

# **Philosophical approach to the current debates in neurosciences: the identity problem and its social impact**

## **Aproximación filosófica a los debates actuales en neurociencias: el problema de la identidad y su repercusión social**

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### **Abstract**

This article analyzes the problem of human identity concerning the neuroscientific interventions on the brain. It questions the place, role and construction of the identity and its repercussions, in order to be altered, either to find a cure or just to enhance certain functions. Also, it is studied if there is a determinism in ethical conducts and the consequences of this affirmation. Finally, it is confirmed that identity is located at the ontological level and, therefore, even when it maintains a close relationship with the social environment, it does not depend on it, for its development.

Are we our brains? This is one of the questions that arise with a greater eco, in face of the current new findings, in neurosciences. The possibility to determine the biological place where phenomena that we thought specific or particular of a transcendent dimension, or even spiritual ones such as the emotions and human feelings, are found, opens the debate about a reductionist

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view where the essence itself of the human being would be determined by his brain functions; in this way, several consequences are drawn of such vision, either at a conduct and human behavior level, as well as at a human sensations and personality formation level. Neurosciences break schemes of traditional thinking that it is worthwhile to address, in light of their advancement, and of the revolution it generates day by day.

In this paper, we are going to address these controversial findings, and their consequences for an integral understanding of the human being and of his being a person, beginning with an analytic vision of two facets, where the debate about the biological reductionism, shows its most voracious face: in the first place, regarding the philosophical problem of the human beings identity, and in second place whatever is concerning to the human conduct and its social behavior.

*Key words:* ethics, brain, human person, social dimension.

## 1. Introduction

Sociobiologism<sup>1</sup> is a trend in Bioethics that has its roots in the evolution of the human being. It starts from the basis that we are another link more in the evolution chain and that, therefore, the possibility of continue to evolve is infinite.

For this trend, the human being is a material reality that continuously changed thanks to the intervention of –natural or artificial– phenomena, that “push it” beyond of itself unfolding in it new and different forms of reality; for that, and if the subject matter is intrinsically headed towards a change, but this can only come from of what she herself if, then the human being, has not finished to evolve, and probably never will have: we will always are going to be able to become more and better.

In the same way, it follows from the above, under this thought pattern, even the non-material values of the human being in his re-

lationship with other manifested such as culture, will also be equally material and will have their origin in the same matter that constitutes the human reality, and therefore, they are going to be configured and transformed as it is being done by the human being in his evolution advancement, that is to say, they shall not be supreme and absolute categories the ones which rule the life of human beings by orders of transcendental issues derived from its essence, but that they shall be, equally, mere evolutionary processes.<sup>2</sup>

However, for a long time it has been thought<sup>3</sup> that there exists a non-material component in human beings. This dimension which escapes the scope of what is observable, is the one that provides information about certain phenomena or personal experiences that cannot be measured or quantified, much less locate in a determined physical space, or within a specific time; nevertheless, even though they cannot be located, it is known that they happen, and that they are true.

With this, the dimension of the human being, can be understood either as a set of interactions between material elements which determine the essence itself and whatever is detached from her, or else as «something more» that if it is a part of a biological basis, it doesn't only stay there, but it is spread out in many interactions which produce sensations, emotions, thoughts, etc., which transcend the limits of what is material. Just to mention an example of the above: we are capable to produce thoughts, and generating ideas around complex problems, and we know that the basis for this is the neural connection, which takes place in our brain; notwithstanding, thinking is not a visible and observable product which is detached and occupies a physical and concrete material place, and therefore, thinking is not the brain nor the neural connection established to generate it. Another example is love: chemical reactions but not only that.

Love, as well as thinking, are existing phenomena which are not located in a bodily part of ourselves-even though we need our body as a basis to generate them.

With this overview neurosciences have emerged<sup>4</sup> as an interdisciplinary subject matter that studies behavior and the neural interaction, under the assumption of understanding human behavior in light of what the brain provides as possible answers, in face of the human being's questions. Nonetheless, the study of it, has opened interesting debates.

Next, down below there are only two facets towards which, such debates could be headed to. Those are going to be treated.

