distinguish the symbols for organizational diagnosis from organization development.
diagnosis is a major contributing tool. His warning should be heeded when it comes to research approaches taken to organizational learning.

There are myths about organizational diagnosis which confuse the issue. For example, Deal and Kennedy (1982) asserted that:

"CEOs and senior managers can read a culture for early warning signals of people out of synch with the aims of their business. Investment analysts can turn to culture for greater accuracy in forecasting. Even executives in search of new opportunities would do well to match-make their personality to that of a company. ... Almost like a psychoanalyst, the culture analyst places a company on the couch." (p. 129)

**Evaluation: A Tool of Organizational Learning and Organisational Diagnosis**

In analysing research on public sector evaluation theory and practice (Sharp, Roffey & Lewis, 1994; Sharp, 1994b) it has been argued that evaluation practice is sensitive to the values of the organisation and the community, especially when the evaluation brief entails questions of appropriateness of the programme.

Obviously for research purposes more sophisticated longitudinal approaches are necessary. But as Emery and Trist (1965) pointed out there are often significant dynamics of change interacting between the internal and external environments of the organization. Annual Reports and Strategic Plans are available sources of useful immutable data about organisations which are amenable to unobtrusive content analyses (Bowman, 1984; Krippendorff, 1980; Webb, Campbell, Schwartz, Sechrest, & Grove, 1981; Weber, 1990). But the immutability of text and its essentially historical content analysis are perhaps limitations for organizational learning research which essentially requires information about the temporal dynamics of an organisation. However, it should be possible to supplement the results of content analysis by comparison with observation, interview and staff survey to gain greater insights into at least the intended directions of change. This paper proposes that corporate planning documents can be used as snapshots in time in order to "benchmark" the changes in organizational culture, and to assist in organizational diagnosis and organizational learning research.

**Evaluation as a tool of organizational learning**

The premise of the MAB/MIAC (1993) review of public sector reform is that information from program evaluation can and should be used in improving the organisation's strategy as well as its effectiveness, efficiency and appropriateness. This implies that the public sector organization can learn, an hypothesis which has several supporters (e.g., see Leeuw, Rist & Sonnischson, 1994; Senge, 1990). According to Senge, "generative learning" as the most important strategic aspect of organizational learning. Generative learning involves coming to achievements by generating new ways of viewing the world, which lead to strategically important opportunities; whereas adaptive learning merely builds on existing information and experience in order to cope better with the world as it is. Both approaches are necessary, both processes involve the use of information from program evaluation, but the generative learning has greater strategic significance.
The generative approach to organizational learning implies a climate of self-evaluation and self-awareness among staff which transcends simply adapting to change and fixing problems. Through generative learning and through continually challenging and seeking higher standards of program delivery, setting and upholding ethical conduct and continually seeking self-improvement you can truly say that you are trying to improve the program for which you are responsible.

The emphases on different evaluative criteria for program evaluation can be interpreted as paralleling these concepts of organizational learning.

**Definitions of Evaluation and Appropriateness as an Evaluative Criterion**

One of the earlier definitions of evaluation, from the influential Baume Report, bares re-discovery, viz.: "social program evaluation is the process of thoroughly and critically reviewing the efficiency, effectiveness and appropriateness of any program or group of programs." (Senate Standing Committee on Social Welfare, 1979a, p. 5, emphasis added) According to the Baume Report, one of the criteria for evaluation of appropriateness was said to be: "the extent to which the program is in accordance with the moral, ethical and social norms of the time..." (Gross, 1979, p. 58, italics original). It is interesting that appropriateness has been neglected, or undefined, as an evaluation criterion in most of the literature (see Sharp, Roffey & Lewis, 1993). Figure 2 is a model developed to explain appropriateness in the context of effectiveness and efficiency as evaluation criteria.

From Figure 2 we can say that:

**Appropriateness**: is the degree of match or fit between the program's objectives and outcomes compared with the expectations or needs of the clients and other stakeholders. For example, appropriateness relates to the following questions:
- how acceptable is the program to those who have an interest in the program?
- did it's staff do things the right way?
- is this a "quality" program?

