

## **ORGANIZATIONAL AMNESIA: THE BARRIER TO ORGANIZATIONAL LEARNING**

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### *Abstract*

*As a concept, organizational learning has been around since as early as 1965 (Crossan, Lane and White, 1999). However, it is in the last decade that the concept has attracted more attention as researchers seek to understand and develop theoretical models on how to increase organizational adaptive ness. Organizations can only adapt as fast as they can learn. As the rate of change accelerates, yesterday's accomplishments and today's success do not guarantee tomorrow's success (McGill and Slocum, 1994). For some organizations, the ability to learn faster than the competitor is a critical competitive weapon in ensuring its survival and continued success (Fulmer, 1993). Yet, one criticism of organizational learning is that while it has a strong appeal there is little discussion on the difficulties and problems in developing organizational learning. This paper proposes that a problem limiting an organization's ability to develop organizational learning is organizational amnesia. To understand organizational amnesia, it is necessary to look at the definitions of organizational learning. Organizational learning is said to occur when the individual member detects the discrepancy between actual and expected results, and tries to correct the errors or challenge underlying assumptions. They seek to improve actions through better knowledge and understanding (Hong, 1999). A learning organization is an organization that facilitates the learning of all its members and continually transforms itself (Pedler, 1989). Organizational learning is not merely the acquisition of knowledge. Equally important is the ability to respond and adapt. Specifically, this adaptation is brought about through double-looping learning and involves a re-examination of fundamental assumptions. This paper defines organizational amnesia as the inability of organizations to undergo the adaptation necessitated from learning. This definition recognizes that not all learning necessitates adaptation. Organizational amnesia happens when the adaptation found necessary through the learning does not take place. Organizational amnesia is distinct from resistance to change. Resistance only takes place as a response to a change initiative whereas organizational amnesia is marked by a failure to even respond and initiate change. We build upon the work of Crossan, Lane and White (1999) who provide a framework of organizational learning that involves 4 processes of learning. They argue that organizational learning involves the processes of intuiting, interpreting, integrating and institutionalising. It is argued that organizational amnesia happens because of the failure mainly at the integrating and institutionalising stage. Drawing from the literature on social network, organizational theory and innovation, a number of explanations are offered on the causes of organizational amnesia. It also proposed that organizational amnesia could be classified into two broad categories. These are time-related amnesia and space-related amnesia. Time-related amnesia happens when an organization fails to tap into the accumulated knowledge in its corporate memory. Space-related amnesia happens when an organization fails to diffuse and integrate knowledge located at different points within an organization and implement decisions made.*

## **Introduction**

When IBM purchased Lotus for \$3.2 billion, it was estimated that the value of the R and D capability residing in the minds of Lotus's employees was worth \$1.84 billion or more than half of the price (Bahra 2001: 33). This reflects how knowledge is making a major impact on the value of companies. Organizational ability to learn and exploit knowledge for competitive advantage is the critical success factor in the K-economy (Lei, Slocum and Pitts, 1999). Yet there is concern that in spite of the importance of learning, organizations are quite vulnerable to amnesia (Conklin, 2001).

Both the organizational learning and knowledge management literature argue that it is not sufficient for individuals within an organization to learn. The lessons learnt must ultimately be diffused within the organization and lead to organizational adaptation (Pedler, 1989; Dodgson, 1993; Redding, 1997; Hong, 1999; Farr, 2000). Organizations need to be able to use the knowledge generated from its learning to create business value and competitive advantage (Tiwana 2000:5). Organizations need to create and retain greater value from core business competencies (Klasson, 1999). This requires more than just installing the sexiest IT hardware or the latest knowledge management software. Far more important is the creation of processes, culture and structure that supports learning. Failure to do this is likely to impede organizational learning (OL) and lead to organizational amnesia. To understand this clearer it is necessary to define what is organizational learning.

