WORKING PAPER

Are Theories of Organizational Learning Necessary © - Yet?
Surfacing the Dilemmas of an "International Learning Race"
Affecting Public Sector Management

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Abstract:

Most strategic management approaches assume some change is required in organizational culture. Current management thinking linking organizational culture with strategic management is interested in constructs like "organizational learning", or "creating the learning organization". However, in the enthusiasm for this popular concept, theory has outstretched research and anecdotal observation has outstretched systematic research and measurement. Even more alarming is the practical implication of this for public sector management, where senior Bureaucrats and Ministers are mouthing the platitudes of pop management best sellers without a basis in research in the public sector, and without realising the emptiness of their rhetoric. It is time, we should ask about organizational learning theory, as the learning researcher Prof. B. F. Skinner asked about general learning theory in 1950, namely:

"are theories of learning necessary?"

Following Skinner's scepticism and empiricism, this analytical paper reviews the literature on organizational learning in the public sector. Various dilemmas are 'charted' or 'surfaced' in the public sector associated with two domains which are emerging as concerns for the research on, and application of organizational learning theory in public sector management, viz: domain A is concerned with organizational learning as a change in organizational culture; and domain B is about organizational learning as the acquisition of knowledge, especially in the exercise of corporate memory.

These concerns are related to the inadequacy of the available research methods to deal with these domains. The present paper points to methods which can be used in an attempt to operationalise the assumptions or assertions about organizational learning. This is a necessary step before extensive theory development can occur. It is not intended to verify any particular theory but to overcome the lack of adequate assessment devices in methods of research on organizational learning, and to identify two areas of conceptual development which may be able to proceed with operationalisation so that organizational learning theory can develop as necessary and sufficient for public sector management.
Are Theories of Organizational Learning Necessary - Yet?  
Surfacing the Dilemmas of an "International Learning Race" 
Affecting Public Sector Management

"A main problem in the study of organizational change is that the environmental contexts in which organizations exist are themselves changing, at an increasing rate, and towards increasing complexity." (Emery & Trist, 1965, p.21)

INTRODUCTION

The concept of organizational learning has gained more attention recently for its salience in management theory than for its wealth of organizational psychological research. According to one who has travelled both approaches organizational learning is:

"... a competence that all organizations should develop ... the better organizations are at learning the more likely it is they will be able to detect and correct errors, and to see when they are unable to detect and correct errors. Also, the more effective organizations are at learning the more likely they will be at being innovative or knowing the limits of their innovation." (Argyris, 1992, p. 1)

The importance and difficulty of interpreting the significance of the relationship between the plan or intention and what actually happened, including what errors occur, is illustrated by the series of pop management books by Tom Peters, viz: In Search of Excellence (Peters and Waterman, 1982) Passion for Excellence (Austin & Peters, 1985) and Thriving on Chaos (Peters, 1987). Their focus on strong organizational cultures and corporate vision among the top Fortune 500 companies surely would have reinforced Argyris' orientation of organizational learning towards reducing the gap between intention and action. But, the first two Excellence books fell into the traps of reliance on anecdotal case study, especially the fallacy of the "successful case". Apart from allowing for the influence of the bias of the authors, basically their approach was predicated on the assumption that we can interpret the underlying variables producing success by looking for successful cases. They failed to learn from the famous 17th Century English philosopher and researcher, Francis Bacon (Baron Verulam), who pointed out in his Novum Organum (1620) that in order to interpret observation one must be experimental, ie. at least systematically apply a "method of similarities and differences". In other words they only looked for similarities among "successful" cases of companies which increased profits, and improved market share. Indeed, they failed to heed the advice of Alvin Toffler (1970) who said that "the first law of survival is clear: nothing is more dangerous than yesterday's success". Initially, they neglected to followup cases of "unsuccessful" companies, which could have given opportunities for useful comparisons to aid interpretation of the ingredients of success. It was only later, when Peters (1987) reviewed the ups and downs, successes and failures, "champ to chump cycles" over a longer time frame, that a more insightful interpretation could be drawn. If Argyris is right about identifying the corporate errors as the gap between intention and action, then learning can be interpreted as benefiting from error as well as from success. Even sound comparative case study techniques of quasi-experimental designs (Campbell & Stanley, 1966) and naturalistic inquiry using triangulation (Lincoln & Guba, 1985) seem to be ignored so often in the rush to claim "best practice" in management and organizational change.
The pop management literature could take a leaf from the works of two of the great popularists of modern Psychology, B.F. Skinner (1950) and George Miller (1956). They were able to draw highly provocative ideas from sound research without recourse to elaborate speculation and untestable theory. Of course management research and practice as we know it might not be able to attain a paradigm equivalent of controlled experimental investigation in psychology (Argyris, 1975). However, it is important to continually review the bases of the current knowledge and practice to improve on its deficiencies in validity.

That organizational learning theory has taken on the trappings of a paradigm has been noted in the literature. For example, Mintzberg (1994) identifies various schools of strategy formation, including what he calls the "learning school" which regards strategy as a process of collective learning in organizations. Indeed, the popularity of organizational culture as a management concept has recently received a fillip from the resurgence of theories of organizational learning (Argyris, 1992; Dixon, 1994; Garratt, 1987; Kim, 1993; Hampden-Turner, 1990, 1992; Senge, 1990; Senge, Roberts, Ross, Smith, & Kleiner, 1994). But as Argyris pointed out in his 1966 classic paper, titled: "Unintended consequences of rigorous research":

"Research is needed to help us understand more precisely how social scientists can develop valid theories and rigorous operational measures in a universe which may be composed of overlapping and redundant parts; where interrelationships are so complex that concepts of steady state are needed to conceptualize them; where objective observations may be limited to researchers who already manifest a relatively high competence in the phenomenon under study." (Argyris, 1992, p 440)

Argyris and others (e.g., Argyris & Harrison, 1962; Argyris & Schon, 1978; Susman, 1984) have followed the path of "action research" or "action science" to develop a grounded theory of organizational change. No doubt this approach has been useful in the exploratory stage of identifying and understanding management practices; but, in order to establish whether principles and theories of organizational learning can be developed which contribute to the substance of management, more normative approaches are needed to complement this early work. Such methods which attempt to operationalise concepts or metaphors, and create a basis for testing theory are needed urgently.