**Efficiency**: is the comparison of inputs (costs) and outputs, usually the cost per unit product or service (e.g., person hours per client serviced by the surgical team per day). Not to be confused with "cost/effectiveness" which refers to the efficiency with regard to the objectives (or benefits) of the program.
Effectiveness: is the degree of match or fit between the program's performance and its objectives; i.e., how well does it meet its objectives?

As Lynn and Jay's (1981) TV series Yes Minister, showed in the program on "The Compassionate Society" it is conceivable that a hospital without medical staff or patients can be efficient and productive and safe enough to be proposed for a "Florence Nightingale Award" or its equivalent for "the most hygienic hospital". But to determine how effective it is and how appropriate depends on knowing what clients' (or patients') needs and community needs are, as well as government policy.

More recently, the now Professor, Peter Baume (1991) in reflecting on the ten years subsequent to his review, asserted that:

"of the many influential thrusts which can be traced back to my senate inquiry, perhaps none is more important than this: that public officials in positions of senior management have a direct responsibility to account publicly for the appropriateness of their program results. ...Near the top of that list of elements of 'accountable management' is an valuation of its appropriateness - judged in terms of the worth of the results of public programs." (Baume, 1991, p. 37, emphasis original)

Following the lead of the two most influential Parliamentary reviewers, Coombs (Royal Commission on Australian Government Administration, 1976) and Baume (Senate Standing Committee on Social Welfare, 1979a, 1979b; Baume, 1991), the message of these reviews of evaluation practice in government was "not about evaluation for evaluation's sake, but about evaluation as a means to a greater end of 'accountable management': the original aim was for more careful attention to program evaluation as a core component of enhanced public accountability." (Baume, 1991, p. 36, emphasis added)

This diagram (Figure 2) from Sharp, Roffey and Lewis (1993) is intended to identify the linkages between the efficiency, effectiveness and appropriateness criteria used in evaluation of programs. In their research on the usage of appropriateness as an evaluation criterion in several key Government reviews and policy or training documents, they found at least five connotations of the term appropriateness in the context of both auditing and evaluation, which were:

- **strategic** (as distinct from the "efficiency and effectiveness" operational focus of traditional evaluative criteria); strategic aspects usually refer to the degree to which the program as a whole relates to its political, economic, legal and socio-cultural environment;

- **coherence**, (auditing) logical consistency of the program elements as evaluated;

- **usefulness**, relevance, or feasibility, and often a critical aspect of the evaluation of the quality of a program's design, structure, and implementation;

- **probity**, integrity with reference to cultural, political, social justice, social and ethical norms.
• **expediency**, when the meaning of "appropriateness" not clarified or used in a manner which gave a conveniently vague or political scope, this was called "expedient".

The use of *appropriateness* as an evaluation criterion in a strategic context seems to lead to asking key questions which can facilitate *generative* learning. Whereas, evaluations oriented towards *efficiency* and *effectiveness* criteria, seems to be more focused on an *adaptive* learning process.

**ORGANIZATIONAL LEARNING AS A THEORETICAL FRAMEWORK FOR ORGANIZATIONAL DIAGNOSIS**

The usefulness of organizational diagnosis is often related to the understanding of the organization's capacity to change (Hampden-Turner, 1990, 1992; Harrison, 1987; Levinson, 1972; Manzini, 1988). In order to understand the role of organizational culture in organizational learning, it is important to explore the effects of the top management policy and the environment as influences on the culture in the organization, especially in organizational change programmes. Organizational diagnosis can use the inference from the artefacts, such as corporate plans, about the organization's mission and values, and the corporate annual reports may be an indication of the organization's paradigm and beliefs (Schein, 1985; Johnson, 1992). Recent research on Computer Aided Text Analysis (CATA) has identified that such Strategic documents in organisations can be sources to illuminate the espoused values of the organisation (Kabanoff, 1991, 1992, 1993).

The present concern with organizational diagnosis is focused on these internal relationships. Perhaps the first of such relationships to begin the analysis with would be the "espoused" culture of top management and its connection with the "enacted" culture (Argyris & Schon, 1978) as in the staff response to an organizational culture survey. The form of such a relationship would presumably contribute to changes in organizational culture, as in planned change programmes the management are often urged to change the culture (see Deal & Kennedy, 1982, & 1983; Schein, 1985) be concerned with the organizational memory (Sharp & Lewis, 1993) and the organization's learning (see also Sharp & Kiresuk, 1993).