## **2. The biological reduction in face of the philosophical thinking**

The anthropological approach of the person, can be made, from its material nature or from the substantialist conception. This last one will be the scope used in this paper. Aristotle used to say that “Ousia”:

“It is the immanent cause of being, of the entities that are not advocated from a subject, for example, the soul is an immanent cause of the existence of an animal.”<sup>7</sup>

Man is substance, and for that, from him, all his qualities can be preached then: size, weight, color, age, sex, etc. This substantial conception of man makes us think that, this one is being formed through his several experiences with other men that in the same way as he, are substances; that is to say, man is open to other relationships with other human beings, and through those, he is forging himself.

Man perceives himself, as not being created by himself, and therefore, as a transcendence that carries the mortality that, in turn, inclines him to think about himself as self-sufficient, but dependent on another greater being. Kant already referred to it when he asked, what is man? In the form of three questions: what can I

know? What do I have to do? And what can I expect?<sup>8</sup> from which three qualities of the human being are derived: freedom, knowledge and openness to transcendence.

Thus, in face of these declarations, with the advances in neurosciences, there is a risk taken by believing that the unity and substance that is the human being, could be physically located in some physical structure, and more concretely, in the human brain. With them, there arise several controversies, because these findings would have made us think, that such transcendent dimension in the human being, which makes him subject to intangible realities, is purely an illusion or mere fantasy; moreover, to think that the human being has stopped to be a «mystery» to become a measurable, quantifiable and observable “result”, that has its basis in brain structures and in the operations performed by those.

One of the above mentioned consequences is, without any doubt, the issue of the identity, which is going to be addressed next.

## **2.1 The identity formation: social process or brain empowerment**

For some,<sup>10</sup> identity is forged, based on two elements: the basis over which rest the processes and dynamics of the identity formation, which actually is “the substance” and the «essence» (also called numerical identity<sup>11</sup>) of the human being, both in his bodily dimension, as well as in his spiritual one; and secondly, the plasticity (narrative identity<sup>12</sup>) of the same that, allows him to adapt and develop adjustment mechanisms, according to what the circumstances are dictating. In this way, the identity would be something which should depend on the essence –unique, fixed and indivisible– of the human being, which rests on it, but also the dynamic detail of his being a person, and a social being which modify him gradually according to how the person’s development itself, is in progress.

On the other hand, for others, the fixed and immovable element is disregarded, in order to put only the identity in her changing dimension; that is to say, it is declared that the human being's Identity is not pre-fixed, but it is being built within the environment and surroundings in which this is being collocated and, with the new findings of "Neuroethics", with various interventions that gradually are shaping it, in accordance with different interests and needs, even if, up to the point where it is altered by means of these interventions<sup>13</sup>.

It is something observable, –and it is since the Pre-Socratics who were asking themselves about the Identity problem in the shift from the single to the multiple,<sup>14</sup> that all things suffer very diverse modifications constantly, and that these are precisely the ones which allow her to adapt to the environment and, as a consequence, her survival; never the less, it has been also admitted that these changes do not alter a fundamental component, which is the essence, this one understood as the universal and necessary content of things, which allows them to be, what they are in themselves, and thus, without altering the essence, changes enable them to adapt to the environment, and are given by the external influences that show up, which demand a posture or position –action or reaction– in front of them.

The same thing happens with the identity in a human being: the essence that makes him to be "a human being", is unalterable, and precisely as a function of it, the person is gradually developing in an interweaving of social, cultural, economic, political and even environmental relationships, which are unfolding to him, different forms of being in a reality and interacting with it, but they do not force it to change its essence because of them; thus, Identity is gradually forming while the human being is becoming "affected"<sup>15</sup> by the surroundings where it is inserted and is continually growing.<sup>16</sup>

Thus, in light of the possibility to conceive that Identity is as plastic as plastics are the interventions made on it, as it is currently

declared by some neuroscience<sup>17</sup> tendencies, there must be said that one of the direct consequences would be the fact of losing the “essential” component of the “substances”, and therefore, to conceive all reality as something subjected to the future to come, forever.

To think that Identity is something changeable and modifiable, allows us to think in the possibility, to strengthen human relations, empower skills that will allow a better development, enable survival adaptations, and an endless quantity of positive aspects; but if you lose sight, at the basis of all of it, there is a unique element of specific content which is immovable, then the enlisted possibilities themselves, would even lose the sense of being, because they would be modifying qualities that are “accidental” to the human being, and would not be modifying “the human being” as for its substance; thus, they would endure as much as certain circumstances would endure, but they would vanish as soon as these would also be modified.