**Organizational Learning In The Public Sector?**

Despite earlier cautionary studies (e.g., Etheredge, 1985; March, & Olsen, 1975), recently attention has re-focused on whether organizational learning can be seen in public sector organisations (Godfrey, 1993; Leeuw, & Sonnichsen, 1994; Rist, 1994). However, there has been very little research on assessing the relationship between organizational culture (Hampden-Turner, 1990; Osborne & Gaebler, 1992; Sinclair, 1989; 1991) and organizational learning, specifically in the public sector (Rist, 1994). The need for this research is essential as organisations in the public sector have undergone major organisational change in various countries (Dunphy & Stace, 1990; Leeuw, et al. 1994; Littler, Bramble & McDonald, 1994; Pollitt, 1995).

There is a mixed blessing in the increasing prevalence of the terms "The Learning Organisation" or organizational learning among public sector CEOs. The interest in the concept of organisational learning in the context of a changing public sector may be encouraging and supportive of trial and error learning and new approaches to staff and organisational development. But it is also a license for CEOs to indulge in disturbing
Are Theories of Organizational Learning Necessary?

platitudes (cf Sedgewick, 1994 vs Pollitt, 1995) which are not reinforced in terms of operational definitions nor with actual practical enduring results in terms of organizational learning.

Some of the reasons for this concern are that there is a dearth of evidence and a difficulty of empirically operationalizing the concepts and measuring their effects.

Indeed, there may be tangible signs of organizational learning in adaptive changes in policy and application of program evaluation results (Owen & Lambert, 1995; Rist, 1994). When Governments encourage appropriateness as an evaluative criterion for program accountability (Sedgewick, 1994; Sharp, 1994b) and benchmarking (Sedgewick, 1995; Sharp, 1994a) they may be important tools in establishing the conditions for organizational learning (Rist, 1994). But these may not be the necessary, nor sufficient, indicators of the operationalisation of organizational learning theory (Sharp, 1996 a). Other factors, such as changes in organizational culture or the existence of a supportive organizational culture (Hampden-Turner, 1992; Schein, 1992) and appropriate human resource management practices (Dixon, 1994) are also important in establishing that organizational learning can occur. While organisational learning can be seen as an aspect of an organization's culture, the concept of "the Learning Organisation" (Senge, 1990b) is an ideal type of organisational culture (Baulderstone, 1994) to which practices, attitudes and values involving program evaluation, as well as other systems development techniques, should be able to make a significant contribution (Owen & Lambert, 1995).

Scope of this paper

This paper takes up the challenge of Hampden-Turner (1990; 1992) and others by attempting to "surface the assumptions" (Mitroff & Mason, 1981) and "chart the dilemmas" (Hampden-Turner, 1990) in the emerging paradigm of organizational learning research. At this stage it is not possible to identify the resolutions to the dilemmas, but it is necessary to identify the problems. The question of whether organizational learning theories are necessary or not for good management practices and achievement of organisational strategies, cannot be answered at present but it is possible to point out that the existing theories are not sufficient to adequately predict or guide management practices to achieve organisational strategies.

DEFINITIONS AND FUNDAMENTAL ASSUMPTIONS

Theory in Context

It is interesting to reflect on the point that Skinner (1950) made about the proliferation of general theories of learning in experimental psychology of the 1930s and 1940s:

"Certain basic assumptions, essential to any scientific activity, are some times called theories. That nature is orderly rather than capricious is an example. Certain statements are also theories simply to the extent that they are not yet facts. ... No empirical statement is wholly non theoretical in this sense, because evidence is never complete, nor is any prediction probably ever made wholly without evidence. The term 'theory' will not refer here to statements of these sorts but rather to any explanation of an observed fact which appeals to events taking place somewhere else, at some other level of observation, described in different terms, and measured, if at all, in different dimensions." (Skinner, 1950, pp. 37- 38)
In terms of this definition, he identified three types of theory of learning, as follows:

a) **physiological:** where (physiological/biochemical) changes in the nervous system are said to take place when an organism learns;

b) **cognitive:** such that "mental events" are said to occur in the brain to mediate the learning;

c) **conceptual:** in that explanatory events are postulated but are not directly observed.

In challenging these models, he pointed out that:

"A science of behavior must eventually deal with behavior in its relation to certain manipulable variables. Theories - whether neural, mental or conceptual - talk about intervening steps in these relationships." (Skinner, 1950, p. 39)

Obviously Skinner's provocative stance did not halt the pace of learning theories, but it did serve to remind researchers to more carefully operationalise the hypothesised intervening variables. A similar lesson is needed in today's rush to theories of organizational learning.

For comparison Senge defines "theory" as:

"...a fundamental set of propositions about how the world works, which has been subjected to repeated test and in which we have gained some confidence. The English word 'theory' comes from the Greek root word *theo-ros*, meaning spectator. This derives from the same root as the word 'theatre'. Human beings invent theories for the same basic reasons they invent theatre - to bring out into a public space a play of ideas that might help us to better understand our world."

