

A Pragmatic Study on Brain Styles and Human Behavior in Organizations

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Abstract— This research study attempts to identify the brain styles of different levels of people in Sri Lankan organizations; the qualities of each style; how far each style influence in their behavior in organizations, the relationship between the brain styles and the organizational justice and which style is more applicable to the managers and Co-workers to successfully retain in their organizations. A qualitative research method of ethnography has been incorporated as a cross-sectional study and the researcher collected the data through interviewing and participant's observation to derive more rich and depth finding. As such the sample was selected based on the purposive and convenient sampling methods. The results showed that in Sri Lankan organizations, the decisions and actions of 97.5 % of people towards the organization are based on their brain style irrespective of their position and their experience and most of the people have left brain style. Further it is also found that female people have more emotions which show more right brain orientation while male people have more cognition which show more left brain orientation. The researcher recommended that it would be beneficial to organizations to have the people with integrative style and the ability of organizational justice.

Key Words— Cognition, Distributive injustice, Emotion, Human Behavior, Left Brain, Organizational Justice, Procedural injustice, Right Brain.

I. INTRODUCTION

The understanding of Human Brain and its functions has been researched by several people over several decades.

During the past decades researchers in psychology, education, biochemistry, physics and mathematics have made very significant advances on the frontiers of man's understanding of the functions of the human brain, the very human mechanism that enables man to explore, understand and manage its environment. There is a new knowledge about the physical structure and connection patterns of human brain cells, the relationship between the upper and lower brain and the number of electrochemical interactions continually taking place in the brain. Organizations enthusiastically want to achieve high productivity through synergistic effect. Therefore, understanding of different brain styles people and their behavior in organizations would be beneficial to the researcher to understand the human factor in organizational performance as well.

II. LITERATURE REVIEW

There were several researches done in many countries based on the brain style. Ornstein from University of California studied the brain phenomena with the background knowledge that the two halves of the brain are biologically similar and can more realistically be thought of as two identical brains working in harmony, rather than as one brain divided into two, found that the left and the right brains handled the following mental activities [8].

Left brain involves with logic, linearity, words, numbers, sequence and analysis. The right brain is more visual and intuitive. It's sometimes referred to as the analog brain. It has a more creative and less organized way of thinking. The right brain involves with rhythm, color, imagination, day-dreaming, dimension, special awareness and music. Ornstein also found that people who had been trained to

use one side of their brain more or less exclusively were unable to use the other side; both in general and in those special situations where the activities specifically related to other side were particularly needed. More significantly he found that when the weaker of the two brains was stimulated and encouraged to work in cooperation with the stronger side, the end result was a great increase in overall ability and effectiveness.

In a managerial context, the left brain would prefer quantitative, analytical and deductive methods of approach to situations and problem solving. It would rely on procedures, structures and plans in order to design the processes of implementation of decisions. In contrast the right brain functions with qualities, intuition and inductive methods. Problems are looked at holistically and feelings, emotions and ideas are considered in problem analysis. Managers who are high on their integrated brain skills employ left and right brain skills interchangeably at the work situations demand [7].

The control centers of the brain including the cortical areas, come in matched pairs, right and left mirror mates with a complete set to each side. Normally, right and left brain halves are in direct communication through a series of commissures which are defined as fiber systems that cross the mid line to form reciprocal cross connections between corresponding structures on the right and left sides [9]. He further studied the two hemispheres of the brain and their functions through several experiments with animals and humans and to show the independent streams of conscious awareness possessed by each hemisphere and to articulate how each hemisphere has its own memories [10], [11].

Left-brain Vs. Right-brain in one hand Calculated, precise, and mathematical on the other hand creative, flexible, and emotional. Two opposing hemispheres locked in an internal battle to determine what from within makes it out into the world. It's a perceived struggle that has raged on for the entirety of human existence, and for the most part, the war has been balanced. However, never has the fight been more one-sided than in the current world of business [1].

Scientists have explored theories about the two hemispheres of the brain and the ways that they differ in function and control of the body. According to recent research, people who are right-brain dominant and those who are left-brain dominant process information and respond in different ways. There are two sides of the brain, which are the left and the right brain. These directly influence learning and produce different ways of receiving, storing and responding to information that ultimately affects our whole learning process.

Most of the theories suggest that right-brain dominant people are guided by the more emotional, intuitive right hemisphere, while left-brain people respond in sequential, logical ways, guided by the left hemisphere. To a great degree, your personality is shaped by your brain type [4].

The study conducted among 81 managers in Sri Lankan organizations in 1993 found that the majority of managers had Left-brain skills and also the female managers showed their skills toward right brain [7].

People described as left-brain thinkers are told that they have strong math and logic skills. Those who are described as right-brain thinkers, on the other hand, are told that their talents are more on the creative side of things [2].