Change for change's sake, does not provide any benefit whatsoever, without a sense of orientation, an improvement is not an improvement but a chance, thus, the possibility to intervene on the structures that will enable a better adaptation to the environment, a better understanding of the social behavior, and of our interference over the surroundings, for the purpose of improving it; those would be actions that neuroscience would open, with a positive judgement and assessment, all of them, in turn, directed and internally oriented toward a container that we grant it, a reason for being strong enough, as to be thought in terms of its social consequences.<sup>18</sup>

## **2.2 Behavioral determinism and behavioral prediction: the prelude to fatalism**

Another debate that has arisen before the findings of neuroscience, is the one that supports them by declaring that human conduct

has, as a basis, an organic structure located also in the brain. If reason is given to the above mentioned proposal, then it would be necessary to also declare that the fact of acting<sup>19</sup>—right or wrong, —ethically or not ethically— depends on having certain brain structures, that would enable such conduct, but not only that, but also that action can be taken over the same, in order to improve or alter the expected behavior of a subject.

This aspect is crucial while thinking on ethic subject matters: what is ethics? Is one born with a natural inclination towards good, or is it learned and modified according to the individual's experiences and of the surrounding environment? Depending on the answer, it will be or not possible to bet for minimum ethics that will enable human harmony, or else to pure and radical determinism and, therefore, the annulment of human freedom.

The Aristotelian-Thomistic theory,<sup>20</sup> states that we human beings, have a natural inclination towards good, understood this last one as everything that preserves and protects our life and our species;<sup>21</sup> now, in our days this translates in what we call “conscience” that, even though it is not located physically in any place of the brain structure, informs this last one, in order to deliberate the actions that must be executed and those that it is convenient to avoid; thus, conscience is all that which warns before acting, this is to say: by natural inclination we tend towards the good, but through the conscience we decide the means to reach this point.

This conscience, in the human beings, is evolving and developing according to how the human being himself is growing and developing, and therefore, this conscience is constantly being transformed according to various factors: educational, cultural, economic, political, social, etc., in such a way that, it can gradually be fortifying itself or else weakening according to the surroundings in which the subject is being inserted. What is interesting here is that, regardless of the circumstances and of its internal dynamics, conscience, as a means of internal thinking, never gets lost, this means that we can always have the possibility to go back

to her, and redirect it, because it is always present, including when it is thought that it has been lost completely.

With the above, it is wanted to consider the thinking reflection about the possibility to behave well or, in other words, of acting ethically, there always exists in the human being due to his same ontological structure, even though in fact, not always is being performed well nor ethically.

Now, in face of the above mentioned, there exists the contrary position, that is to say, the one that states that acting right or wrong, ethically or not ethically, depends on having certain brain structures, and that these would be working properly; so then, there exists a determinism which would allow some to act ethically and not to others. Furthermore, it is currently suggested the possibility to intervene in such brain zones to empower human behavior in order to what is wanted to obtain from her.<sup>22</sup>

The above, as extraordinary as it might sound, it also implies an enormous consequence in the human person: the annulment of his freedom.

The argument is the following: If it is true that there exists a natural trend towards a good detected by the human intelligence (as an ontological condition given *per se*) it is required that the liberty to act in consequence, that is to say, it is not enough for a person in detecting a possible good, but he needs to put into operation his liberty in order to get closer to it and execute it, and, once his operational in his liberty, then he is capable to act ethically, but if you start from the basis that acting well or not, depends on the brain structure and of the connections in it are done, then there will be no space of deliberation where the human being, rather freely, will address him, because everything will depend on the existence and functioning of the brain, and not from a decision made in accordance with their own conscience, which is particular of a free act.

Taken to an extreme, this argument closes the possibility to act freely and even, the responsibility over their actions,<sup>23</sup> being able

then, to justify almost any behavior, claiming the correct or incorrect functioning of the brain structures.

The human behavior determinism, the annulment of the liberty and of the responsibility and of the opening up of possible justifications for acts even inhumane, are some of the consequences detached from thinking that is possible to locate and even predict the human being behavior, by studying and analyzing his brain.

### **3. Main conclusions**

Both in the subject matter of identity, as well as in the subject matter of the human behavior, it must be ensured that preserving ontological elements, universal and necessary contents that will enable the changes and the necessary modifications, because, if not having them, the human subject himself would get lost in a sea of risky, hazardous and difficult possibilities. The possibilities of change are, only on the basis of something solid that will allow them; thus, it is possible to harmonize both the idea of the human essence, as a universal content, as well as the one that supports the construction always changing of himself.