(Senge, Roberts, Ross, Smith & Kleiner, 1994, p. 29)

**Theories of learning**

The definition of terms often has embedded theory or at least exposes the approach of the writer to associated theory. There have been various comparisons of definitions of key terms like learning (see Estes, 1971; Skinner, 1950) and organizational learning (Garvin, 1993; Kim, 1993); and attempts to synthesise a universal definition of learning (e.g., Kimble, 1961) and organizational learning (Kim, 1993). For the purposes of this paper, Table 2 characterises some definitions in terms of the level of theorising implied as identified in Table 1.

The degree of abstraction in research and theorising has been subject of many reviews (e.g., see Davis, 1985; Kaplan, 1964), so the classification in Table 1 is not definitive. But it is sufficient for the point of this paper because in management theory and research in general, and organizational learning research in particular, there is an apparent indifference toward rigour, vagueness of the basic premises and unconvincing generalisations from minimal data.
As the organizational learning proponents advocate (e.g., Senge, 1990b) it is important to question and challenge established ways of viewing the world ("mental models"). For example, terms like "system" have permeated the basic discourse of management, and organization structural change, like a paradigmatic filter over the perceptions of the new researcher or practitioner. But it also bring theoretical baggage with it:

"System... is another word for theory or model explaining and predicting events in the real world in a parsimonious way that permits manipulation. To say that one is being systematic ... implies that one has causal knowledge." (Wildavsky, 1988, p. 141)

Although even this meta-concept can be defined in a 'level 2' fashion, e.g.:

"...a 'system' means a grouping of parts that operate together for a common purpose. ...Management is a system of people for allocating resources and regulating the activity of a business." (Forester, 1968, p. 1-1)

Table 2 illustrates the point of the distinction between the levels. Ever since Dewey (1938) and Tolman (1934) proposed their cognitive theories of learning, the challenge has been to find empirical methodologies to operationalise and test their validity.
Theories of organizational learning

Two reviewers, Garvin (1993) and Kim (1993) have attempted to provide basic definitions which will suffice across different theories of organizational learning:

"A learning organization is an organization skilled at creating, acquiring, and transferring knowledge, and at modifying its behavior to reflect new knowledge and insights".

(Garvin, 1993, p. 80)
<table>
<thead>
<tr>
<th>Key Term</th>
<th>Source</th>
<th>Definition</th>
<th>Level of Theory</th>
</tr>
</thead>
<tbody>
<tr>
<td>Learning</td>
<td>Kimble, 1961, p. 2</td>
<td>a more or less permanent change in behaviour which occurs as a result of practice</td>
<td>1</td>
</tr>
<tr>
<td>Learning</td>
<td>Dewey, 1938, p. 124</td>
<td>a continuous process of reconstruction of experience</td>
<td>2</td>
</tr>
<tr>
<td>Learning</td>
<td>Tolman, 1934, p. 29</td>
<td>acquisition of expectation sets, or knowledge about sign-Gestalt's, or cognitive maps</td>
<td>3</td>
</tr>
<tr>
<td>Learning</td>
<td>Argyris, 1982, p.29</td>
<td>a process of detecting and correcting errors</td>
<td>2</td>
</tr>
<tr>
<td>Organizational Single loop learning</td>
<td>Argyris, 1982, p.8</td>
<td>when matches are created or when mismatches are corrected by changing actions</td>
<td>2</td>
</tr>
<tr>
<td>Organizational Double loop learning</td>
<td>Argyris, 1982, p.9</td>
<td>when mismatches are corrected by first examining and altering the governing variables and then actions</td>
<td>2</td>
</tr>
<tr>
<td>Learning in Organizations</td>
<td>Senge, et al, 1994, p. 49</td>
<td>the continuous testing of experience, and the transformation of that experience into knowledge - accessible to the whole organization, and relevant to its core purpose</td>
<td>2</td>
</tr>
<tr>
<td>Learning organization</td>
<td>Senge, 1990b, p. 14</td>
<td>an organization that is continually expanding its capacity to create its future.</td>
<td>3</td>
</tr>
<tr>
<td>Generative learning</td>
<td>Senge, 1990a, p. 8</td>
<td>requires seeing the systems that control events</td>
<td>3</td>
</tr>
<tr>
<td>Organizational Learning</td>
<td>Stata, 1989</td>
<td>occurs through shared insights, knowledge, and mental models ... builds on past knowledge and experience - that is, on memory.</td>
<td>3</td>
</tr>
<tr>
<td>Organizational Culture</td>
<td>Hampden-Turner, 1992, p. 7</td>
<td>only cultures can learn - and organizations must learn</td>
<td>4</td>
</tr>
<tr>
<td>Mental models</td>
<td>Senge, 1990b, p. 174</td>
<td>internal images of how the world works, images that limit us to familiar ways of thinking and acting. That is why the business of managing mental models - surfacing, testing, and improving our internal pictures of how the world works - promises to be a major breakthrough for building learning organizations.</td>
<td>4</td>
</tr>
</tbody>
</table>

"Analogous to individual learning, organizational learning is defined as increasing an organization's capacity to take effective action" (Kim, 1993, p. 43)
Garvin (1993) summarises the main role of theories of organizational learning, as a focus on the intervening variables and processes which translate the innovation and new ideas into action: "Without accompanying changes in the way that work gets done, only the potential for improvement exists" (Garvin, 1993, p. 80). His contribution extends to highlighting appropriate measures of organizational learning through productivity "half-life" curves developed by Stata (1989).

