

Holographic Organizations: Thinking Organizations Like A Brain

Holografik Organizasyonlar: Organizasyonları Bir Beyin Gibi Düşünmek

Ayşe Meriç YAZICI
Dr., Blue Marble Space Institute of Science
ayse.meric@bmsis.org
<https://orcid.org/0000-0001-6769-2599>

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ABSTRACT

The brain is fully capable of functioning for the most important purposes of the human body. It consists of separate cells that carry the same information and allow this information to be transferred seamlessly to neighbouring cells. The flexible structure of the brain results in the ability to self-organize. The metaphor of thinking of organizations as a brain compares the organization to a set of functions that process and even learn information over the long term as the brain does. The metaphor of thinking as a brain addresses the collective intelligence of employees in all departments of an organization. Employees in all departments of the organization use the organized wisdom of management, the practical knowledge of employees and the experience of management to create a learning organization. This study provides a brief theoretical understanding of the organization-as-brain metaphor, holographic organizations, and the principle of the whole into the parts. The study also addresses the application of the whole to the parts, from organizational processes, organizational DNA and holistic leadership.

ÖZET

Anahtar Kelimeler:

Örgütsel DNA,
Beyin Metaforu,
Holografik Örgütler,
Holistik Liderler

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Beyin, insan vücudunun en önemli amaçları için tamamen işlevseldir. Aynı bilgiyi taşıyan ve bu bilginin komşu hücrelere sorunsuz bir şekilde aktarılmasını sağlayan ayrı hücrelerden oluşur. Beynin esnek yapısı, kendi kendini organize etme yeteneği ile sonuçlanır. Organizasyonları bir beyin olarak düşünme metaforu, organizasyonu beynin yaptığı gibi uzun vadede bilgiyi işleyen ve hatta öğrenen bir dizi fonksiyonla karşılaştırır. Beyin olarak düşünme metaforu, bir organizasyonun tüm departmanlarındaki çalışanların kolektif zekasına hitap etmektedir. Organizasyonun tüm departmanlarındaki çalışanlar, yönetimin organize bilgeliği, çalışanların pratik bilgileri ve yönetimin deneyimi ile öğrenen bir organizasyon oluşturmak için kullanılmaktadır. Bu çalışma, beyin olarak organizasyon metaforu, holografik organizasyonlar ve bütünü parçalara ayrılması ilkesi hakkında kısa bir teorik anlayış sağlar. Çalışma ayrıca, örgüt süreçlerinden bütünü parçalara uygulanması, örgütsel DNA ve holistik liderlik gibi konularına değinilmiştir.

1. INTRODUCTION

Employees are living beings who come together to share an organization's vision. Every employee has a unique perspective towards his organization. Each employee shares the responsibility of the whole, not his own part. However, the component parts of every organization are not the same. Each presents the whole picture from a different perspective. When you collect the parts of a hologram, the image of the whole does not change, but rather the image becomes denser. When employees in an organization share a common vision, the vision fundamentally does not change, it becomes more alive and more real in the sense of a mental reality that employees can only dream of achieving.

According to Morgan (1997: 100), organizational performance is significantly affected by the parts forming the whole in the brain metaphor. Considering the brain, the most important organ of the body, as an information processing system, it is possible to see organizations as brains. The brain fulfils five different roles: system control, information translator, collective information library, informative link and understanding the overall picture that separates small pieces of information. These five important factors of the brain help organizations to analyse the available information, determine the appropriate strategy based on data collection and make decisions.

The principle of decomposition of the whole into parts is an integral part of holographic organizational design and the application of this principle to organizations affects the organizational culture, leadership, teamwork, the future of work, the organization's strategy and information system. The principle of the whole into parts also increases the efficiency of the organization and is essential for the organization. In holographic organizations, the brain metaphor teaches how we should learn, how to process knowledge and how important intelligence is and how an organization should work. In short, it provides a frame of reference for both understanding and evaluating modern organizations (Morgan, 1997: 100). This study provides a brief theoretical understanding of the organisation-as-brain metaphor, holographic organisations and the principle of the decomposition of the whole into parts, as well as the application of the whole to parts from organisational processes, organisational DNA and holistic leadership.

