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THE INTERSECTION OF PHILOSOPHY AND MEDICINE IN THE BRAIN DEATH DEBATE (I): THE PHILOSOPHICAL ARGUMENT FOR THE EQUIVALENCE OF BRAIN DEATH AND HUMAN DEATH

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ABSTRACT

The debate on brain death as equivalent to human death involves complex philosophical and medical dimensions. Initially guided by scientific criteria, the discussion now incorporates philosophical arguments questioning whether brain death genuinely signifies the end of human life. Key contributions from various commissions highlight the role of the brain in maintaining the organism's integrative functions, but philosophers argue this extends beyond empirical medical knowledge. This interdisciplinary debate stresses the need for philosophical and ethical insights, alongside medical understanding, to fully grasp the implications of defining death.

Keywords: *brain death; human death; philosophical; medical; integrative functions; interdisciplinary;*

INTRODUCTION

In addition to scientific argumentation, which remains the most important, the need for arguments from the philosophical realm to support or refute the concept of brain death has been apparent from the very beginning. However, these philosophical analyses have shown that beyond the soundness of scientific arguments and evidence, brain death can be subjected to all kinds of interpretations, such that different philosophical approaches can lead to different and conflicting ethical conclusions.

There are, therefore, philosophical arguments that support brain death ascertained on criteria of brainstem death alone, 'brainstem death,' arguments that support the death of the entire brain, 'whole brain death,' and arguments that, abandoning the biological terrain almost entirely, seek to equate human death with the death of only the cerebral hemispheres, 'higher brain death,' or 'cortical death. Finally, there are philosophers who, if they do not try to prove the total falsity of brain death, at least question the possibility of acquiring moral certainty about it.

There are therefore philosophers who argue that brain death is not only a medical issue, but also or especially a philosophical issue, and that it is at the philosophical level that there is the real confusion that has resurrected the debate on a topic that seemed by now to have received unanimous consensus on all sides. If the responsibility for verifying brain death falls within the sphere of medical competence and is based on the criteria of ascertainment presented, equating the latter with the death of man is not an empirical medical thesis and, as such, is not exclusively the competence of physicians.

When we speak of brain death, we mean not only the death of the brain organ but also the death of man. The implication of the definition of brain death is that because the brain is so significant in its function for man's biological life, its collapse in itself leads to the cessation of life *tout court*, although all or most other vital biological functions remain. The conclusion that because a person's brain no longer functions, then he as a human person possessing life in the body is no longer alive is not a medical point of view. Or, as philosopher Josef Seifert, an opponent of brain death, states with good reason: "While on the irreversibility of the cessation of brain function, *only or at least predominantly medicine speaks competently*, in no way *only or at least predominantly medicine should or can say* whether the death of the organ 'brain' *is in fact the death of* the human being. Any doctor who talks about it does so *as a* doctor *doing philosophy*, and not as a doctor."[1]

We are in a sense victims of the specialization of human knowledge and its shattering into so many different areas. No one holds holistic knowledge that can answer the problems that human life sometimes runs into. This fragmentation means that neither the doctor nor the philosopher nor the theologian nor the jurist, can answer for themselves the questions about life without being accused of presenting an insufficient and as such, reductionist perspective on the problem that needs to be solved.

In this perspective of the diversification and superspecialization of knowledge, I feel that a definitive answer on brain death and its ethical implications cannot come exclusively from medicine. There is also a need for *philosophical reflection and theological reflection and experience* that, together with medicine, will clarify such an intricate and, it seems, increasingly controversial problem as the problem of brain death.

1. UNDERSTANDING BRAIN DEATH: INTEGRATIVE UNITY AND PHILOSOPHICAL REFLECTION

As early as 1968, the Harvard Report, without going into philosophical or ethical details, held that "more than medical problems are present. There are moral, ethical, religious, and legal issues. Adequate definition here will prepare the way for better insight into all of these matters as well as for better law than is currently applicable."[2]

The definition of brain death as de facto death was supported at first exclusively with scientific arguments, while later, the 1981 President's Commission uses a variety of philosophical arguments to support it. Today, as we will have occasion to demonstrate by citing the opinions of the 2008 U.S. Presidential Commission, the arguments both supporting and rejecting brain death have shifted from predominantly scientific to predominantly philosophical arguments.