However, as Table 2 indicated there are many other definitions of organizational learning which rival Garvin's (1993) and Kim's (1993). Although there had been some pre-cursors who had pointed to organizational learning (Chapin, 1923; Rogers, 1962), among the earliest to identify a model of organizational learning were Cyert and March (1963) who saw it as an adaptation of an organization through the rational decision making process of the individuals composing the organization. This approach led to one of the first models to attempt to integrate individual and organizational learning by March and Olsen (1975).

Senge (1990) developed Argyris' (1982) concepts of "single loop and "double loop" learning. Senge pointed out that for a learning organization "it is not enough merely to survive. 'Survival learning' or what is more often termed 'adaptive learning' is important - indeed it is necessary. But for a learning organization 'adaptive learning' must be joined by 'generative learning', learning that enhances our capacity to create." (Senge, 1990b, p. 14)

A recent theorist of organizational learning (Kim, 1993), has provided a typical example of the problem to be addressed in this paper. He has formulated (from several others, see e.g., March & Olsen, 1975) a level 3 type model of organizational learning:

"An integrated model of organizational learning organizes all of the elements ... into a cohesive framework ... I call it the OADI-SMM model: observe, assess, design, implement - shared mental models. It addresses the issue of the transfer of learning through the exchange of individual and shared mental models." (Kim, 1993, p. 42)

In this he owes his heritage to Senge's (1990b) derivation of Forester's conceptual framework, viz:

"A model is a substitute for an object or system. ... Any set of rules and relationships that describe something is a model of that thing. In this sense, all our thinking depends on models. Our mental processes use concepts which we manipulate into new arrangements. ... mental concepts are abstractions based on our experience. This experience has been filtered and modified by our individual perception and organization processes to produce our mental models that represent the world around us." (Forester, 1968, p. 3-1)

This type of fourth level theoretical construct "mental model", is what prompted the theme of this paper. These organizational learning models illustrate the problem in that they postulate other ill-defined or unoperational intervening variables, like "mental models" or "organizational memory". The latter has its own literature of attempts to reach a useful definition and operationalisable methods (see Sharp & Lewis, 1992; 1993; Tsoukas, 1991).

But, as Cameron (1986) pointed out, there has been a continuing void between theory and practice in specification and assessment of organizational effectiveness, and the intervening variables (like organizational culture). His warning should be heeded when it comes to identifying and measuring organizational learning.
Methods of Assessing Organizational Learning

As in Skinner's (1950) situation, it is important in this time of proliferation of definitions, models and theories of "the learning organization" to clarify the grounding of theory in the data available. Or if data is not available to establish operational frameworks and methods of empirical research to remedy the dearth of data.

In selecting a method for this type of research, it is important to ensure that it is sensitive to the content which conveys relevant aspects of the organizational cultural, paradigm, and meaning. As Parker and Lorenzini (1993, p. 39) pointed out: "Explicit communications, such as written language, do not completely represent the organizational messages transmitted as part of a culture. It is also necessary to identify the 'words' behind the words."

Current methods assume that the content of documents (usually corporate annual reports are the most available) reflects the "espoused corporate culture" by the use of the corporate language (e.g., Kabanoff, 1993; Parker and Lorenzini, 1993). As explained below, this allows application of content analysis methods to assist in examining organizational culture.

The Role of Organizational Culture

In Table 2 organizational culture is given the status of a meta-concept in the literature on organizational learning. Here is one definition which substantiates this view:

"The culture of an organization defines appropriate behavior, bonds and motivates individuals, and asserts solutions where there is ambiguity. Culture governs the way a company processes information, its internal relations, and its values. It functions at all levels from subconscious to visible." (Hampden-Turner, 1992, p. 1)

If, as Hampden-Turner (1992) asserts, "only cultures can learn", then a change in organizational culture is a necessary condition for organizational learning. According to Schein (1992) a learning leader is one who has the role of examining and managing the organizational culture. If this is so then how can researchers operationalize and measure organizational learning, without operationalising and measuring organizational culture? Is organizational learning any change in organizational culture? What if there is a change in organizational culture due to severe staff turnover? Surely if staff turnover is severe enough to cause "corporate memory loss" (Sharp & Lewis, 1993) then this would adversely affect organizational learning as well as organizational culture? These questions are not addressed in the available literature on organizational learning in the private sector or public sector. It is the intention of the present paper to propose alternative methods and research to remedy this deficiency.

Being so pervasive it is difficult to operationalise organizational culture and so still quite elusive to prove organizational culture change, when researching organizational learning. One way to re-conceptualise organizational culture is to categorise it in terms of the shared values of the participants (see Quinn & Rhorbaugh, 1983). Quinn and colleagues (see Quinn & McGrath, 1985; Quinn & Rhorbaugh, 1983) have devised a self-report scale (questionnaire) to research their "Competing Values Framework" (CVF). This characterisation of organizational culture as competing values is a fore-runner of Hampden-Turner's (1992) "horns of a dilemma" of dichotomous values.
Are Theories of Organizational Learning Necessary?

In the last decade, other concepts have emerged in an attempt to clarify the broad category of organizational culture in the context of "soft systems" (Checkland, 1981) or "meaning systems" (Storey, 1992), and organizational learning (Argyris & Schon, 1978; Senge, 1990ab). One such concept which seems to complement organizational culture, and give researchers a better guide to disentangling the operational aspects for study is "paradigm" (Mohrman & Lawler, 1985; Lawler, 1989; Johnson, 1992) which derives from Kuhn's (1962) analysis of the belief systems common among researchers. This concept is similar the Weltanschauung (or world view) advocated by soft systems thinkers (Checkland, 1981). These shared beliefs are the essential core of corporate memory (see Sharp & Lewis, 1993), but also give some indication of the "metal models" or even "espoused culture" of the top management of the organization (Mohrman & Lawler, 1985; Lawler, 1989; Johnson, 1992; Storey, 1992).