2. ORGANIZATIONAL DNA

The universal feature of living organisms is to store, use and transmit all the genetic information necessary for the maintenance of their functions. It is genes that ensure the flow of genetic information between generations. If it is assumed that organizations are a living organism just like people, it can be said that each organization has its own unique cultural structure. Because organizations consist of people with different cultural backgrounds.

DNA (Deoxyribonucleic Acid) is one of the most basic concepts of the biology discipline and is a biomolecule that carries the characteristics of all living beings such as the formation, development, characteristics, reproduction and end of life (Çandır, 2005: 48). With this idea, DNA, which is an important phenomenon for living things, has also been considered for organizations. The DNA biomolecule in living things is the place where the necessary codes and information about all the features of living things are stored for a long time in order for them to survive. DNA consists of genes that carry the codes of biological processes that take place in the lives of living things. In this respect, as in people, organizations have to store and information about all their characteristics and experiences from the past to the last day. In this case, it has led to the emergence of the concept of "Organizational DNA" (Esmer, 2020: 16).

The fact that the discipline of business management has an electrical characteristic, metaphors are frequently used when explaining or researching business management events. For this reason, the concept of business DNA is a metaphor taken from the discipline of biology and genetics and used to explain the issues related to businesses (Koçel, 2018: 461).

The human body consists of networks with a hierarchical order. Cells make up tissues, tissues make up organs, organs make up systems, and systems make up the body. New capabilities emerge at each stage, and gradually each subsystem becomes equipped to perform its function. When the hierarchical situation in organizations is compared with the system of the human body, a high degree of similarity is observed. Expressing the entire organization as a system and other hierarchical subsystems, and that cells and organs form subsystems of a living organism, are in harmony with the systems approach, which is considered as a biological metaphor (Morgan, 1997: 51-54). The central nervous system in living organisms is similar to the role of top management in organizations. The central nervous system in living organisms receives and interprets the messages in the organism, coordinates the activities to be done, ensures the safety of the body and makes decisions about the whole body (Baskin, 1998: 8).

Organizations are like social organisms. Like living organisms, organizations are born, grow, develop, mature, age and die. Some organizations may have short or long lives, just like human life. Organizations that closely follow technological developments and can create a good organizational culture ensure the continuity of their sustainability and have a longer life span. However, the lifespan of organizations that do not create this is short.

Organizations within a social system can be considered as the cells of the social system. Just as each cell that makes up an organism has the same DNA, it can be accepted that the organizations that make up the social system have the same essence. The core DNA of an organization is expressed as its shared vision, mission, cultural structure and managerial structure. Organizations fulfil their duties with their employees. Each employee comes to the organization with different knowledge, skills, values and beliefs. Therefore, each organization has a corporate culture and based on this, there are differences in the management structure. The fact that an employee has the core DNA of the organization is realised by the adaptation of that employee to the organization. To the extent that the employee adopts the philosophy, vision, mission and corporate culture present in the core DNA of the organization, he/she integrates with the organization (Ball, 1997).

As an advanced organism, the human being is governed by the brain. Although the brain decides what to do, how to do it and when to do it, it is the DNA of its constituent cells that carries out the management function of this managerial organ. In this context, the management of an organization within a social system and the management of a cell of an organism can be related as a metaphor. Metaphor is a tool of perception (Arnett, 1999). Understanding an organization's DNA helps us understand and know how to achieve agility and authenticity in a rapidly changing world (Bonchek, 2016). In short, it is important and valuable for organizations to understand their DNA for their own sustainability.

Organizational DNA is a figurative term that refers to the key factors that define the character of an organization and help explain its performance. Organizational DNA is also a system that seeks to discover the organization by identifying its strengths and weaknesses as well as identifying solutions (Nafei, 2015: 118). An organization has four basic building blocks that define its unique characteristics. These basic building blocks are decision, structure, motivators and knowledge (Booz, 2005: 1; Çandır, 2005: 100).