**METHODS FOR DIAGNOSIS OF ORGANIZATIONAL LEARNING**

To address the need for a method which can diagnose organization learning which is able to be applied to concepts and artifacts of organizational culture, it is appropriate to consider the relationship between internal organisational processes ($L_{11}$) identified by Emery and Trist (1965). One such example of the relationship between internal variables which would pertain to the operationalising of organizational learning is the influence of "espoused culture" on "enacted culture" (cf Argyris & Schon, 1978).

Above it was proposed that the paradigm of an organization's top management gives an indication of the espoused culture (see also Johnson, 1992). Johnson even suggests that the paradigm is the conduit for the representation of the external environment as it influences the internal organizational factors towards action (learning).
"Rather than being a logical testing out of strategies in action, strategic management can be seen as an organizational response over time to a business environment which is essentially internally constructed rather than objectively understood. The idea that external events have a self-evident reality is clearly not so for us as individuals: two spectators from opposing sides watching a sports event will interpret reasons for success and failure quite differently and quite partially. We should not expect it to be very different for groups of managers." (Johnson, 1992, p. 33, emphasis in original)

Parker and Lorenzini (1993) point out, that such aspects of the organizational culture, as the beliefs about the external environment, can be investigated by content analysis of top management's public documents (see also Bowman, 1984; Fiol, 1989). Here it is useful to introduce the CATA technique and explain the rationale of these methods.

ORGANISATIONAL DIAGNOSIS SUPPORT SYSTEMS USING COMPUTER AIDED TEXT ANALYSIS

The "infosift" information management capability of Lotus Agenda has been to show information hierarchies dynamically and to explore the relationships among different pieces of information, and the displays can be designed to identify patterns and connections (Jewell, 1992; Sharp, Baulderstone & Stanwick, 1995). This appears as a spreadsheet-type analysis of information and enables subsequent decisions and action based on that information.

Jewell (1992) developed Lotus Agenda's infosift capability to create PLAN SPEC: "... organizational documents, especially strategic (or corporate) plans can be considered as models of an organization and should be tested against a brief (or specification) before they are put into effect. PLAN SPEC provides a framework for developing such a specification. This framework can then be used as the basis for the plan to be developed. The plan (or organizational model) can then be tested, using PLAN SPEC, against the planning specification/brief and against itself, for consistency."

Similarly, "CULTURE SPEC" was designed for content analysis using a lexicon derived from the Competing Values Framework to investigate the paradigmatic statements of the top management of an organization for their embedded values, and to test the espoused organizational culture against the self-reported CVF values of staff (see Sharp, 1994; Sharp, Baulderstone & Stanwick, 1995).

Again the items from the strategic plan and corporate reports appear as a cells in a spreadsheet-type analysis of information comparing them with regard to their relationships to the categories in the Competing Values Framework, to enable subsequent decisions and action based on that information.
FIGURE 3: The Competing Values Framework
(adapted from Quinn & Cameron, 1983; Quinn & Rohrbaugh, 1983)

**HUMAN RELATIONS MODEL**
* Cohesion & Morale-Oriented
* Staff & Teamwork focus

**INTERNAL PROCESS MODEL**
* Hierarchy-Oriented
* Control, Rules & stability focus

**OPEN SYSTEMS MODEL**
* Development-Oriented
* Innovation & adaptability focus

**RATIONAL GOAL MODEL:**
* Market-Oriented
* Task & Planning focus
Basically, the Competing Values Framework (Quinn & Cameron, 1983; Quinn & Rohrbaugh, 1983) is arranged around two dimensions (see Figure 3):

- flexibility - rigidity.
- internal - external focus.

The intersection of these two dimensions are presumed to result in four cultures types. These are:

- **Human Relations Model** (Flexibility - Internal Focus).
  cohesion, morale, teamwork, & concern with the development of staff.

- **Open Systems Model**: (Flexibility - External Focus).
  insight, innovation, & adaptability in order to meet changing needs.

- **Rational Goal Model** (Rigidity & External Focus).
  task orientation and planning.

- **Internal Process Model** (Rigidity & Internal Focus).
  internal control, rules and procedures dominate & concerned with the stability of the organisation.

According to the espoused "evaluative culture" of the Commonwealth government it could be said to be a form of "Rational Goal model" of organisational culture.