Further, researchers suggest different management styles can originate from the left or the right side of the brain. The left side has an irritating devotion to numbers, analysis, logic, etc, concerning itself with cash flow and the dire consequences of mismanagement of finances. The right side deals with more romantic ideas and imagination rules [6].

The significance of these findings for management is that they help to understand the work styles of various levels of management. Successful management always requires balances attention to production or task orientation and the people or human relations dimension at work situations.

Typically, Organizational behavior scientists focus only on people's perceptions and their behaviors, especially

when it comes to organizational justice. Organizational justice is the study of people's perceptions of fairness in organization. The form of organizational justice that focuses on people's beliefs that they have received fair amounts of valued work related outcomes is the distributive justice. On the other hand procedural justice means people's perceptions of the fairness of the procedures used to determine the outcomes they receive. Interestingly, however, a recent study found people's reactions to distributive injustice and procedural injustice manifest themselves differently inside people's brain [3].

Based on previous research, it was expected that different regions of people's brains would respond to procedural injustice and distributive injustice [5]. Procedural injustice, the scientists reasoned, is highly cognitive as people need to process information about what's going on to assess the extent to which various procedural rules have or have not been followed. As such people experiencing violations of procedural justice were predicted to show signs of activation in the portions of their brains associated with cognition. By contrast they noted that people experiencing distributive injustice in highly emotional ways. i.e., they get angry when they believe that someone has not given them what they deserve. Accordingly, the researchers predicted that the brains of people experiencing distributive injustice would show signs of activation in regions known to be associated with emotion. Figure1 shows precisely what the stated researchers found. The findings are very important since they suggest the differences to reactions to distributive injustice and procedural injustice is real in the sense that they may be traced neurologically. It looks like an actual biological basis for people's reactions in injustice. Another intriguing suggestion from the findings is that as species, people appear to be "hard wired" to be responsive to injustices [5].

UPenn Perelman School of Medicine radiologist Verma and her colleagues scanned the brains of more than 400 males and more than 500 females from 8 to 22 years old and found distinct differences in the brains of male versus female subjects older than age 13. The cortices in female brains were more connected between right and left hemispheres, an arrangement that facilitates emotional

processing and the ability to infer others' intentions in social interactions. In male brains, however, the cortex was more connected to rear brain regions, such as the cerebellum, which suggests greater synergy between perception and action [13].

Recent studies have focused on the frontal cortex due to its role in emotional regulation and executive functioning, like goal-directed behavior. More specifically, the right frontal area of the brain is important to interpersonal communication and relationships. Coherence in this part of the brain is essential for social skills, emotional control, and self-awareness. These skills are the basis of being a resonant leader. Resonant means that a leader is empathetic and has a high emotional intelligence level [12]. They found that leaders who used more social language (we and us) in their vision statements were more likely to have higher coherence in the right frontal part of the brain than leaders with more self-language (I and me). It also concurs the study of [13].

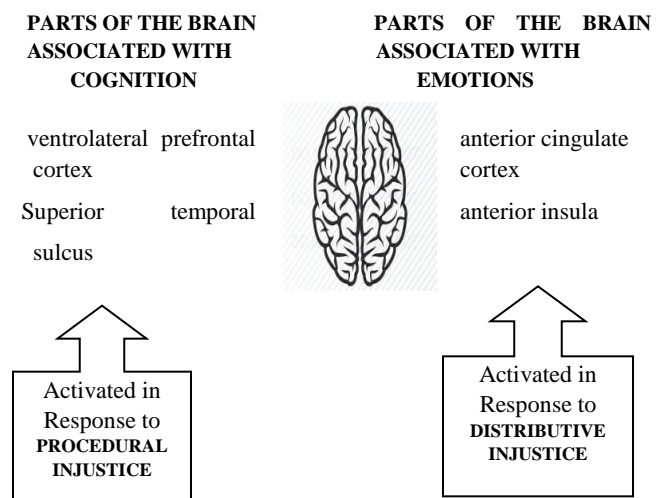


Figure1. Neurological Reactions to Distributive Injustice and Procedural Injustice

Source: Dulebohn et al., 2009

III. SCOPE OF THE RESEARCH

This study aimed to examine the different type of brain styles of people who are at various levels in the hierarchy; their behavior towards the decision making; which of the brain style is ideal for people in organizations and organizational justice. In many organizations, higher turnover rate and higher absenteeism rate are due to their negative organizational justice or their organizational injustice. This study covers the people who have been employed in different levels in Sri Lankan public and private sector organizations over the island.

IV. METHODOLOGY

The study has been conducted as a qualitative research and the ethnography has been incorporated as a cross-sectional basis to find the rich and depth information through personal interviewing and participant's observation. The researcher interested in this study to bridge the gap of the research conducted in 1993[7]. She selected 40 people from different organizations in different parts of Sri Lanka by using convenience sampling method. 20 persons from managerial levels and 20 from non-managerial level have been selected which includes five female respondents in each category purposively to identify the differences between gender. The researcher mainly focuses on the suggestions given by the researchers in 2009 [3] and examined how far those findings are related with Sri Lankan perspective.