The 1981 President's Commission, relying on a stable scientific consensus, also introduced philosophical arguments to support the validity of the Harvard definition in an official document for the first time. But this was possible because, already soon after the appearance of the Harvard paper, a public debate began, which the 1981 Commission took full advantage of, so much so that its philosophical arguments were already formed at the time of its work.[3]

1 Josef SEIFERT, AA. VV., *Questioni mortali. L'attuale dibattito sulla morte cerebrale e il problema dei trapianti*, a cura di Risangela BARCARO e Paolo BECCHI, Edizioni Scientifiche Italiane, 2004, 79.

2 AA.VV. "A Definition of Irreversible Coma. Report of Ad Hoc Committee of the Harvard Medical School to Examine the Definition of Brain Death," 85.

3 The most important works cited by the President's Commission are: J. L. BERNAT, C. M. CULVER, and B. GERT., "On the definition and criterion of death"; Robert M. VEATCH, *Death, Dying and the Biological*

According to the President's Commission's main argument in favor of brain death, the brain plays a unique role in integrating the biological functions of the organism such that if the brain is destroyed, the body is reduced to a conglomerate of organs. This idea allows for a distinction between the integrative life of the organism that functions as a whole and partial, disorganized life processes that are implemented only on mechanical principles. The death of the encephalon leads to the death of the organism as a whole.

"On this view, death is that moment at which the body's physiological system ceases to constitute an integrated whole. Even if life continues in individual cells or organs, life of the organism as a whole requires complex integration, and without the latter, a person cannot properly be regarded as alive... A person is considered dead under this concept even if oxygenation and metabolism persist in some cells or organs. There would be no need to wait until all metabolism had ceased in every body part before recognizing that death has occurred."[4]

What remains after the irreversible cessation of the functions of the entire encephalon, as the Presidential Commission defined brain death, is considered a mechanical system and not an organic one, since the function of integrating the body's organic systems and subsystems is presided over only by the encephalon. Philosophically, therefore, the Presidential Commission, considers the human body a mechanical system integrated by the encephalon. The following quotation from Bernat and colleagues, who provided the main scientific support, demonstrates this fully:

Philosophically, we answer the objection by saying that if the functioning of the brain is the factor which principally integrates any organism which has a brain, then if that function is lost, what is left is no longer as a whole an organic unity. If the dynamic equilibrium of the remaining parts of the system is maintained, it nevertheless *as a whole is a mechanical, not an organic system.*"[5]

The functioning of the organism as a whole, in this sense, is characterized by spontaneous and innate activities, realized by the integration of all or at least the majority of the organism's subsystems by the encephalon.

2. THE "WHITE PAPER OF THE PRESIDENT'S COUNCIL ON BIOETHICS"

A more articulate philosophical argument was made by the recent paper of the American President's Council on Bioethics in 2008, which holds that the central question is precisely now a philosophical one. It is contextually stated, "Why do we describe the central question of this inquiry as a *philosophical* question? We do so, in part, because this question cannot be settled by appealing exclusively to clinical or pathophysiological facts."[6]

Accordingly, accepting the most recent scientific and philosophical criticisms of the concept of brain death, this White Paper articulates a complex philosophical argument that

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Revolution: Our Last Quest for Responsibility, Yale University Press, New Haven 1977; ID., "The whole-brain oriented concept of death: an outmoded philosophical formulation," in *Journal of Thanatology*, 3(1975)13-30; M. B. GREEN, D. WIKLER, "Brain Death and Personal Identity," in *Philosophy and Public Affairs*, 2(1980)105-133; Douglas N. WALTON, *Defining Death: An Analytic Study of the Concept of Death in Philosophy and Medical Ethics*, McGill-Queen's University Press, Montreal 1979; Julius KOREIN, "The Problem of Brain Death: Development and History," in *Ann. N.Y. Acad. Sci.* 19(1978);

4 AA. VV., President's Commission for the Study of Ethical Problems in Medicine and Bioemdical and Behavioural Research., *Defining Death...*, 33.