Figure 1 is an illustration (see Schein, 1985, p. 22) of how the concept of paradigm is thought to be related to the other concepts usually defined in the organizational culture (i.e., the artefacts, 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 artifacts and creations of the organization commensurate with its shared values and the related beliefs articulated by its spokespeople.

MEASURES OF ORGANIZATIONAL LEARNING

Indicators of organizational learning are dependent on trend analyses of data generated by various measures. Ever since Chapin (1923) discovered the "growth curve" in adoption of innovation, the "s-curve" or learning curve has been found in various forms of diffusion of innovation (Rogers, 1962; 1995), organizational change life cycles (Downs, 1967; Kimberly, 1980), "envelop curve" (Ayers, 1968) and "experience curves" in R&D and technology management (Abernathy & Wayne, 1974). Indeed, Garvin (1993) has begun to develop a methodology of investigation of organizational learning using "half-life" curves. But apparently, he has not developed a formula to account for the findings (cf Abernathy & Wayne, 1974). Also this data relates only to supporting the theory that organizational learning does occur, it does not account for the relationships between intervening variables in the theories of organizational learning. For example, it does not provide the analytical precision to address the theoretical relationship between individual learning and organizational learning (e.g., Kim, 1993).

The usefulness of organizational diagnosis is often related to the understanding of the organization's capacity to change or acquire knowledge (e.g., Cohen & Levinthal, 1990; Kiresuk, 1993). 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 programs. As Figure 1 indicates (based on Schein, 1985; Johnson, 1992) 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.

If these are satisfactory operationalisations of organizational culture, what can be used to operationalise the concept of organizational learning? The level of abstraction or operationalisation of the concept gives some indication of the degree of usefulness in research and practice. But either application depends on the strength of the inference or logical linkage
between the concepts at different levels. Figure 1 shows that the concepts of organizational learning are often only operationalisable by *indirect inference* connecting them with the identifiable instruments of operationalisation (Platt, 1964) for external research or management practice, such as corporate plans and reports (see Kabanoff, 1993; Sharp, 1994c; 1996b).
FIGURE 1:
The Levels of Organizational Culture and their relationship to Corporate Plans and Reports
(adapted from Schein, 1985; Johnson, 1992)

<table>
<thead>
<tr>
<th>Level of Abstraction: of Concept</th>
<th>Instrument of Operationalisation:</th>
<th>Degree of Inference</th>
</tr>
</thead>
<tbody>
<tr>
<td>Level 1: Artifacts and Creations</td>
<td>Logos and Motos Corporate Annual Reports</td>
<td>Direct inference: Visible but often not decipherable</td>
</tr>
<tr>
<td>Level 2: Paradigm (beliefs)</td>
<td>Corporate Strategic Plans</td>
<td>Some direct &amp; some indirect inference: Some awareness (Pre-conscious ?)</td>
</tr>
<tr>
<td>Level 3: Values</td>
<td>Vision and Mission Statements</td>
<td>Indirect inference: Taken for granted (Pre-conscious &amp; Unconscious ?)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Level 4: Meta concepts (Indirect inference):</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Basic Ontological Assumptions</strong> (Pre-conscious &amp; Unconscious?) including:</td>
</tr>
<tr>
<td>Relationships with the environment; Nature of reality, time and space</td>
</tr>
<tr>
<td>Nature of human nature; Nature of human activity</td>
</tr>
<tr>
<td>Nature of human relationships</td>
</tr>
</tbody>
</table>

DILEMMAS

Dewey (1938, p. 99) foreshadowed some of the fundamental philosophical tenets of the current organizational learning school, including the following insight: "Mankind likes to think in terms of extreme opposites. It is given to formulating its beliefs in terms of Either-Ors, between which it recognises no intermediate possibilities. When forced to recognize that the extremes cannot be acted upon, it is still inclined to hold that they are all right in theory but that when it comes to practical matters circumstances compel us to compromise."

Following Mitroff and Mason, (1981), according to Senge et al. (1994) a useful technique of developing a vision for the purpose of an organization is to "surface the assumptions" and according to Hampden-Turner (1990) it is important to "chart the dilemmas" of underlying competing values.

Ironically, it seems that the field of organizational learning has its own underlying dilemmas, which are characterized as follows:

Management Plays Pascal's Wager as part of the Contagion of Pop Management Theory

Hampden-Turner (1990) pointed out that there is an "international learning race" to characterise the corporate rush to gain strategic advantage by becoming a "Learning Organisation". Like the
arms race of the cold war, this creates an ideal environment for the operation of Pascal's Wager. In other words, business leaders (and, it seems, pop management theorists) are damned if they do not wager in favour of the "Learning Organisation" paradigm, because everyone else is racing to get onto the bandwagon; and others seem to be thriving on it, so why not try?. Which business leaders, and their academic "management gurus" (see Huczynski, 1996), can afford to be left out of the race? As Pascal would say: they are "embarked".

In the public sector, there is an increasing tendency to embark on attempts to catch up with the private sector in management trends such as "delayering" (Littler, Bramble & McDonald, 1994), Total Quality Management (Baulderstone, 1994; Hammond & Maddux, 1990; Pollitt, 1990) and benchmarking (Baulderstone, 1994; Frost & Pringle, 1993; Sharp, 1994).

