

Descartes and the paradigm of Western medicine: an essay

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Abstract

This essay is a contribution to the study of the Cartesian Dualism (separation of mind and body) and Mechanicism (the body is a machine) that have contributed to the paradigm of Western medicine. These Cartesian ideas of separation and fragmentation of the reality have hampered the implementation of the new paradigm in health care in contemporary society, where the patient is seen in an holistic way: soul-mind-body.

Keywords: Science and the paradigm of Western medicine, Cartesian Dualism, Cartesian Mechanicism, New paradigm of medicine (Integrative medicine).

Introduction

In this introduction on the theme of this essay "Descartes and the paradigm of Western medicine", I shall begin by referring to the roots of the Cartesian paradigms [1].

The root of Cartesian Dualism is in the "Methodical Doubt", described in *Discours de La Méthode* [2], that defends that only in rational thinking (Rationalism) there is no doubt. This idea was expressed through the famous sentence «I think, therefore I am» (*cogito, sum* or *je pense, je suis*), described in *Meditations Metaphysiques Touchant la Première Philosophie* [3]. The Cartesian Dualism defends that the man is composed of two distinct and incompatible substances, namely, «res cogitans» (substance not extensive or soul/spirit) and «res extensa» (substance extensive or body). The "Méthode" aims to build the Descartes' system of Natural philosophy, described in *Les Principes de la Philosophie* [4], that is, to replace the principles of Scholastic philosophy (that seeks to reconcile faith and reason) by a philosophy based on mechanistic and natural principles.

The root of Cartesian Mechanicism is in the existence of "Vital Spirits", described in *L'Homme* [5], that are the source of life for the movements of the body. This book makes the description of the functioning of the organs and the various parts of the body as a "machine", according to the natural philosophy of Descartes. In fact, the Cartesian Mechanicism claims that as the scientific method was able to take a mechanical interpretation of the physical world, the same principle might be applied to living things, such

as the human body. In this regard, I have to mention the Cartesian elaboration on human physiology, described in *Treatise of Man and Passions of the Soul* [6].

These Cartesian views represent an ancient vision to see reality, in which the observer (the subject) is a mere observer of outer reality (dualism) and has not any responsibility on it (the object). In contemporary society, on the contrary, there is another way of approaching reality, where the body and the mind (thoughts and feelings) operate as a unit and the observer is responsible for the shape of the outer reality [7]. Jung referred to as archetypes or "mental images" that exist in unconscious and that are projected into physical reality [8]. In this regard, I have to mention the historical roots and the importance of the Cartesian paradigms to the history of medicine.

Methods

In this essay on *Descartes and the paradigm of Western medicine*, I selected the 16 most important scientific books and technical articles specific on this topic, based on the "impact factor" of the article and the "reference" books that are available in academic libraries.

Results and Discussion

In this section, I will present the results of my investigation on *Descartes and the paradigm of Western medicine*, describing and discussing the most relevant fact of my research.

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The Western or conventional medicine whose roots lie in the teaching of Hippocrates claimed that the man was constituted by four fluids (yellow bile, black bile, phlegm and blood) and the illness was an imbalance of these humors. Galen developed the teachings of Hippocrates and proposed that patient healing should occur both in patient's mind (promote positive thoughts and feelings) and patient's body (give medications). Furthermore, Aristotle defended a close relationship between the spiritual and the physical phenomena, as the basis of the human experience of Nature. Thus, in Ancient period to the Middle Ages the main purpose of medicine was to heal the body without knowing exactly the causes of disease. These teachings on practice and medical theory remained unchanged until the end of the Middle Ages. In the Renaissance period, the knowledge of the human body was deepened, particularly with the research work performed by Andreas Vesalius about anatomy [9].