5 J. L. BERNAT, C. M. CULVER, and B. GERT., "On the definition and criterion of death," 391 (emphasis added).

6 AA.VV., *Controversies in determination of death*, A White Paper of the President's Council on Bioethics, 2008, 49.

we would present in the following pages, which, in some ways, is new compared to traditional philosophical argumentation.

The novelty of the scientific assumptions of this argument lies in accepting the persistence, at least for some time after brain failure, of the integrative unity of the organism. "If the patient is sustained with life-supporting technologies, this condition [brain failure] need not lead immediately to somatic disintegration or failure of other organ systems." [7]

Building on this new assumption, which was not accepted by the 1981 Presidential Commission, this paper makes a new and deeper interpretation of the concept of life as functioning of the organism as a whole. The argument we would analyze is found in the paper between pages 58 and 67, under the title, *"Position Two: There Is a Sound Biological Justification for Today's Neurological Standard."* This position, it states, *"defends the consensus, taking the challanges posed in recent years as opportunities to strengthen the philosophical rationale for the neurological standard."*[8]

Based on the review and reassessment of the clinical facts of the neurological standard of death, this position seeks to develop "a better rationale for continuing to use the neurological standard to determine wether a human being has died." Building on the philosophical assumption made by the earlier 1981 Commission based on the work of Bernat and colleagues, that an organism is alive when it functions as a whole, the paper asserts that the biological activity of cells and tissues remaining for some time yet does not indicate this kind of integrated functioning and that, consequently *"the moment at witch the 'wholeness' of the body is lost ... must come before biological activity in all of its different cells or tissues has ceased."*

However, the position of the previous commission is criticized, which, it is argued, erred by focusing on the loss of somatic integration (loss of somatic integration) as a sign that the organism no longer functions as a whole. That is, the previous interpretation of "organism as a whole" as "an organism whose parts are working together in an integrated way" is deemed wrong, since:

"Even in patient with total brain failure, some of the body's parts continue to work together in an integrated way for some time - for example, to fight infection, heal wounds, and maintain temperature. If these kinds of integration were sufficient to identify the presence of a living 'organism as a whole,' total brain failure could not serve as a criterion for organismic death, and the neurological standard enshrined in law would not be philosophically well-grounded."[9]

Therefore, an attempt is made to formulate a more adequate explanation of the integrative unity of the organism that goes beyond mere somatic integration and shows that "after total brain failure the body is no longer an organismic whole and hence no longer alive," an explanation that offers "a superior defense of 'total brain failure' as the standard of declaring death." With this new reason/motivation (account) death remains a condition of the organism as a whole, but reliance (reliance) on the concept of integration is abandoned and with that also "the false assumption that the brain is the 'integrator' of vital functions."

7 AA.VV., *Controversies in determination of death*, A White Paper of the President's Council on Bioethics, 2008, 49.
8 AA.VV., *Controversies in determination of death*, A White Paper of the President's Council on Bioethics, 2008, 49.
9 AA.VV., *Controversies in determination of death*, A White Paper of the President's Council on Bioethics, 2008, 60.

Consequently, determining whether an organism remains a whole does not depend on its somatic integration, but on recognizing the persistence or cessation of the fundamental vital *work* of a living organism (fundamental vital work of a living organism), namely, the self-preservation work acquired through the need-pulse of relationship and exchange with the surrounding environment (need-driven commerce with the surrounding world):

"*When there is good reason to belive that an injury has irreversibly destroyed an organism's ability to perform its fundamental vital work, then the conclusion that the organism as a whole has died is warranted."*[10]

It is then also explained what this 'fundamental vital work' of the organism consists of, the lack of which is equivalent to the loss of its functional unity and, as such, death. Compared to inanimate objects that continue to exist through inertia and without effort, each organism endures through its endeavor driven by its inner *need-pulse* for a continuous exchange with the surrounding world. This is what distinguishes living organisms from corpses.