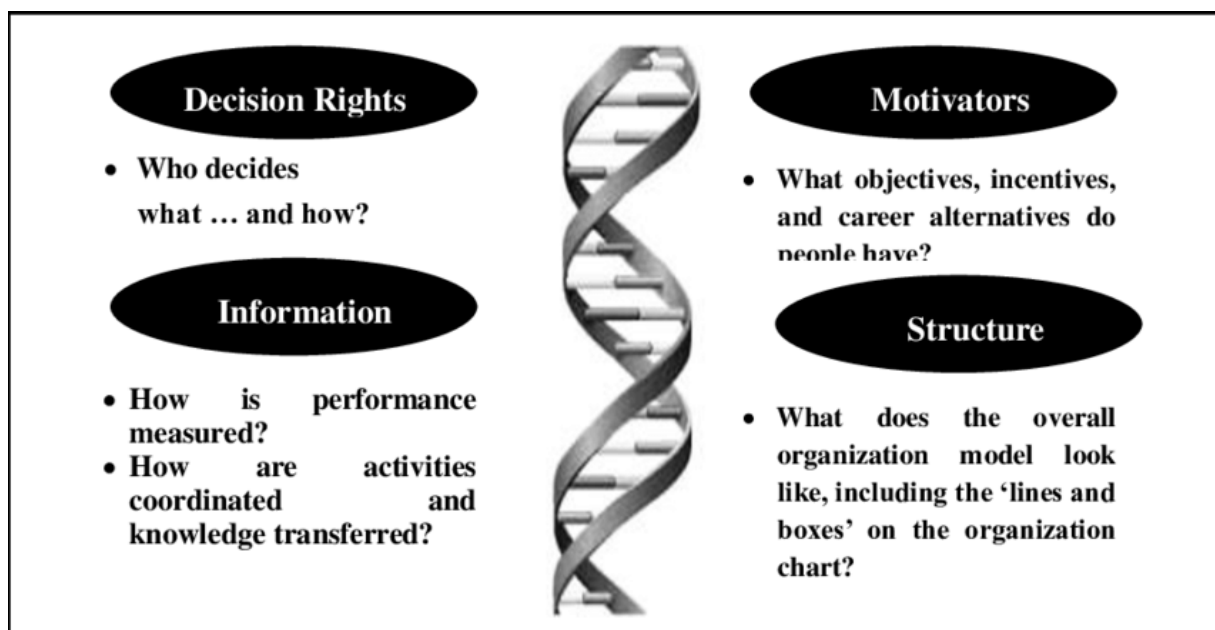


Figure 1. The four building blocks of organizational DNA

Source: (Nafei, 2015: 119).

The first of the four building blocks of organizational DNA, the decision, determines who is authorised to make which decisions. Structure, what does the hierarchy of the organization look like? How do the lines and boxes fit together in the organization's structure chart? How many layers are there in the hierarchy and how many reports does each layer receive? Motivators look for answers to questions such as what goals, incentives and career alternatives people have. Knowledge, on the other hand, is one of the most difficult tasks of modern business and one of the most undervalued contributions to creating competitive advantage through high performance (Kaipa and Milus, 2006: 9).

3. ORGANIZATION METAPHORS

Each of the eight organizational metaphors used by Morgan (1998), who has conducted studies on organizational metaphors, deals with the organization with different characteristics. These eight metaphors of Morgan are as follows (Uğurlu, 2011: 120; Manuti and Giancaspro, 2021: 115-116). In this study, the metaphor of organizations as brains - the brain metaphor among the organizational metaphors was examined.

4. ORGANIZATIONS AS BRAIN- BRAIN METAPHOR

Living systems have the ability to respond to and adapt to their environment. One of the fundamental concepts underlying organizations as brains is information processing. Organizations are information systems, communication systems and decision-making systems. In the machine metaphor, organizations are quite routine (Morgan, 1986: 81).

Bureaucracies tend to concentrate information and decision-making in the closed spaces of the hierarchy. However, since organic systems work on interdependencies, communication and decision-making are expected to be better networked. Thinking of the organization as a brain is related to the assumption that the organization is purposeful and rational, in a state of flexibility and creative activity. The aim is to create new forms of organizations that are capable of intelligent change and that radiate brain characteristics (Mullins, 2005: 32-33).

The brain metaphor, which reveals the importance of the brain's information processing system, is an information translator. It is a collective knowledge library. It is an informative link and breaks down data. These actions performed help organizations to develop strategy, analyse information and make correct decisions and can depict to the organization what is going on around (Morgan, 1997: 100).