Here follows an attempt (Table 3) to identify some of the dilemmas of the organizational learning race, and the emerging applications of the organizational learning paradigm.

TABLE 3: THE DILEMMAS OF THE ORGANISATIONAL LEARNING RACE

<table>
<thead>
<tr>
<th>TYPE OF DILEMMA</th>
<th>THESIS</th>
<th>ANTITHESIS</th>
<th>SYNTHESIS?</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Methodological: Anecdote VS Rigour</td>
<td>Anecdote - uncritical case study -realism but how valid?</td>
<td>Rigour - unrealistic? but constrained</td>
<td>Triangulation (e.g. Patton, 1980)</td>
</tr>
<tr>
<td>2. Conceptual: Abstraction VS Operationalisation</td>
<td>Abstraction - more abstract the more difficult to measure</td>
<td>Operationalisation - more concrete operational approaches lose breadth and cohesion</td>
<td>Strong inference (Platt, 1964)</td>
</tr>
<tr>
<td>3. Measurement: Outputs VS Intervening Variables</td>
<td>Outputs - focus on measuring what is available</td>
<td>Intervening Variables - difficult to operationalise</td>
<td>Instrumentation (e.g. Dixon, 1994)</td>
</tr>
<tr>
<td>4. Argyris &amp; Schon's Paradox</td>
<td>organizations are not merely collections of individuals, yet there are no organizations without such collections.</td>
<td>organizational learning is not merely individual learning, yet organizations learn only through the experience and actions of individuals.</td>
<td>Identify links with individual learning (e.g. Kim, 1993) &amp; group learning (e.g., Dixon, 1994)</td>
</tr>
<tr>
<td>5. Emery &amp; Trist's problem</td>
<td>the study of organisational change implies some point of reference to the context</td>
<td>the environmental contexts in which organizations exist are themselves changing</td>
<td>Longitudinal research &amp; benchmarking</td>
</tr>
<tr>
<td>6. Clash of Paradigms in public sector</td>
<td>accountability for economy of resources</td>
<td>accountability for customer service quality</td>
<td>Competing Values Framework (e.g. Quinn, &amp; McGrath, 1985)</td>
</tr>
<tr>
<td></td>
<td>cooperation of professionals &amp; community agencies</td>
<td>quasi-markets, competition and antagonism</td>
<td>Co-opetition (Norda, )</td>
</tr>
</tbody>
</table>
7. Rhetoric VS Reality

| Continuous quality improvement | de-layering & corporate memory loss | balance of ordinary and extraordinary management (Stacey, 1995) |

8. Mental Models vs Experimenter and/or Hawthorn Effects

Obviously, to fill the right column on potential resolutions or syntheses of these dilemmas is a daunting task. At this stage it is sufficient to identify the dilemmas, and give examples of possible synthesis or directions for research which may lead to resolutions of some of these dilemmas.

Experimenter and/or Hawthorn Effects

The irony of the Centre for Organizational Learning's (Kim, 1993) approach is that if mental models are so influential then surely they undermine the validity of anecdotal case study, because they reinforce the biasing effect of personal theories. In other words the proponents of the influence of individual mental models on organizational learning, have their own mental models which must (according to their argument) influence the perceptions and actions of their research and the cases presented. Also, different mental models ("in the eye of the beholder") will lead to different interpretations of the meaning of the cases cited.

As pointed out by Sharp and Kiresuk (1993) such "arational" or "pre-conscious" concepts do seem to play an influential role in such endeavours as strategic management. But there is little rigorous research on what are the reliable practical implications for management practice of the sub-conscious mental models.

Practical Implications of the influence of Mental Models

Although in need of greater research and development, Senge et al (1994) and Parker and Lorenzini (1993) point out, that mental models can be used as tools to understand the organizational culture. In particular, Parker and Lorenzini (1993) suggest 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). Indeed, Kabanoff (1993) has applied this technique to "espoused" culture in various commercial organizations.

If a standard analysis of organizational culture could be applied to the beliefs and values expressed in an organization's public documents as might be used in a survey of the staff on organizational culture, then it would be possible to develop an indicator of organizational learning qua organizational culture change. Sharp (1993) proposed that the reduction in the degree of "gap" between the "espoused values" (in key corporate documents) and the reported values (in a staff survey) would give an estimate of the extent of organizational learning.

Argyris & Schon's Paradox
Kim (1993) is one of the few theorists to attempt to deal with a major dilemma in organizational learning theory, viz: the paradoxical relationship between individual learning and organizational learning.

“There is something paradoxical here. Organizations are not merely collections of individuals, yet there are no organizations without such collections. Similarly, organizational learning is not merely individual learning, yet organizations learn only through the experience and actions of individuals. What, then, are we to make of organizational learning? What is an organization that it may learn?”

(Argyris & Schon, 1978, p. 9)

Here is one of the dilemmas of this field. Along the way to developing a better understanding of the degree of theorizing about organizational learning, a number of other dilemmas will be "charted" (Hampden-Turner, 1992) or "surfaced" (Senge et al, 1994).

Organizational Learning: the Exercise of Corporate Memory?

As with the human body's muscles and memory: "if you don't use it you lose it". There is increasing emphasis on survival of the fittest in international competitiveness, we are told there is a corporate international organizational learning race (Hampden-Turner, 1990, 1992). In order to survive in the 1990's organisations are told they have to model themselves on the learning organisation. All these metaphors imply not only the need for exercise of corporate strategies, but also the exercise of corporate memory.