In attempting to establish this model as a basis for an evaluation technique it is useful to draw on work done using a comparison of staff CVF survey of organizational culture and CATA computerised analyses findings of espoused organizational culture in strategic documents in the same organisation. Stanwick (1993) has already gathered useful data on the organizational culture of a government department using the Quinn and Rohrbaugh (1983) Competing Values Framework (CVF), and Sharp, Baulderstone and Stanwick (1995) have demonstrated comparisons of these two approaches to collecting data on the CVF factors in an organisation can be meaningful. Some of the relevant data are available in the following tables from their study.
Table 1. Results for the Comparison of CVF Survey and CATA of the strategic plan of a large federal Government welfare agency summed across the document for the four CVF Culture Types  
(from Table 17 in Sharp, Stanwick and Baulderstone, 1996, p. 21)

<table>
<thead>
<tr>
<th>Culture Type</th>
<th>CATA of Document 2</th>
<th>Staff CVF Survey</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Relative % (Rank)</td>
<td>Relative % (Rank)</td>
</tr>
<tr>
<td>Human Relations</td>
<td>24% (3)</td>
<td>23% (3)</td>
</tr>
<tr>
<td>Open Systems</td>
<td>26% (2)</td>
<td>20% (4)</td>
</tr>
<tr>
<td>Internal Process</td>
<td>28% (1)</td>
<td>31% (1)</td>
</tr>
<tr>
<td>Rational Goal</td>
<td>22% (4)</td>
<td>26% (2)</td>
</tr>
</tbody>
</table>

Using Kendall's W to test for concordance the \( W \) was 0.6, the \( \chi^2 \) (3.6) was not statistically significant (df= 3, \( \alpha = 0.308 \)). But setting aside the variation around the other culture types, the staff survey and the CATA did concur on the dominant emphasis in terms of the CVF culture types being the Internal Process type or "Hierarchical culture". However, there are differences in the second order culture type, showing a discrepancy between the CATA and the staff survey, which would have affected the statistical result.

The document used for this comparison (Table 1) was the federally-focused strategic plan for the whole organisation. When the same organisation’s regional operational plan in examined with the same technique a much stronger disparity occurred (see Table 2).

Table 2. Results for the Comparison of CVF Survey and CATA of the operational plan of the same federal Government welfare agency summed across the document for the four CVF Culture Types  
(from Table 18 in Sharp, Stanwick and Baulderstone, 1996, p. 21)

<table>
<thead>
<tr>
<th>Culture Type</th>
<th>CATA of Document 3</th>
<th>Staff CVF Survey</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Relative % (Rank)</td>
<td>Relative % (Rank)</td>
</tr>
<tr>
<td>Human Relations</td>
<td>26% (2)</td>
<td>23% (3)</td>
</tr>
<tr>
<td>Open Systems</td>
<td>32% (1)</td>
<td>20% (4)</td>
</tr>
<tr>
<td>Internal Process</td>
<td>21% (4)</td>
<td>31% (1)</td>
</tr>
<tr>
<td>Rational Goal</td>
<td>21% (3)</td>
<td>26% (2)</td>
</tr>
</tbody>
</table>

Using Kendall's W to test for concordance the \( W \) was 0.0000 the \( \chi^2 \) (0.0) which was as statistically insignificant (df= 3; \( \alpha = 1.0 \)) as possible. This confirms the impression from inspection of the data, that the staff CVF survey and the CATA were diametrically opposite in their organizational diagnosis in terms of the CVF culture types. Indeed, the Open Systems type of culture (identified by the CATA) is supposed to be externally oriented and flexible, whereas the Internal Process type (identified by the staff survey) is internally oriented and rigid in its approach.
Lack of Confirmation of the Hypothesized “Evaluative Culture”

Some of the data of Sharp Stanwick and Bauldstone (1996) bear on the question of an evaluative culture in the Australian public service. If this proposition (Sedgewick, 1994) was correct then it would be expected that the CVF culture type most dominant would be the “Rational Goal Model” explained by Quinn and Rorbaugh (1983) as results-oriented externally focused on customers and goals. This is very much akin to the prevailing paradigm of program evaluation in Australia (MAB-MIAC, 1993; Sedgewick, 1994). However, if the data from each of the CATA analyses are examine (see Table 3) only Document 1 (from a State Government corporate service department here called, Organization I) shows this to be the dominant culture type. Otherwise there is a considerable variation across the culture types.