5. ORGANIZATIONS AS HOLOGRAPHIC BRAINS

Hologram means that each of the parts in the system contains all the characteristics of the whole. In holographic systems, if one or more of the parts fail to fulfil their functions, the remaining parts can be reorganised and ensure the continuation of the system since they have the characteristics of the whole. An organization with this capability can process large amounts of information and shape this information for different purposes. It can also turn different perspectives into an advantage for itself. In holographic organizations, members of the organization are open to challenges and can find ways of organizing for urgent needs. Organizations structured in this way will be able to survive in any situation (Morgan, 1998:117-119; Morgan, 1989: 56; Argyris and Schon, 1978; Bach, 1989). Figure 2 shows some design principles of holographic organizations.

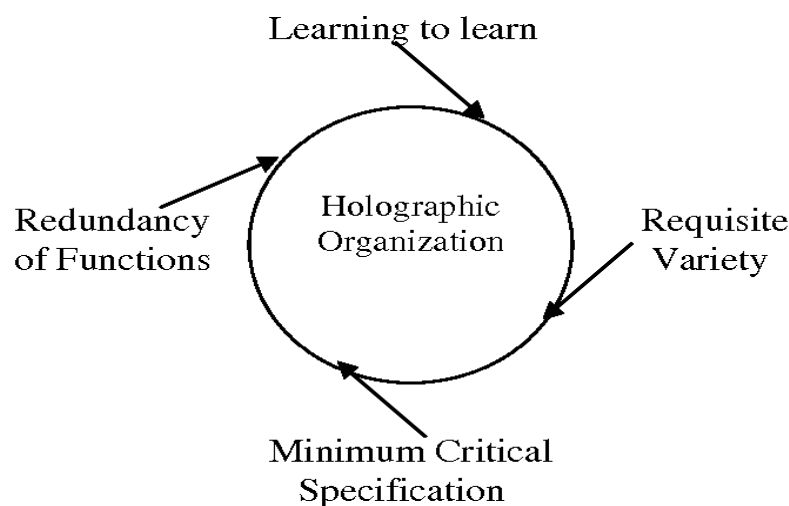


Figure 2. Principles of Holographic Design
Source: (Morgan, 1986: 99; Morgan, 1989: 53).

Redundancy: The focusing of all members of an organization on a large number of tasks in order to create a certain degree of specialisation and allow for generalisation. Each individual or team has a wider range of knowledge and skills than is required for the immediate task. This gives flexibility to the organization. To balance

the level of redundancy, the second principle, necessary diversity, comes into play (Morgan, 1998; Drucker, 1988; Hoda, 2011; Kramer et al., 2021).

Requisite variety: The principle of necessary diversity, the principle of necessary diversity, must match the challenges posed by the environment. All factors of an organization must incorporate the critical dimensions created by the environment. Each member of the organization acquires broad management and decision-making functions by learning to multitask and adapt to environmental factors. Functional redundancy is necessary because a single person in the organization will find it difficult to cope with all the factors in a given environment. By creating redundancy within the limits of the principle of necessary diversity, organizations can develop in a cellular way around self-organizing groups with the necessary skills and abilities to deal with the environment in a holistic and integrated way (Huber, 1984; Morgan, 1989; Morgan, 1998; Zoethout, 2006; Andriani, 2001; Balijepally et al., 2014).

Minimum critical specification: This policy provides sufficient control of groups or systems to perform their tasks. Leadership and facilitation skills are used to inform employees within the organization about the process. The minimum critical specification principle is borrowed from a bureaucratic system. However, it need not be bureaucratic in terms of function. By not assigning designated positions and providing a space where all members take turns leading and leading, employees have the opportunity to bring a variety of styles and views to the group. Employees generate new ideas. This principle requires constant thinking. But it keeps differentiation to a minimum so that group members can learn to focus on their tasks or goals without repeating unnecessary constructs (Morgan, 1989; Morgan, 1998; Goldman et al., 1999; Bellini et al., 2016; Ren et al., 2016).