## **Defining Organizational Learning**

Farr (2000) defines OL as a process that provides organizational knowledge. Organizational learning is said to occur when the individual member detects the discrepancy between actual and expected results, and tries to correct the errors or challenge underlying assumptions. They seek to improve actions through better knowledge and understanding (Hong, 1999). A learning organization is an organization that facilitates the learning of all its members and continually transforms itself (Pedler, 1989). These organizations consciously construct structures and strategies so as to enhance and maximize organizational learning. They have embedded systems to capture and share learning (Watkins and Marsick, 1993). Members of learning organizations continuously expand their capacity to create new patterns of thinking and learn to function as a team (McGill and Slocum 1994).

Kogut and Zander (1992) state that an organization's knowledge is socially constructed. Members of the organization interact to interpret and give meaning to data and information in the process of developing knowledge. They also point out that organizations are social communities where individual and social expertise is transformed into economically useful products and service by the application of higher organizing principles. This view implies that an organization's ability to use of these expertise and knowledge is a product of how the organization is designed.

The extent an organization learns determines its ability to transform itself and meet new challenges. Ultimately, the learning must lead to transformation. This understanding is embodied in the Noah principle that states that one survives not by predicting rain, but by building an ark. To achieve this adaptability the organization

needs to deliberately align of its organizational dimensions: vision, strategy, leadership, culture, structure and processes to facilitate OL (Redding, 1997).

In some organizations learning occurs in a more limited manner. Such learning does not lead to a reassessment of values and assumptions. Not all-learning lead to adaptation. Likewise not all learning at the individual level translates into learning at the organizational level. OL is not merely the aggregate of the learning of the organization's members (Cohen and Levinthal, 1990; Dodgson, 1993; Watkins and Marsick 1993). OL takes place when the lessons learnt at one point in the organization are stored and diffused to others in the organization. This then leads to actions that are directed towards rectifying discrepancies in the organization. OL is more than just training.

Argyris and Schon (1978) succinctly describe the different types of learning that take place in organizations. The first type of learning is what they termed as single-loop learning. Single-loop learning happens when an organization detects an error or problem and takes corrective action without having to question or change its present policy. The second type of learning, termed as double-loop learning, happens when the error detection and correction involves a modification of the organization's underlying norms, policies and objectives. Fundamental assumptions are re-examined in the process of trying to understand the problem faced. The third type of learning is deutro-learning. In this type of learning, members learn about previous context of learning and seek to understand the reasons for past ability or inability to learn and develop new strategies for learning. OL begins with double-loop learning. Most organizations tend to do well with single-loop learning but very few are effective at double-loop and deutro-learning (Dodgson, 1993).

The above definition implies the following:

- a. OL is a cognitive and social process.
- b. OL involves capturing, storing and diffusing knowledge within the organization.
- c. OL is the product of certain organizational arrangements and decisions.
- d. OL is learning that involves reassessing fundamental assumptions and values.
- e. OL is an organizational phenomenon that begins with learning at the individual level that then involves diffusing the knowledge generated to other parts of the organization.
- f. The result of OL is organizational adaptation and value creation.

### **Organizational Amnesia**

In spite of the strong need to develop OL capabilities, studies have shown that organizations do not always learn easily. Conklin (2001) argues that organizations have a natural tendency to forget. Organizations are said to not know what they already know (Tiwana 2000: 34). Kransdorff (1998: 65) cites a number of studies that found organizations to be quite capable of forgetting. A Warwick University study lead by Rosenfeld found that many companies repeat their blunders on a regular basis. This study also found that managers have little awareness of past actions or rationales. Lessons learnt earlier were not used to reduce the time and effort needed to solve recurring problems. This is more acute in project development where a US study found that projects from the same company tend to suffer from the same mistakes. Another US

study undertaken by McKinsey Consulting found that many companies continually reinvent solution even though the solution could be found from past experience.

Even academia is not spared from the failure to learn from lessons from the past. Some of us have probably gone through the experience of our faculty developing strategic plans that came to naught. Yet the faculty will keep on having retreats and internal seminars to develop strategies every few years without in the first place assessing the lessons that have been learned or should have been learned from earlier strategy plans.