V. FINDINGS AND DISCUSSION

There were several interesting results found among the people in Sri Lankan organizations. They were significantly similar to the finding of previous research of [7].

In Sri Lankan context, the researcher found that the decisions and actions of 97.5 % of people towards the organization are based on their brain style irrespective of their position and their experience. There were situations that the managerial level people had to take stern actions with immediate effect however they had not done in that way and they were reacting based on the rules and regulations and in a highly bureaucratic way. On the other hand, 40% of Co-workers (non-managerial) expressed

the results of actions based on their brain style and rest of the 60% has the behavior based on their family background and the organizational learning.

All the female respondents showed more emotions in their behavior while male respondents expressed more cognition in their behavior.

The researcher further found that organizational conflict, discrimination in work place; poor communication and leadership styles are also determined by the brain styles in certain extent. Brain style plays a significant role in work related attitudes of both managers and co-workers. People who have more left brain style are systematic in their work however they are very reluctant to implement new ideas and creativity in their work practices. In contrast very few people have more right brain style and they show the creativity, innovation and empathy in their work. Very interestingly, female people showed higher right brain qualities like empathy, feelings, emotional intelligence and interpersonal skills towards their work than the males. This finding supports the findings of [12] and [13]. Further they react against the distributive injustice. It supports the findings of [3].

Finally, the researcher articulates that the majority of the managers and the co-workers showed more left brain style and due to this reason there were circumstances for bureaucracy which leads to the organizational conflicts. Moreover, no person found with a balanced style of both left brain and right brain equally. However, the people both in the managerial and non-managerial position who have their brain styles or skills somewhat equally(in between 54% and 46%) showed as the successful people in problem solving and decision making and also in maintaining a good interpersonal relationship with their superiors, subordinates and peers. This supports the findings of [7]. Only 7.5% of respondents are under this category and it is also found that there are people who have not successfully utilized their brain sides. However if they develop these sides in optimum level it would result in greater levels of synergistic effects [7]. Employees who are graduates with adequate managerial skills and doing the clerical works are found in this category.

Therefore, it is interesting that people who have this integrative brain style also have the capacity of organizational justice and whenever they become in a negative way, they would react against both procedural and distributive injustice.

General personality traits, individual preferences, or learning style don't translate into the notion that you're left-brained or right-brained. Still, it's a fact that the two sides of your brain are different, and certain areas of your brain do have specialties. The exact areas of some functions can vary a bit from person to person. People who are left brain tend to approach each problem with an analytical point of view. Right brain thinkers tend to arise at solutions based on their understanding of relationships. In this paper, it is discussed that how each side of the brain can have negative or positive impacts of solutions and give detail information on each side. Left brain thinkers have a different way at arriving to solutions than the right brain thinkers do. They solve their problems through the use of data. Left brain thinkers also have work done by individuals who are assigned to study a system using an orderly approach. Being a left brain thinker can have negative impacts such as not realizing the intent of another person in time to catch what they are up to, this in turn can be very dangerous. However, left brain thinkers do develop solutions using logical analyses of all the facts. They also tend to identify root causes of problems by elaborately categorizing possible causes and using strict rules for questioning. Left hemisphere thinkers also try to improve quality by studying specific variations within a system. They have the quality of reacting against the procedural injustice. Therefore, this finding also supports the findings of [3].

The two sides of our brain look very much alike, but there's a huge difference in how they process information. Despite their contrasting styles, the two halves of our brain don't work independently of each other. Different parts of our brain are connected by nerve fibers. If a brain injury severed the connection between sides, it could still function. But the lack of integration would cause some impairment. Therefore the findings are matched with the findings of [3].

The human brain is constantly reorganizing itself. It's adaptable to change, whether it's physical or through life

experience. It's tailor-made for learning. Some of these researchers also believe that the left and right sides of our brain work hand in hand with each other, and that one cannot function. The left side of the brain is said to be responsible for interpreting language, sound, and speech. In contrast, the right side of the brain is said to control face recognition, creativity, and emotions conveyed when reading among others.

VI. CONCLUSION

It is concluded from this research that the people have two sides of brain and the left and the right brains functions in different way. Based on the brain style, people's behaviors towards the organization are varied. This study has found that most of the people in Sri Lankan organizations have the left brain style and female people have more right brain style irrespective of their capacity and organizations. Further, the researcher also recommended that the integration of both left and right brain would be the ideal managers or workers for the contemporary organizations and having the capacity of organizational justice. It also supports the findings of the predecessors. It is suggested that the future researches could be carried out to investigate the brain styles of different gender; to examine the relationship between the brain style and leadership and the impact of brain style on decision making as quantitative research studies.

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