Learning to learn: Learning to learn is to minimize chaos in the process. Organizations avoid predetermined rules. It is up to the participants to monitor their learning capacities, their development, their results and in general the direction of the processes they are involved in. Learning to learn is based on a cyclical system of enquiry that goes from single loop to double loop. At the single loop level, objects are analysed as they are without framing the context. The double loop level reframes the problem in context and allows more variables to be introduced into the environmental mix. In a holographic organization, it is necessary to create a culture of learning and self-regulation to make the most of the combined work between the four interrelated principles (Bateson, 1979; Morgan, 1989; Goldman et al., 1999; Hoda, 2011; Beck et al., 2003).

It is defined as the reflection and representation of the whole in its constituent parts or components. In this context, a holographic organization is a self-organizing organization with an extraordinary memory in which information is stored and processed in many parts or subsystems at the same time as a necessity of being everywhere (Balci, 2006). The basic principles that must be followed in order for these organizations to form and survive are explained respectively.

6. THE PRINCIPLE OF THE WHOLE INTO THE PARTS

This principle is realised by focusing on culture, information systems, structure and roles in the organization. More precisely, this principle envisages that the vision, values and culture of the organization should be conveyed to all employees; that all employees should have access to all information about the organization; that expanding organizational structures should be designed; and that the roles of employees should be broadly defined and employees should gain skills in multiple areas (Morgan, 1998).

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When all parts of an organization, be they individuals, teams or departments, share their vision of the perspectives of the organization, the responsibility for the whole appears to be the purpose, goals, objectives, vision and a common purpose among the parts to achieve organizational success. Sharing the vision is crucial for learning organizations. In organizational learning, the energy among employees increases and focus is achieved. It increases cohesion among employees and builds confidence and courage to do what is needed for the vision (Reed, 2006). Thanks to the principle of the whole into the parts, the growth of the organization increases in parallel (Senge, 1994). The principle of dividing the whole into parts creates the capacity to be a problem solver in the employees within the organization and increases their ability to cope with any changes that occur inside or outside the organization (Döş, 2013).

7. HOLISTIC LEADERSHIP

Holism is defined as a theory in which the universe, and nature in particular, is correctly viewed in terms of interacting wholes that are more than just the sum of fundamental particles (Yaraş and Boydak Özan, 2019). Therefore, to be a holistic leader, one must not only understand and lead others from this perspective, but also understand oneself in terms of how one's own internal interactive aspects create a whole greater than oneself. Holistic leadership is being able to lead from the mind, heart and soul. Holistic leadership is applying a methodology that encompasses a developmental systemic approach to influence others as leaders, followers and the environment. Holistic leadership should reflect a journey towards transformation at individual, team and organizational/community levels (Orlov, 2003).

The leader's field dynamics, awareness and capacity include the potential field of holistic leaders. Holistic leadership is a methodology that focuses on systemic development that affects the self as a leader, others as followers, and the environment (Orlov, 2003). Taggart (2009) presents a holistic leadership model which he calls holistic leadership, a holistic approach to leadership. This model includes components such as organizational teaching, personal mastery, reflection, inquiry, management, visionary and strategic action, results orientation, thought leadership, power sharing, collaboration and nurturing.

Holistic leadership, similar to the participative leadership of action research and appreciative inquiry, represents change that strives to be inclusive and is based on a strong commitment. Holistic leadership optimises strengths. It builds on strengths to create an environment of transformation. In holistic leadership, artificial intelligence and action research, the leader does not control the goals. He allows a process of emergence to shape the outcome. The leader is an active participant. This participation, not control, forms the basis of Collin's fifth level of leadership (Collins, 2001) and the understanding of the high-performance organization (Collins, 2005).