It seems that organizations are quite vulnerable to amnesia. One notable work on organizational amnesia (OA) is the book by Kransdorff's (1998) titled *Corporate Amnesia*. He defines corporate amnesia as losing organizational memory. This happens through short and selective memory recall and when employees leave an organization. Kransdorff's definition sees OA as basically the failure to benefit from an organization's history. However, the Warwick study cited by Kransdorff (1998: 102) shows that organizations keep on repeating their mistakes and blunders for 2 reasons. The first is the inability to draw from past experiences. These organizations have either lost their corporate memory or are incapable of recalling their corporate history. The second reason is the inability to communicate lessons from one part of the organization to another in a timely manner. This is more related to problems in diffusing the learning that has taken place and is not merely a failure to tap into corporate history.

We propose that OA amnesia is basically the failure to use learning to make the necessary adaptation or create value. It should be noted here that OA is not the same as the inability to learn or organizational dumbness. A person cannot forget something he or

she never knew in the first place. OA reflects the failure to benefit from the learning that has taken place in organizations. This can happen because the lesson is lost in history or because of the inability to transfer the learning to the points within the organization where the lessons learnt can be used for adaptation or creating value. Thus, the learning could have happened at the individual level but that learning did not move to the organizational level.

The above definition shows that there are two basic types of OA. The first is *time-based OA* that relates to the inability to benefit from past experience. The second is *space-based OA* and is related to the inability to move or diffuse lessons learned at one point in the organization to other points in the organization. As a result, the necessary adaptation does not take place and the opportunity to create more value is missed.

Kransdorff (1998: 64) cites a number of examples of organizations that suffered from *time-based OA*. One such example was the situation faced by the Halifax Building Society at the beginning of the housing market collapse in the UK in 1989-90. The organization found that it did not have any branch manager who could remember how the organization handled the previous market downturn. Likewise, when there was an upturn in the housing market very few in Halifax could recall how the company faced the previous upturn. As a result it took longer for it to develop an effective response.

Another example mentioned is the case of an automotive parts supplier (Kransdorff 1998: 104). A study conducted by a consultant found that 40% of the problems encountered in the development of a product had actually been resolved in prior programmes. Since the engineers involved did not review the previous work, they ended up wasting 30% of their design time solving problems that been resolved earlier.



Tiwana (2000: 24) mentions the case of the Ford Taurus development team. None of the engineers currently working on the project are able to identify why the car had been such a huge success in the mid 1980s. Again, here is a case of knowledge acquired from earlier experience is lost in time.

An event that best describes *space-based OA* is the failure by the US military to respond to signals of an impending attack Japanese on Pearl Harbour (Hughes-Wilson, 1999: 79-88). Intelligence gathered by the FBI, as well as the army and navy's own interceptions of Japanese communication were all showing that a Japanese attack on Pearl Harbour was imminent. The US intelligence services had managed to read the Japanese naval operations code and read Japanese intentions before the attack on Pearl Harbour. Unfortunately the Americans had allowed their signal interception operations to grow in a fragmented and uncoordinated fashion. The army and navy each had their own intelligence gathering operations but there was no sharing of information.

Just a few days before the attack of Pearl Harbour a merchant ship SS Lurline had detected radio communication of the Japanese carrier fleet. The ship's captain had provided the information to the US Navy in Hawaii. Unfortunately, no action was taken. Around midnight on 6 December 1941, Lieutenant-Colonel Clyde Dusenbury, deputy of the Far Eastern Section chief, received the final part of Tokyo's secret instructions to their Washington Embassy. It ordered the Japanese Ambassador to break off relations with Washington. It became clear that Japan was going to attack. However, the warning only reached Hawaii just as the attack started.

Information on the impending Japanese attack was gathered at different points in the organization. Yet, there was a failure to piece all these information together and

assess its implication. As a result, the US Navy was caught in a surprise attack that could have been avoided. Someone learned something about the threat but the organization did not learn fast enough and therefore was not able to respond to the coming threat.

The distinction between these two types of OA is important because they require different strategies to overcome them. Whereas the key element in overcoming *time-based OA* is the creation of an effective form of organizational memory, the approach needed to overcome time-based OA is somewhat different. Measures to overcome *space-based OA* require a careful examination of the processes involved in diffusing knowledge within organizations. There is naturally an overlap between the two. Being able to retrieve lessons from the past but not being able to transmit to those who stand to benefit most from it is still inadequate in ensuring learning.