In the 17th century, Descartes proposed the separation of mind and body – the Dualism. The mind was the domain of exclusive study of philosophy and religion, while the body was to be treated as a machine by science and medicine – the Mechanicism. The illness is a disturbance of the components of the human machine and could be repaired through the mechanical laws of the medical knowledge. This is the *paradigm of Western medicine* [10]. These Cartesian ideas have been a very important milestone, not only in philosophy but also in History of medicine. Since then, science (particularly medicine) and philosophy (including religion) have been treated as separated areas of study. However, I have to mention that recently, some scientists have proposed a "union" between the area of humanities (such as philosophy) and the area of sciences (such as medicine) [11]. Furthermore, in the 18th and 19th centuries, it occurred some experiments in the brain area performed by Luigi Galvani, Golgi, Ramón y Cajal, vanWaldeyer with the discovery of electrical conduction by neurons. Furthermore, John Hughlings Jackson, Pierre Broca and Carl Wernicke came to the conclusion that motor functions can be attributed to certain specific areas of the brain. In the 20th century, David Hubel and Torsten Wiesel discovered that feeling, perception, memory (and other functions) are the result of "calculations" between neurons, suggesting that the mind and body are interconnected entities [12].

These ideas were the base of the research work performed by António Damásio [13] who has written about the «Descartes' error», namely, the irrelevance of the key role of feeling and emotion in the rational and

social behavior of the human being. This scientist gives several examples of patients with brain lesions that demonstrate that the absence of emotions and feelings is harmful to both the rationality and personal choices and to show the best side of the human character. Thus, António Damásio claims that the Descartes' error is related to the separation between the body and the mind, and the notion that they could exist independently of each other. In this regard, António Damásio has proposed a new perspective in medical practice where the emotions and feelings are an important link between the physical body and the reason which aims both the survival of mankind and the expansion of awareness/perception of the human being. Thus, our minds are what they are currently due to the interaction between the body and the brain that occurred during the evolutionary process of mankind.

Conclusion

In the 17th century, the Cartesian philosophy and paradigm (Dualism and Mechanicism) appeared as a need to change the old paradigm of the Middle Ages (cure the body without knowing exactly the causes of disease) to the scientific paradigm based on mechanistic and natural causes (cure the body after knowing the causes of the disease). In the 19th century, the Cartesian paradigms were supported by Pasteur and Koch who discovered some antibiotics to cure the diseases. In fact, Western medicine thought to have the cure to all diseases through the administration of allopathic medicine on patient - the concept of prophylaxis (vaccination after discovering the causes/agent of disease) [14].

However, in the 20th century, in the area of phenomenology, Erwin Strauss [15] and Maurice Merleau-Ponty [16] have proposed that the body is not a machine (as defended by Descartes), but it is an intentional entity with some purposeful aim in the physical world. These views have helped to build an holistic approach in medical practice. Furthermore, in area of psychology, some researchers claim that Descartes developed only an elaborate theory of animal physiology that he used to explain the human behavior, but where the soul did not intervene [17].

At the same time, in the biological area, with the emergence of systemic biology, the genome (genetic code) is seen as a self-organizing network, where each component is interdependent of each other. An example, are the various biological systems of the human body, such as the nervous system and the respiratory system, where the breath becomes deeper and accelerates when the human being feels nervous [18]. Thus, the Cartesian idea of separation and fragmentation of the reality has constituted an obstacle

to the realization of the new paradigm of health care proposed by Integrative medicine and systemic biology, where soul, mind and body are interconnected. Furthermore, Integrative Medicine (synthesis of Eastern and Western medicine) claims that a positivemind might have a causal effect on the harmony of the body [19].

In this regard, some authors have discussed the Cartesian dualism in the context of health care system, highlighting both the limitations of this view and the suggestionsof new models for medical practice [20]. For example, the need for a new bio-psychological model in medical practice, where the relationship of physician and patient might play an important role in the biological and psychological cure of the illness. In fact, in contemporary society, there are several examples of the urgent need for a paradigm shift in Western medical practice, particularly in the psychiatric and oncological areas. This means to cure not only the patient's body (as defended by Western medicine) but also minimize the psychological suffering of the patient during the medical treatments [21]. Furthermore, some scientists claim the need of Western medicine (conventional medicine) brings the soul back in the patient healing process [22].

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