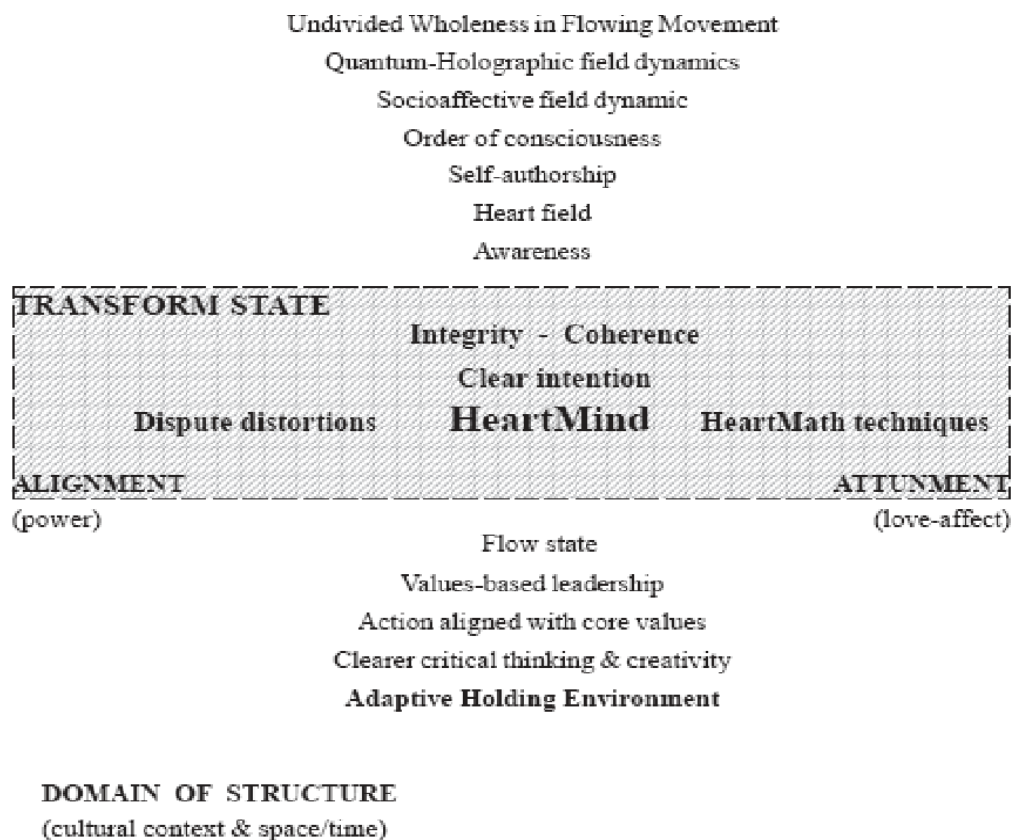


Figure 3. Holographic Leadership Theoretical Model
Source: (Byars, 2009: 136).

Figure 4 represents three descriptive dimensions of holistic leadership (Self (nurturing), Spirit (aligning) and Service (contributing)) and three corresponding leadership types (Self leadership, Authentic Leadership and Legacy Leadership). Each leadership type has three dimensions. Self-leadership represents the preparatory stage on the path to holistic leadership and includes self-motivation, self-mastery and self-creativity. Authentic

leadership involves self-awareness informed by an internalised moral perspective expressed as unity and purity in thought, speech and action. It implies the use of spirit through emotional intelligence and discretionary enquiry guided by a strong moral compass. Service leadership offers the pursuit of meaning and fulfilment through selfless service that results in a leader's lasting legacy. At each level, the various dimensions of holistic leadership are presented in a dialectical manner, emphasising their opposites on one level while at the same time highlighting their creative harmony based on synthesis. Throughout, leadership presents an opposition between self and other, each claiming its own true superiority. The holistic leadership paradigm recognises and builds on this inherent dialectic and seeks its resolution in the subordination of the good of the self for the good of others (Dhiman, 2017: 9; Quatro et al., 2007).