An example of an initiative that was able to avoid OA is Boeing's development of its 757 and 767 models (Kransdorff 1998: 123). To ensure that the development of these two models could tap into past experiences at Boeing, a group of senior employees spent three years studying past failures and success in product development. Once this was completed, members of the team were transferred to the 757 and 767 project. This way, the lessons learned was moved to where it was needed most. This enabled these two projects to benefit from past experience. Because of this, Boeing produced the freest product in its history. This approach essentially enabled Boeing to overcome the problem of *time* and *space-based amnesia*.

### **Causes of Organizational Amnesia**

To understand the causes of OA, it necessary to describe how organizations learn. Crossan, Lane and White (1999) provide a framework that involves 4

processes of learning, referred to as 4Is, that takes place at the individual, group and organizational level. They argue that OL involves the processes of *intuiting*, *interpreting*, *integrating* and *institutionalising*.

*Intuiting* is the preconscious recognition of the pattern and/or possibilities present in a personal stream of experience. The cognitive map of the individuals affects this process of recognition. The higher the degree of expertise a person has, the more complex is his cognitive map and the higher his ability to perceive patterns that others cannot. *Intuition* is a uniquely personal process and therefore happens at the individual level.

However, the learning that takes place through *intuition* does not affect the organization unless it is shared and some form of a common meaning is attached to it. This involves the process of *interpretation*. It helps refine and develop intuitive insights through an iterative conversational process. The higher the equivocality of the information gained, as is the case in a high uncertainty and rapidly changing environment, the more likely the individual will seek to share the information with others to develop an interpretation of it. *Interpreting* is a social activity that happens at the group level and generates and refines the common language, clarifies images and develops convergence of meaning (Crossan, Lane and White, 1999). *Interpreting* is also the process linking individual learning with the group.

The next process is *integrating*. This involves the development of shared understanding and taking coherent collective action by members of the group. Successful actions are repeated and accepted as a regular process that needs to be made permanent in the organization. This also helps develop a new understanding of how to adapt to problems. The shared understanding helps develop new vocabularies that are then

assimilated into the organizational language. This evolution in the organization's language helps preserve and diffuse what has been learnt. Through *integration*, the learning that takes place at the group level is linked to the organization level.

*Institutionalising* is the process whereby the learning becomes embedded in the systems, structures, strategy, procedures and the culture of the organization (Crossan, Lane and White, 1999). The new knowledge is stored as part of the organization's memory. The success at *institutionalising* learning ensures that what has been learnt is no longer dependent on the continued presence of the individual who was the agent of the learning process.

OA can happen when there is a break down at any of the 4 stages. In fact, even when learning goes through all 4 stages it is still possible for OA to happen. One the reason why OA can be present and thus make OL difficult to develop is the nature of knowledge itself. Learning is basically a process of knowledge acquisition (Bahra 2001: 35).

Davenport and Prusak (cited in Tiwana, 2000) defines knowledge as a fluid mix of framed experience, values, contextual information, expert insight and grounded intuition that provides an environment and framework for evaluating and incorporating new experiences and information. Knowledge becomes embedded not only in documents but also in organizational routines, processes, practices and norms. Kransdorff (1998: 34) argues that whereas information is essentially rooted in data relevant to a historical time frame, knowledge is interpretive and predictive in nature.

Quite often knowledge has to be understood by looking at the context it was generated. Knowledge also has its explicit and tacit elements. Explicit knowledge is

knowledge that can be articulated into formal language. However, tacit knowledge is more difficult to articulate with formal language and lies in an individual's values, belief and perspective system (Bahra 2001: 85).