This metaphor is the basis for current research on corporate memory loss (see Sharp, 1996a)

To continue the metaphor, program evaluation can be the memory rehearsal mechanism which helps to recall and prioritize corporate memory of vital data, for decision making as well as to discard what is not needed and to assist in anticipating and rehearsing the costs and benefits, strengths and weaknesses of strategies in the development of the organisation's strategic management.

This construct has implications for the use of evaluation techniques in organisations (see Sharp, 1996b).

One of the necessary steps is to operationalize organizational learning in various ways which are implied by the assumptions or theories being tested. Here it is proposed to operationalize organizational learning by assessing the consistency of "espoused values" and corporate values-cum-culture, with the responses of staff to organizational cultural inventories. It is proposed to develop a method to test the theories of organizational learning by using the measurement of changes in organizational culture as an indicator of organizational learning.

Following Jewell's development of Lotus AgendaR as an information sifting tool, or computer aided text analysis technique, for evaluation of the consistency of annual reports with strategic plans, the author has used the items from the "Competing Values Framework" Culture Survey (Quinn & Rohrbaugh, 19983) to form a conceptual template to search public documents for traces of "espoused values" and indications of the corporate culture. This data can then be compared with the responses of staff to the standardised questionnaire derived from the "Competing Values Framework" Culture Survey. In this way it is possible to test for consistency between the espoused values, or paradigm, of management thinking, and the reports of the "actual" culture
coming from the staff. A number of studies (with John Stanwick and others) are in progress to develop this approach, using a Computer Aided Text Analysis (CATA) approach called CULTURESPEC (Sharp, 1994; Sharp, Stanwick & Boulderstone, 1996).

**DILEMMAS "SURFACED" IN THE ORGANIZATIONAL LEARNING RACE**

Among the practical admonitions proffered by the organizational learning school of management consultants are the techniques of "charting dilemmas" (Hampden-Turner, 1992) and "surfacing mental models" (Senge et al, 1994). This paper has overtly and covertly surfaced a number of dilemmas in this field.

A number of such dilemmas have already been encountered in other papers, for example:
* Rational vs "Arational" aspects of strategic management (see Sharp & Kiresuk, 1993)
* "Chaos" vs Learning (see Sharp, 1993; Sharp & Kiresuk, 1993).

In addition to these dilemmas four theoretical/empirical dilemmas have been identified here:

**Dilemma 1: Methodology- Anecdote Vs Rigour**

We have been concerned that the basis of much of the literature is anecdotal "success stories". If theory of organizational learning is to progress, it is essential that more rigorous research be advanced in the search for operationalizable variables. Like organizations, researchers also need to learn from the mistakes of their field.

**Dilemma 2: Level of Theoretical Abstraction Vs Degree of Operational Practicality**

Lack of rigour is a dangerous catalyst when mixed with an increasing levels of abstraction in theory, without the corresponding degree of operational definition and measurement of key intervening variables. The concept of organizational culture is assumed as a key intervening variable by most theory in this field. Yet there has been little in the organizational learning literature focused on developing operational definitions of its effect in organizational learning, nor in attempting to measures its actions during episodes of so-called organizational learning.

**Dilemma 3: Prediction of Key Concepts -Organizational Learning Vs Corporate Memory**

If organizational learning depends on corporate memory, which corresponds with the learning og the staff, then what effect will staff turnover have on organizational learning? It could be argued that staff turnover may be an unintended consequence of organizational learning, since as the staff learn new skills they become more mobile in the labour market. It could be argued that CEOs and Boards want to increase staff turnover as a way of getting rid of the "deadwood" to promote more capacity for organizational learning. However, some argue (see Sharp & Lewis, 1993) that there is an inevitable loss of corporate memory with staff turnover. So how can increasing staff turnover be compatible with attempts to promote organizational learning?

**Dilemma 4: Measurement focused on outputs Vs Testing of Intervening Variables**

Garvin (1993) and others have identified measures of organizational learning in ratios of performance (e.g. productivity half-life curves) which are a useful step towards testing the predictions of organizational learning theories. But in order to justify theorising about more elaborate intervening variables, such as the role of organizational culture, there is a need for
more operational definition and measurement of the observable variables linked to these intervening variables. In the case of organizational culture we have been using Quinn's (Quinn & McGrath, 1985 and Quinn & Rohrbaugh, 1983) CVF values survey.

**CULTURESPEC: An Organizational Culture Consistency Meter?**

One of encouraging research approach (see Sharp, 1994) is utilising the same capabilities of Lotus Agenda to develop a package called: "CULTUREspec" which designed for content analysis and information structuring to investigate the paradigmatic statements of the top management of an organization for their embedded values, and to test those "espoused theories" with regard to the self-reported values of staff (organizational culture).

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 (Quinn & Rohrbaugh, 1983) to enable subsequent decisions and action based on that information.

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 (1991, 1993, 1994), 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) Competing Values Framework (CVF). Stanwick is currently developing another organizational culture instrument by correlational comparison with the CVF data obtained in other public sector agencies.

**DILEMMAS FACING THE PUBLIC SECTOR'S ATTEMPTS TO FOSTER ORGANIZATIONAL LEARNING**

Government advisers and decision makers appear to be forcing an agenda of "reform" on the third sector which has been rehearsed in the public sector (see Sharp & Talbot, 1993), known as "economic rationalism" (Pusey, 1991) and "managerialism" (see Power, 1990; Weller & Lewis, 1989; Yeatman, 1990) or the "new public management" (Pollitt, 1995). Rather than re-visiting those debates, the point is that while attempting to promote competition through "quasi-markets", Governments are undermining the cooperative ethos of third sector, and public sector organisations especially in the human services where the professional commitment to service often promoted inter-organisational sharing and learning (see Sharp & Talbot, 1993).