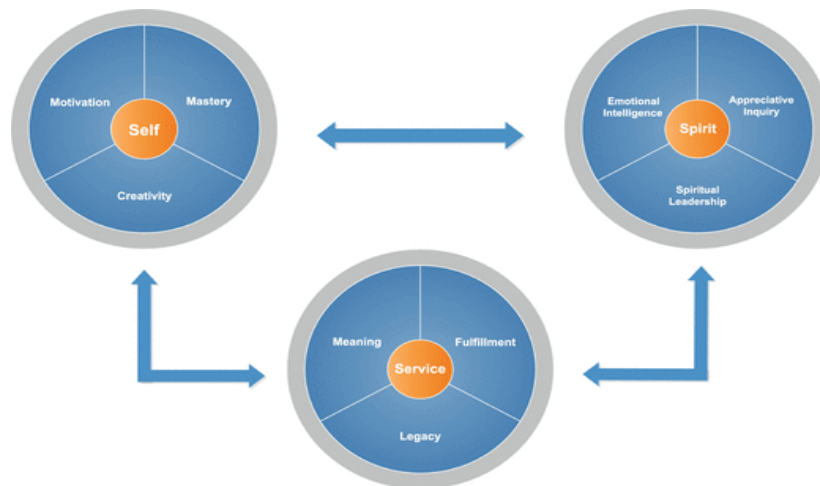


Figure 4. Holistic leadership framework

Source: (Dhiman, 2017: 9).

Holistic leadership is based on the understanding that leaders should bring their whole selves to their roles. It is a concept that is not only about the skills, processes and approaches of holistic leaders to their work, but also about their character, values and mindset.

8. CONCLUSION AND DISCUSSION

The brain can fully capable of functioning for the most important purposes of the human body. It consists of separate cells that carry the same information and allow this information to be transferred seamlessly to neighbouring cells. The flexible structure of the brain results in the ability to self-organize.

The brain metaphor, which is one of the important metaphors in understanding and explaining organizations, has an approach that examines organizations by likening them to the human brain. Organizations receive, process and store information as a brain. Organizations are systems that depend on information, communication and decision-making processes. Organizations create their own sense of identity (Koç Başaran, 2017; Döş, 2013).

Organizations are systems dependent on information, communication and decision-making. Organizations create their own sense of identity and develop ways of acting from an incomplete and evolving picture of the world around them. The brain metaphor suggests that organizations are structures made up of active participants who think, learn, gather knowledge and apply it in various ways. When participants in an organization learn and assimilate knowledge, changes occur in the ontology and function of the organization. This process of change is similar to the processes that affect the brains of living beings. One of the most important implications of the brain metaphor is that when employees in an organization learn and assimilate knowledge, it makes a difference to the existence and functioning of the organization and allows employees to develop their skills.

The principle of the whole into the parts establishes a strong link between the emergence of teamwork capabilities, information systems and organizational performance. Learning within the organization usually takes place through the dissemination of knowledge among team members. This enables employees to easily reach the goals, vision and mission of the organization. The principle of the whole into parts is important because it is generalised

and specialised in the organization. The principle of dividing the whole into parts helps employees to see the organization from different angles and perceptions. Organizational DNA is important for holographic structure and holistic teamwork. Organizational DNA also helps organizations to achieve common culture, vision, values and goals among all employees, units, teams, departments and the whole.

The holographic organization concept promotes teamwork in the organization, provided that the team consists of cohesive and skilled professionals. Teamwork collaborates to achieve competence that enhances organizational productivity, improvement of employee performance and organizational growth. Holographic organizations are organizations that can adapt to rapid changes in the environment, learn quickly, adapt, keep pace with change and process information. The result is innovative organizations that achieve results in the most efficient and proactive way.

Holographic organizations give employees and constituents the chance to actively participate in key governance functions such as vision framing and providing transparent accountability. Holographic organizations allow time and a strong sense of trust to be built between all members. The multiplicity of roles and functions creates enormous flexibility for the organization. The holographic organization is based on a culture of mutual trust, compromise and commitment to developing the capacities of employees (Mackenzie, 1991: 9-13). According to Ilkhani and Rohani (2021), holographic organizations have results on increasing self-management and affecting knowledge centres within the organization. Holographic organizations are also among the suggestions that a knowledge centre can be established using employee empowerment, shared values for the organization, participative leadership, employee self-actualisation and creative thinking. According to Hassan et al. (2016), employees in holographic organizations have new thinking patterns by continuously developing their internal capabilities.

Holographic leadership offers a unique set of guidelines for leadership and change. Holographic leadership also recognises the power of each individual employee within the organization. Because each employee has their own vision. Holographic leadership endeavours to provide each employee with an environment for their own development in harmony with the whole.

AUTHORS' DECLARATION

This paper complies with Research and Publication Ethics, has no conflict of interest to declare, and has received no financial support.

AUTHORS' CONTRIBUTIONS

All sections are written by the author.

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