Yet in order to capture and store knowledge, the knowledge must be codifiable. Codification structures knowledge into a set of identifiable rules and relationship that can be communicated (Korgut and Zander, 1999). In so doing, the knowledge can lose its tacit elements and is left with basically only the explicit elements. Thus, what may in fact happen is that the knowledge becomes richer as it moves from individual learning i.e. *intuition*, to group learning i.e. *interpretation*. However, as it is diffused and capture at the organizational level i.e. *integrated* and *institutionalized* the knowledge is codified and loses the tacit and contextual elements. Szulanski (1997) argues that the failure to transmit the tacit part of knowledge makes knowledge "sticky" i.e. difficult to transfer.

Schulz's (1998) discussion on organizational rule birth highlights the problem with capturing learning. He explains that organizations develop rules to institutionalise learning. Yet rules are more likely to be formulated to address frequently recurring problems. And rules that are created tend to focus on the communication of explicit knowledge such as procedures, measurable standards and decision criteria. Yet, it usually in solving infrequent problems that organizations need to reflect more on past experiences. Unfortunately, the tendency to not develop rules for such problems makes it difficult to search and retrieve lessons and knowledge from the past.

Another problem usually contributing towards OA is the problem of deciding which knowledge needs to be captured and stored. Henderson (1997) argues that the form of learning that takes place and the knowledge generated may not be easily determined.

This is because members of the organization may not themselves clearly understanding the causal relationship of the problems they encounter. At times, this may lead to superstitious learning where the relationship between variables are misunderstood or not understood. As such, even when "knowledge" is captured, it is of dubious and limited validity. Compounding this problem is the problem of selective perception and attribution. Individuals, and also groups, tend to ignore lessons that reflect badly on themselves and are also likely to attribute positive outcomes to their effort and negative ones to others (Kransdorff 1998: 45). Thus, the learning at the *intuition* and *interpretation* stage can be rather distorted.

The organization of an organization's memory can also cause OA. As Schulz (2001) points out, the advent of IT creates so much information that the challenge today is how to organize and process the vast amount of knowledge generated. This is particularly a problem in organizations where organizational knowledge is in hard copy form. A simple example is the way minutes of meetings are kept. Minutes of meetings are stored in a chronological order. If someone needs to address a problem that was discussed in a meeting some time ago but is unable to recall the approximate date of the meeting, searching for the meeting's minutes can be laborious process.

Quite often, it is more convenient to just discuss the matter again by going back to square one. This is why we sometimes encounter a sense of déjà vu during meetings, realizing well enough that the issue being discussed has been decided before but not being able to retrieve the documents related to it. In some ways, this problem can be overcome through some of the softwares available today. Groupware, such as Lotus

Notes, enable organizations to store knowledge according to subject matter and other criterion. This makes accessing and retrieving the knowledge easier.

Assuming that it is possible to capture, store and retrieve knowledge, there is still the problem of whether those receiving the knowledge are capable of using it. First there is the difficulty in creating the elements of tacit knowledge. When even the tacit element is understood, replicating it at other parts of the organization may not be easy. This is particularly the case with knowledge that has skill elements. These skills may not be easy to transfer to other parts of the organization. Differences in human intelligence can also limit the transferability of such skills (Korgut and Zander, 1992).

Cohen and Levinthal (1990) argue that the prior knowledge base of an individual and an organization affects their ability to utilize new knowledge. They explain that research on memory development shows that accumulated prior knowledge in individuals increases their ability to absorb new knowledge in the memory and the ability to recall and use it.

At the individual level, this knowledge base can be in the form of basic skills, recent technological and scientific discoveries as well as the common language that has evolved in an organization. Such knowledge provides the members of an organization the ability to recognize the value of new information, assimilate it, and apply it for commercial purposes. Cohen and Levinthal (1990) term this capability as absorptive capacity.

At the organizational level, research evidence shows that firms that conduct their own research are better at utilizing externally available information. These organizations expand their knowledge base as a result of their R and D activity and are therefore better

able to assimilate new external information. Cohen and Levinthal (1990) conclude that an organization's absorptive capacity can be enhanced through the R and D activities it undertakes. Likewise, investment in training also contributes towards developing absorptive capacity.