**Accountability for Economy Vs Accountability for Service Quality**

"Economic rationalism" (Pusey, 1991) is a euphemism for the paradigm of financial constraint which has become anathema to recent paradigm of quality management in service delivery. (Pollitt, 1995; Talbot & Sharp, 1993; Yeatman, 1990). In the process of constraint there have been various cut backs in staffing including high staff turn-over and de-layering (Littler, et al., 1994) which are threats to corporate memory (Sharp & Lewis, 1993) and so could retard organizational learning

**Competition VS Cooperation**
One of the features of Government service organisations used to be the common professional ethos and the inter-organisational sharing. However, the move to competition, contestability and quasi-markets (see Pollitt, 1995; Yeatman, 1990) has tended to create an adversarial climate of competition and exclusivity among such organisations (Sharp & Talbot, 1993; Talbot & Sharp, 1993). This is not only a dilemma of public sector management, but also could significantly erode the bases for organizational learning (cf Leeuw, et al. 1994).

Continuous Improvement VS Corporate Memory loss

Business process improvement (Harrington 1991), TQM (Morgan & Murgatroyd, 1994) and best practice benchmarking (Sharp, 1994b) are all thought to have a role to play in organisational change in pursuit of organization effectiveness. But in the public sector, they have become associated with down-sizing and other major potential disruption of corporate memory, how can they facilitate continuous improvement and organizational learning?

TWO DOMAINS OF RESERACH IN PROGRESS

As a first step in operationalising some of the crucial concepts in organizational learning theory, two domains have been chosen for investigation. These are focused on:

- organizational learning as a change in organizational culture (domain A); and
- organizational learning as the acquisition of knowledge, especially in the exercise of corporate memory (domain B).

The research is being attempted in public sector organizations. All have experienced substantial structural change and they were chosen because of the opportunity to have a common domain of organizational culture to apply the CVF culture survey, and because of the prevalence and concern for corporate memory loss with down-sizing. These organizations were also selected because of the accessibility of top levels of management and internal information to the researchers.

The experience of the investigation will form a basis for assessing the feasibility of expanding the study to consider a wider range of organizations which could further the investigation of the variables identified at this early stage (see Sharp, 1996 a 1996 b). The information obtained is being used to address the questions raised about the operationalisation of organizational learning, above.

CONCLUSION

If organizational learning depends on the intention or purpose of the organization and organizational culture learning then how do we test organizational learning theory, if we cannot measure organizational culture change in relation to intention or espoused theory or espoused values? This paper has attempted to identify such dilemmas in current theory about learning organizations.

It would be premature to offer solutions or syntheses for these dilemmas. Rather, it is necessary to chart the research emerging from identifying these issues.
Further Research

By asking whether theories of organizational learning are necessary, it was intended to provoke a closer scrutiny of the gaps in theory, research and development in the field. It is hoped that by identifying these gaps and at least one approach to operationalizing these elusive intervening variable, i.e., measures of change in the organizational culture, then the field may be able to move further forward. However, organizational culture is only one of several intervening variables postulated as essential to the organization's capacity to change. As the proposed research is analysed, it may be possible to identify other key aspects that could be tested to see if they were amenable to operationalise organizational learning.

The target for this test of methods is whether organizational learning can be operationalised in the public sector. The reason for this focus is not only convenience, but also because of the great disjunctures and flux recently being experienced in public sector organisations.

The proposed research is developing a focus on two domains of conceptual operationalisation, viz:

- **domain A** - organizational learning as a change in organizational culture; and

- **domain B** organizational learning as the acquisition of knowledge, especially in the exercise of corporate memory.

The author proposes that if organizational learning occurs in the public sector it should appear in **domain A** as an enduring reduction of discrepancy between desired and achieved organizational culture. In pursuit of this, the second paper in this series refers to a new method of assessing the consistency of "espoused values" and corporate culture, compared with the responses of staff to organizational cultural inventories. In this way the discrepancy between desired and observed organization culture, may be used as an indicator of organizational learning. The third paper in the series focuses on **Domain B** which is concerned with the identification of corporate memory as a premise of organizational learning.

REFERENCES


Cascio, W.F. (1993) "Down-sizing: What do we know? What have we learned?" Academy of Management Executive vol. 7, no. 2, pp. 95-104.


Godfrey, B, 1993, "The Learning Organisation and Accountability in the Public Sector", *Canberra Bulletin of Public Administration*, No. 73, September


Jewell, R.E. 1992 PLANSPEC - A decision support system for developing and testing plans. Dept of Civil & Maritime Engineering, University College, Australian Defence Force Academy, Campbell, ACT 2600, Australia.


Stanwick, J. (1993) "Instruments for the assessment of organisational cultures in changing public sector environments in Australia - A pilot study" Paper presented at the Australian and
New Zealand Academy of Management (ANZAM) Conference, Deakin University, Australia, December.


The author proposes that if organizational learning occurs in the public sector it should appear in domain A as an enduring reduction of discrepancy between desired and realised organizational organizational culture. In this pursuit the present paper introduces a new method of assessing the consistency of "espoused values" and corporate culture, compared with the responses of staff to organizational cultural inventories. In this way the discrepancy between desired and observed organization culture, may be used as an indicator of organizational learning. The research on domain B is concerned with the identification of corporate memory as a premise of organizational learning. The target for this test of methods is whether organizational learning can be operationalised in the public sector. This research is focusing on two domains of conceptual operationalisation, viz: In mapping out this research program, the present paper