This vital fundamental work depends, according to the document's drafters, on three essential capacities:

1. "Openness to the world, that is, receptivity to stimuli and signals from the surrounding environment." This openness manifests itself in different manners and at different levels. In higher animals, including humans, it is expressed primarily in consciousness and the feeling of awareness, even in its most rudimentary forms. In the persistent vegetative state, for example, the patient follows light with his eyes, twitches in response to pain, swallows fluids placed in the mouth, sleeps and wakes. These behaviors, even if they did not indicate self-awareness, witness the essential and vital openness of the organism to the surrounding world, which in this case, is not dead.

2. "The ability to act upon the world to selectively obtain what it needs." Also needed is the ability to *act* on one's own behalf to take food and water, and even more drastically, to breathe. Spontaneous respiration is an indispensable action in higher animals that makes metabolism and all other vital activities possible. Consequently, an organism that breathes spontaneously cannot be dead.

3. "The basic felt need that drives the organism to act as it must, to obtain what it needs and what its openness reveals to be available." *The basic felt need as an impulse of* the organism to act in order to obtain what it needs and what its openness to the outside world reveals to be available. The internal experience of need is manifested, for example and fundamentally, in the impulse to breathe. The perception of need can be conscious, but it can also be unconscious, as in the case of a person in a coma. The presence of the impulse to breathe, even in a comatose state, offers evidence of the continuation of the organism's impulse to live. After encephalic death, these elementary and essential capacities of any organism cease irreversibly. We can, therefore, state with certainty that the organism is no more, that the individual is dead.[11]

The authors of the paper distinguish, therefore, the spontaneous action of breathing from the passive condition of being ventilated by a mechanical ventilator. The natural work of spontaneous breathing, even in the absence of consciousness and awareness, is in itself a sure sign of the functioning of the organism as a whole. In contrast, artificial respiration that

10 AA.VV., *Controversies in determination of death*, A White Paper of the President's Council on Bioethics, 2008, 60.
11 AA.VV., *Controversies in determination of death*, A White Paper of the President's Council on Bioethics, 2008, 61-64.

is not elicited by the experience of the inner impulse-need is not a sign of the genuine vitality of the organism. For this reason it can be said that mechanical ventilation obscures the arrival of death, namely, the death of the human organism as a working whole (the death of the human organism as a working whole).

This paper, seeks to correct the previous argument, especially in what concerns the concept of the life of the organism as an integrated whole. It accentuates, therefore, the spontaneity of the fundamental work that keeps the organism an integrated whole, especially respiration, which, to indicate the vitality of the organism, must be spontaneous and aroused by the internal experience of need. Thus, an in-depth interpretation is given to the concept of "organism as a whole," introducing, in addition to the functioning of the organism as a whole, functioning which, new scientific findings have shown is possible to a large extent even in brain-dead patients, also *the internal impulse-need* for this fundamental work, need that gives spontaneity to the act of breathing. The lack of this spontaneity indicates, according to the paper's authors, the loss of the internal impulse-need to live, and consequently, the loss of life.