The absorptive capacity at the individual and organizational level needs to be enhanced to increase an organization's OL capabilities. Besides performing R and D and training, the organization's communication structure with its external environment and among its subunits needs to be designed to facilitate this. This is particularly important when the learning requires the recombining of pre-existing knowledge to synthesize new products and solutions. The organization and its members need to link different bits of knowledge from its past, from different parts of the organization and from external source to create something new (Tsai, 2001).

Equally important is personal motivation of the members of an organization. OA may prevail simply because individuals refuse to share their knowledge. The culture of the organization has to be aligned to encourage knowledge sharing. Openness to questioning needs to be encouraged (Jones, 2001). The experience of Buckman Lab International shows that a combination of carrot and stick is needed to create greater willingness to share knowledge members of an organization (Rifkin, 1996).

Schulz (1998) warns that OL can create a vicious cycle that ends up restricting further learning. This happens when the creation of rules to institutionalise learning leads to a situation where individuals habitually depend on these rules even when it is no longer inappropriate. Old rules are used to address new problems that are totally unrelated. This is a phenomenon termed "trained incapacity of bureaucrats". Members of



an organization need to be trained to be more reflective of the problems they had and are encountering to avoid this phenomenon.

### **Research Issues**

This paper is an attempt to raise OA as an issue needing attention in developing OL. Our survey of the literature found only one major work on organizational amnesia i.e. by Kransdorff (1998). Conklin (2001) makes a brief mention of the topic. The ability to assess the extent OA affects an organization is an important starting point in mapping out an OL initiative. This can help identify the issues needing attention in an OL initiative.

The practical implication from the awareness of OA can help organizations audit its failure to learn and how this has affected various performance dimensions such as product development time, responsiveness to changes in the external environment and the ability to exploit organizational knowledge. By identifying two types of organizational amnesia, we hope to help researchers pursue a more specific line of inquiry in the attempt to identify the impediments to OL.

There are indeed some theories on how organizations that offer some explanation on how to overcome OA. Kransdorff's work has been primarily on *time-based OA*. He proposes a number of approaches to overcome *time-based OA*. This includes a more systematic effort to capture organizational history, the use of post-mortem and project review, oral debriefing etc.

Some of the work done on knowledge transfer is important in overcoming *space-based OA*. Social network theory proposes that a unit's network position can affect learning and knowledge (Hargadon and Sutton, 1997). It is argued that units that occupy

a gap in the flow of information between subgroups in a larger network are better at innovating. This is because such units are able to transfer resources, including knowledge, between those needing it and those having it. The use of knowledge brokers is seen as instrumental in facilitating this. Knowledge brokers are persons located in a position to access multiple sources of knowledge and move them to where they are needed.

The product innovation theory argue that close and frequent interactions between R and D team and other functional and operational units lead to better integration of knowledge across boundaries (Hansen, 1999). Such close and frequent interactions offer efficient knowledge sharing. It is said that Japanese companies tend to be able to move faster in full scale production of a new product because of their practice in moving members of the R and D team to the production process to enable faster debugging of problems in the early stages of production.

All these theories offer some guidelines on how to overcome OA, specifically *space-based OA*. However, these theories assume that whatever that is learnt constitutes valid and scientific knowledge. There is still the need to identify how to decide which knowledge to capture and store. As mentioned earlier, organizations may actually embark on superstitious learning and capturing and storing knowledge from such learning can be detrimental to the organization. It is here that deutro-learning is important. Much of the discussion in the OL literature has been about double-loop learning but little attention has been given to deutro-learning. Developing the deutro-learning skills, i.e. how to learn, will be one area that needs to be developed further.

Attention should also be given to enhancing the absorptive capacity of the organization. Since learning begins at the individual level, this will inevitably require developing strategies. As Tsai (2001) points out, the mere availability of knowledge does not ensure learning. The capacity to absorb the knowledge must also be present. Training and development programs aimed at developing a broad knowledge base of employees should given attention.

We believe there is considerable work that needs to be done to help organizations overcome OA. This paper is by no means a complete and exhaustive examination of the issues. We hope that by raising OA as an impediment to OL we are able to make a small contribution in stimulating the interest of other researchers to examine this issue.

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