According to the staff survey data (see Table 4) none of the organizations (which did not include Organization I) showed this rational goal model as the dominant culture. Even in Organizations IV and V, where staff surveys included perceptions of both “Desired” and “Actual” cultures, again there was no preference for the rational goal model.

These analyses were conducted among both state and commonwealth (Organization II) organisations over the last three years, during which time Sedgewick (1994) made his assessment of the development of an “evaluative culture”. It is difficult to resolve the discrepancy between his assessment and the data obtained by Sharp et al (1996).

Obviously, there are weaknesses in the both the CATA data and staff survey data as measures of organizational culture on their own. These and other methodological problems are symptomatic of the difficulties of the field of research and practice in organisational diagnosis and organizational learning in the public sector. The analysis provided above is only as persuasive as the data available to allow tests of the concept of an "evaluative culture". However, as mentioned, these are part of an ongoing longitudinal study investigating various public sector organizations. The next organizational culture survey results are awaited to enable a more thorough review of this approach.
Table 3. Results for the all CATAs of seven documents across the five Organizations using the four CVF Culture Types
(NOTE: Documents 2 and 3 came from Organization II; and Documents 6 and 7 came from Organization V)

<table>
<thead>
<tr>
<th>Culture Type</th>
<th>Doc. 1 Relative % (Rank)</th>
<th>Doc. 2 Relative % (Rank)</th>
<th>Doc. 3 Relative % (Rank)</th>
<th>Doc. 4 Relative % (Rank)</th>
<th>Doc. 5 Relative % (Rank)</th>
<th>Doc. 6 Relative % (Rank)</th>
<th>Doc. 7 Relative % (Rank)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Human Relations</td>
<td>15% (4)</td>
<td>24% (3)</td>
<td>26% (2)</td>
<td>32% (1.5)</td>
<td>26% (2)</td>
<td>22% (2)</td>
<td>36% (2)</td>
</tr>
<tr>
<td>Open Systems</td>
<td>21% (3)</td>
<td>26% (2)</td>
<td>32% (1)</td>
<td>32% (1.5)</td>
<td>19% (3)</td>
<td>35% (1)</td>
<td>47% (1)</td>
</tr>
<tr>
<td>Internal Process</td>
<td>24% (2)</td>
<td>28% (1)</td>
<td>21% (4)</td>
<td>18% (3.5)</td>
<td>37% (1)</td>
<td>18% (4)</td>
<td>10% (3)</td>
</tr>
<tr>
<td>Rational Goal</td>
<td>41% (1)</td>
<td>22% (4)</td>
<td>21% (3)</td>
<td>18% (3.5)</td>
<td>18% (4)</td>
<td>25% (3)</td>
<td>07% (4)</td>
</tr>
</tbody>
</table>

Table 4. Results for the all the Staff CVF survey of across the five Organizations the four CVF Culture Types
(NOTE: In Organizations IV and V, Stanwick's modified CVF survey asked staff to respond to each question in terms of the “Desired” culture versus the “Actual” culture of their organization)

<table>
<thead>
<tr>
<th>Organization No:</th>
<th>II</th>
<th>III</th>
<th>IV &quot;Actual&quot;</th>
<th>IV &quot;Desired&quot;</th>
<th>V &quot;Actual&quot;</th>
<th>V &quot;Desired&quot;</th>
</tr>
</thead>
<tbody>
<tr>
<td>Culture Type</td>
<td>Relative % (Rank)</td>
<td>Relative % (Rank)</td>
<td>Relative % (Rank)</td>
<td>Relative % (Rank)</td>
<td>Relative % (Rank)</td>
<td>Relative % (Rank)</td>
</tr>
<tr>
<td>Human Relations</td>
<td>23% (3)</td>
<td>30% (1)</td>
<td>20% (4)</td>
<td>27% (1)</td>
<td>22 (4)</td>
<td>28 (1)</td>
</tr>
<tr>
<td>Open Systems</td>
<td>20% (4)</td>
<td>25% (2)</td>
<td>22% (3)</td>
<td>26% (2.5)</td>
<td>25 (3)</td>
<td>27 (2)</td>
</tr>
<tr>
<td>Internal Process</td>
<td>31% (1)</td>
<td>24% (3)</td>
<td>32% (1)</td>
<td>21% (4)</td>
<td>27 (1)</td>
<td>20 (4)</td>
</tr>
<tr>
<td>Rational Goal</td>
<td>26% (2)</td>
<td>21% (4)</td>
<td>26% (2)</td>
<td>26% (2.5)</td>
<td>26 (2)</td>
<td>25 (3)</td>
</tr>
</tbody>
</table>
**FURTHER RESEARCH**

