## Chapter XIV Associative Patterning: The Unconscious Life of an Organization

**David Bennet** Mountain Quest Institute, USA

Alex Bennet Mountain Quest Institute, USA

### ABSTRACT

This chapter begins with a brief discussion of the basic concepts related to the unconscious life of an organization, and then addresses specific aspects of knowledge, learning, and memory, developing a language and framework for comprehending their application to organizations. Knowledge is addressed in terms of an information part and a proceeding part. Tacit knowledge is divided into embodied, intuitive, affective, and spiritual parts, with each of these aspects carried over to corresponding descriptions of memory. Organizational memory is then considered in light of a rapidly changing, uncertain environment. It is forwarded that organizational sustainability in an uncertain world requires a dynamic and responsive organizational memory. This highlights the challenge of keeping tacit memory updated as experienced personnel retire. Ideas and actions are briefly suggested to enhance and sustain organizational memory.

## INTRODUCTION

Every decision made every day in an organization is a guess about the future based on past, present and anticipated activities in relationship with each other. In the brain of the decision-maker, thoughts are represented by patterns of neuronal firings, their synaptic connections and the strengths between the synaptic spaces. A single thought might be represented in the brain by a network of a million neurons, with each neuron connected to 10,000 other neurons (Ratey, 2001). A decision is the result of recursive interactions between external information and internal information of relevance to the problem at hand (the process of associative patterning) (Bennet & Bennet, 2006;

This chapter published as an Open Access Chapter distributed under the terms of the Creative Commons Attribution License (http://creativecommons.org/licenses/by/4.0/) which permits unrestricted use, distribution, and production in any medium, provided the author of the original work and original publication source are properly credited. Byrnes, 2001; Stonier, 1997). The intermixing of these sets of information (patterns) creates new neural patterns that represent understanding, meaning, and the anticipation of the consequences of actions, in other words, knowledge. Thus associative patterning is the way the brain/mind creates knowledge.

For purposes of this chapter, the mind represents the patterns created by the neurons in the brain. A useful analogy is to consider that the mind is to the brain as the waves on the ocean are to the water in the ocean, that is, patterns to particles. From the objective perspective, electrical impulses flow down neuronal axons and impact other neurons through networks of connections. Since we are not able to see our own mind patterns, we interpret them as thoughts, ideas, visions, feelings, etc., some of which are stored as memory. For the sake of simplicity, we will not address the role of electro-chemical processes.

It is well-established that the storage and retrieval of memories lie in the structure, association and activities of neurons. Giorgio Ascoli, head of the Computational Neuroanatomy Group at the Krasnow Institute for Advance Study, says:

... the principal axiom of modern neuroscience: the key substrate for all the functions performed by nervous systems, from regulation of vital states, reflexes, and motor control, to **the storage and retrieval of memories** and appreciation of artistic beauty, **lies** not in some 'magic' ingredient, but rather **in the structure and assembly of neurons** [Emphasis added]. (Ascoli, 2002, p. 3)

Although there is much that is not understood about the mind/brain from a scientific viewpoint, the explosion of new technology coupled with neuroscience research is providing significant insights into the operation of the mind/brain/body. When considering learning, knowledge, and tacit, implicit and explicit memory, neuronal patterns offer a useful perspective. Taking a multidiscipline approach, this chapter will build an understanding of knowledge and organizational memory through the lens of neuroscience, evolutionary biology, organizational development and knowledge management. Each of these domains offers ideas, perspectives and insights that help build a holistic understanding of the nature, challenges, relationships and efficacy of memory, learning and knowledge concepts. In taking this approach, we consider organizations as living entities, representing entangled sets of individual minds interacting with historic and current patterns of information. If organizations have people, they also have neurons.

We begin with a brief discussion of some basic concepts related to the unconscious life of an organization. We then address specific aspects of knowledge, learning and memory, providing a language and framework for comprehending their application to organizations. Finally, equipped with the perspective needed to understand the focus of this chapter, we relate these aspects of knowledge to organizational memory and briefly suggest ideas and actions leaders can consider to enhance and sustain organizational memory.

## BACKGROUND

As Tennessee Williams wrote in *The Milk Train Doesn't Stop Here Anymore*, "Has it ever struck you ... that life is all memory, except for the one present moment that goes by you so quickly you hardly catch it going?" (Kandel, 2006, p. 281) Memory is everywhere, stored throughout neurons in the brain and other parts of the body: approximately 100 billion in the brain; 20,000 in the heart and 6,000 in the gut (Amen, 2005; Gershon, 1998; Kandel, 2006). Parts of the brain act as central control systems and operating posts to connect incoming and outgoing signals to the many different regions of the central nervous system, and no two patterns of this creative process are the same. 22 more pages are available in the full version of this document, which may be purchased using the "Add to Cart" button on the publisher's webpage:

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