Chapter 15
Allocation of Information and Technology Professionals According to Brain Structures

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ABSTRACT

Profiles of employees must be properly analyzed and combined for a better organizational benefit. If each employee profile is understood, the organization is in a better position to assign each one an adequate role, optimizing individuals efforts and consequently, benefiting global organizational performance. Professionals of Information and technology (IT) normally are a heterogeneous team, where different competences are needed and where different profiles cohabite. The management of these teams may be improved by the lenses of neuro-organizational behavior. By understanding individual brain profiles it is possible to better allocate each one into the right function. This is a way how to efficiently orchestrate an IT team. Each professional can better contribute to the team if allocated to appropriate tasks. It is like a musician in an orchestra with all other different musicians. Each musician contribution to global music interpretation will run better, if each one plays the right instrument.

INTRODUCTION

The management mission of helping individuals to work together efficiently and effectively depends on understanding how and why individuals act the way they do (Stroh, Northcraft, & Neale, 2002). The right allocation of professionals to specific activities has also been a great organizational challenge at Information and Technology (IT) teams. Although IT professionals may perform a variety of disciplines, it is usually hard to assign "the right one for the job". The complete understanding of human behavior in organizations depends on the integration of the brain´s effects. There has been an absent cognitive neuroscience viewpoint like cognitive processes (information processing, memory, perception) or emotional arousal (anger, frustration, resentment) in explaining behavior in organizations (Beugré, 2010).

Human behavior is supposed to be controlled mainly by the endocrine system and the nervous system. Neuroscience is the name given to the

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scientific study of the nervous system. Yet, the nervous system can be studied at several levels, varying from the molecular and cellular levels to the systems and cognitive levels. The study of the relationship between brain and behaviour is usually known as neuropsychology (Andrewes, 2001). However, why is it necessary to investigate brain mechanisms? According to Paul D. MacLean, an important American physician and neuroscientist, the brain research will help to understand the different forms of paleopsychic processes under consideration. Also, "the laws of formal thought have been derived without an understanding of the underlying machinery of the brain". The inputs into our brains are so "obscured by an indefinable input from the person´s ancestral past and personal life history that there is no means of ascertaining what the outcome will be". The cerebral processes have neither been shown to follow laws that permit expected conclusions (MacLean, 1993). A new field of study called the neuro-organizational behavior (neuro-OB) is starting and is defined as the study of the impact of brain structures on human behavior in organizations. Neuro-OB area frontiers are close to other allied scientific fields such as organizational behavior, neuroscience, cognitive psychology, social cognitive neuroscience and neuroeconomics. According to Beugré the neuro-OB may be considered as the application of neuroeconomics and social cognitive neuro science theories to the workplace. More knowledge about activation of specific areas of the brain allows a better understanding about some mental processes like cognition or emotional arousal and consequently an improved knowledge about behavior in organizations (Beugré, 2010).

The purpose of this chapter is to address some of these questions, with particularly orientation to the improvement of IT human resources management. It stands the possibility of improving the management of an IT team by improving the allocation of professional staff according to their brain structure. Starting by presenting three important perspectives about brain structure, focusing specific activation brain areas and its mental processes associated, this paper calls particular attention to special brain profiles among IT professionals. Skills that are predictably needed in certain IT disciplines are discussed, and they are therefore associated with their corresponding brain structures. Because required skills may vary a lot among IT disciplines, different kind of skills are discussed some closer to business side, others closer to technology. The left and right brain theory and the four quadrant model will be used to support a better attribution of certain IT profiles to certain IT disciplines. Whereas each professional has a specific profile of the brain, preferably known by his boss, a good human resource management will depend on the allocation of each professional to the most appropriate tasks for him. This chapter evidences that IT team leaders should work as people "conductors", understanding the profiles of the brain of each element of their team and their associated skills, and thus facilitating the individual allocation of disciplines. The idea that every IT professional, with a specific type of behavior derived from a particular brain profile, can better contribute to the team if allocated to appropriate tasks, is like a musician that best contributes to compose an harmonious music by the orchestra if playing the right instrument.

BACKGROUND

All vertebrate and the majority of invertebrate animals have the center of their nervous system at their brain. Brain is the section of the vertebrate central nervous system that is enclosed within the cranium. This organ composed of gray and white matter, continuous with the spinal cord, is the primary center for the regulation and control of bodily activities. It receives and interprets sensory impulses, and transmits information to the muscles and body organs. Brain also sustains consciousness, thought, memory, and emotion