Currently the preliminary results of this research are being used in developing estimates of the parameters for an index of organizational learning (see Sharp, 1996c). It could be that we can develop a useful ratio of *espoused* organizational culture rankings (from strategic documents) over *observed* organizational culture rankings (from staff survey). In any case it is difficult to judge how to interpret these values unless and until further data is available on:

a) more APS organisations to be included in the study, although, given the turbulence of the public sector environment at present in Australia, this will be extremely problematic;

b) followups of the CVF staff survey data after a reasonable period to enable organizational change (e.g. one year);

c) further data on the validity of the CATA method as a measure of espoused CVF values.

However, it is worth elaborating on some of these possible interpretations to explore their implications.

In the political and economic climate facing the public sector in Australia the expected espoused culture would suggest a trend towards the market driven customer-service quality oriented "Rationalistic" culture type. Obviously these issues cannot be resolved without the need for more data for example, from a followup staff CVF survey. However, at this stage it is possible to use the available data from the study by Sharp, Stanwick and Baulderstone (1996) to give some indication of the feasibility of this approach. Thus, the relative percentages of the identification of the four CVF culture types by the CATA and staff survey could be estimates of the probability of the culture type at time =n (now).

**CONCLUSION**

It has been argued that if the Commonwealth public sector has developed an organisational culture of evaluation, it should be seen in the values of the staff (e.g., CVF survey), as well as in the public actions of the organisation (e.g., changes in procedures and evaluation reports) and eventually improved effectiveness and efficiency of operations. But for convincing culture change, simplistically it could be expected, that it should be able to be measured by change in the direction of the responses of staff to values surveys. Also, as recognised by the MAB-MIAC (1993), it should be able to be seen in the change of emphasis on evaluation practice from simplistic compliance approaches (e.g. efficiency focused) to a focus on questioning the foundations of the organisation's programmes, as seen in appropriateness evaluation. An internalisation of the values and beliefs of evaluation, which encompass the openness to reviewing the appropriateness issues, should be demonstrated by evaluation of the appropriateness of the organisation's objectives and strategy (see also Sharp, Roffey & Lewis, 1994).

The present study is a first attempt to see if these espoused theories can be operationalised and tested in simple terms. It was proposed that if the Commonwealth public sector has developed an organisational culture of evaluation, it should be seen in the values in use as articulated by
the staff of various public sector organisations (e.g., CVF survey), as well as in the strategic
documents (espoused values) of the public sector.

Although, MAB-MIAC's (1993) review suggested that, despite outward signs of increased
evaluation practice, there was evidence also of a compliance approach rather than
internalisation of the values and paradigm of evaluation. To be convincing culture change in
favour of an evaluative culture” it should be able to be demonstrated by change in the direction
of the responses of staff to values surveys. However, preliminary findings of both CATA and
staff CVF survey failed to find a consistency dominance of a “Rational Goal” model of
organizational culture. Of course, this is only a limited sample of Government agencies, and the
proposed “evaluative culture” may be manifested in other ways. Nevertheless, a tool of this
kind could be a valuable method of pursuing the investigation of such espoused cultures in the
public sector.

A more complete evaluation should also include a review of public actions of the organisations
(e.g., changes in procedures and evaluation reports) and eventually improved effectiveness and
efficiency of operations. Also, as recognised by the MAB-MIAC (1993), it should be able to
be seen in the change of emphasis on evaluation practice from simplistic compliance
approaches (e.g., efficiency focused) to a focus on questioning the foundations of the
organisation's programmes, as seen in appropriateness evaluation. An internalisation of the
values and beliefs of evaluation, which encompass the openness to reviewing the
appropriateness issues, should be demonstrated by evaluation of the appropriateness of the
organisation's objectives and strategy (see also Sharp, Roffey & Lewis, 1994).

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