Although it uses more in-depth arguments than previous papers, the White Paper comes to the same conclusions by equating brain death with human death and defining it as loss of consciousness and spontaneous breathing under conditions of total irreversibility:

"If there are no signs of consciousness and if spontaneous breathing is absent and if the best clinical judgment is that these neurophysiological facts cannot be reversed, Position Two would lead us to conclude that a once-living patient has now died. Thus, on this account, total brain failure can continue to serve as a criterion for declaring death-not because it necessarily indicates complete loss of integrated somatic functioning, but because it is a sign that this organism can no longer engage in the essential work that defines living things."[12]

On closer inspection, the White Paper's proposal, circumvents the scientific criticism against brain death by dodging all arguments that purport to demonstrate both the persistence of non-encephalon-mediated integration of the organism and the persistence of isolated activity in the encephalon, through a revisiting and deepening of the concept of the organism being explained no longer through the concept of holistic integration of the organism as a *spontaneous interrelationship between the different parts of the organism*, but through its autonomous and spontaneous possibilities and capacities for *self-regulation* and *self-integration*, capacities verifiable only in *interaction with the environment*, of which the most basic is the capacity to breathe spontaneously.

This conception, in fact, is not new since it can be traced back to the concept of *autopoiesis*, which is the ability of the organism to autonomously maintain its own functional unity, an ability presided over by the encephalon. This does not mean that life resides exclusively in the encephalon or that there are no functions, even complex ones, that have their own autonomy and inertia nor that there is no relationship and interaction between the various parts, even apart from the functioning of the encephalon. Vital phenomena that persist even after the organism has lost its autopoietic ability to self-maintain and self-regulate do not indicate the organism's self-integration, but rather a process of interaction among its different parts.

12 AA.VV., *Controversies in determination of death*, A White Paper of the President's Council on Bioethics, 2008, 64.

According to some more recent authors, a distinction must be made between 'integration' and 'interaction' to understand the difference, which is difficult to observe between a living organism and a brain-dead organism.

"Different tissues, organs and systems, interact with each other, sending and receiving messages, reacting in a certain way depending on the signal received, etc. This happens in the living organism, but it can also happen in an already dead body to the extent that, oxygenated with mechanical ventilation, some of its tissues, organs and systems still continue to function, receiving messages from each other, reacting autonomously to those messages. This same interaction we might even find outside the body, if a connection is maintained between various organs that are still functioning."[13]

This kind of interaction present even in a brain-dead organism has nothing to do with the concept of "poietic self-integration" of an organism as a living unit. The fact that some biological functions remain present and that there is interaction between the parts of the organism due to the technical support that replaces some basic physiological processes, such as respiration that sustains the metabolism of every cell in the body, does not mean that the organism, without the encephalon, continues to self-manage as such an organism in its entirety.

The argumentative effort carried out by the *President's Council of Bioethics*, responds to the need to deepen fundamental concepts such as those of organism and life, which are necessary to better understand our topic and its ethical implications. It also demonstrates the lack of adequate exploration, both in the past and today, of these concepts and the underlying reasons why brain death would be equivalent to human death. "The debate around the criteria for ascertaining death certainly has this one positive thing: that it is forcing a little bit of everyone to think seriously about concepts that before were simply taken for granted."[14]

CONCLUSION

In conclusion, the intersection of philosophy and medicine in the brain death debate illuminates the complexity of defining human death. This discussion reveals that purely scientific definitions, while foundational, may not capture the full ethical and existential dimensions of the concept of death. Philosophical arguments challenge and enrich these definitions, questioning whether brain death truly marks the cessation of a human being's life.

Throughout the evolving discourse, it becomes clear that determining brain death's equivalence to human death cannot rest solely on medical criteria. The topic necessitates an interdisciplinary approach that encompasses philosophical, ethical, and theological viewpoints. Such a multifaceted perspective ensures a more comprehensive understanding of death, which respects the complexity of life and human identity.

By integrating these diverse fields of knowledge, stakeholders can better navigate the ethical implications of brain death in medical practice. Future discussions and policies should continue to foster dialogue between medicine and philosophy, ensuring that both empirical evidence and humanistic concerns guide determinations of life and death. Ultimately, this approach promises more nuanced and ethically sound interpretations that can adapt to both advancing medical technologies and evolving societal values.

13 Gonzalo MIRANDA, "Encephalic death: analysis of arguments, for realistic moral reflection," 16.
14 Gonzalo MIRANDA, "Encephalic death: analysis of arguments, for realistic moral reflection,"17.

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