Maybe, while advancing forward in the knowledge of the infinite possibilities of science, but if this last one does not connect with the ontological thinking and ethics, we are taking the risk of stopping to be what we are, of losing the identity which makes us human beings, thus, both ethics as well as the philosophical thinking and as well as the neuroscience as a scientific advancement, are desirable and necessary as long as both walk side by side.

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<sup>2</sup> NÚÑEZ P. *The six versions of Bioethics*. Personna and Bioethics, University of La Sabana. 2009. (Access on 25.03.2016 In: <http://personaybioetica.unisabana.edu.co/index.php/personaybioetica/article/view/626/1803>).

<sup>3</sup> For the pre-Socratics the question was about the constitutive principle of things, the “arje”. The answers varied from the material and observable things like water for Thales of Miletus, until reaching the immaterial conceptions such as “apeiron” (infinite) from Anaximander passing through the “air” of Anaximenes and the “nous” (cosmic mind) from Anaxagoras. Already in the golden era of the Greek Philosophy for Socrates, the soul existed in the body, and had to be liberated from it, in order to reach its true happiness; the same happened for Plato for whom the souls lived in the “Topus Uranus” (the place beyond the sky), and to it returned when they were freed of the body that kept them captured. Aristotle, on one hand, and with a more evolved thinking in his treatise “De anima” (on the Soul) claims that the soul or “psyche” was what ontologically differentiated the living of the non-living beings. On the other hand, Thomas Aquinas spoke about the soul, understood as a vital principle. Thus then, from this tradition arises the possibility to think that the human being is something more than the matter that composes it, and the possibilities to understand this principle, keep being, infinite until our days.

<sup>4</sup> It is suggested the Reading of: BLANCO C. *History of Neuroscience*. Madrid: Biblioteca Nueva; 2014.

<sup>5</sup> PÉREZ M. *The magnetism of Neuroimages: fashion, myth and ideology of the Brains*. Papers of the Psychologist. 2011; 31 (2): 98-112.

<sup>6</sup> PICCINI G. *Foundational issues in cognitive Neurosciences*. In CLAUSEN, J., LEVI, N. *Handbook of Neuroethics*. Nueva York-Londres: Springer; 2014. p. 3-7.

<sup>7</sup> ARISTÓTELES. *Metaphysics*. Buenos Aires: Sudamericana; 2000. p. 272-273.

<sup>8</sup> Cfr. BUBER, M. *What is man?* 6th ed. México: Fondo de Cultura Económica; 1967. p. 9.

<sup>9</sup> CRICK, F. *The Astonishing Hypothesis: The Scientific Search for the Soul*. New York: Touchstone Press; 1994. In LEVIN, Y., AHARON, I. Reverse inference and mind-brain identity. *Journal of cognition and neuroethics*. 3(2): 23-45. p. 27-28.

<sup>10</sup> In the book “Handbook of Neuroethics” mentioned before, section no. 5 entitled “Neuroethics and Identity” (pp. 365-459) includes a varied exposition about identity seen from the Neurosciences.

<sup>11</sup> MACKENZIE, C., WALKER, M. *Neurotechnologies, personal identity and ethics of authenticity*. In CLAUSSEN, J., LEVI, N. Op cit. p. 377.

<sup>12</sup> MACKENZIE, C., WALKER, M. *Neurotechnologies, personal identity and ethics of authenticity*. In CLAUSSEN, J., LEVI, N. Op cit. p. 380.

<sup>13</sup> This constitutes one of the most compelling dilemmas about the Neurosciences, because it is thought that, the identity of a person looks very seriously altered at the moment of having performed some intervention on his brain, even though if this intervention had as an objective the cure or the treatment of some illness. Cf. GALERT, T. *Impact of brain interventions on personal identity*. In CLAUSSEN, J., LEVI, N. Op cit. p. 407-422.

<sup>14</sup> DI CAMILLO, S.G. *The argument of "The single over the multiple" in the Treatise about the ideas of Aristotle*. *Synthesis*, La Plata. 2010; 17: 47-63. (Access on 26.03.2016 In: [http://www.scielo.org.ar/scielo.php?script=sci\\_arttext&pid=S0328120520100010004&lng=es&tlng=es](http://www.scielo.org.ar/scielo.php?script=sci_arttext&pid=S0328120520100010004&lng=es&tlng=es)).

<sup>15</sup> By «affected» it is understood, the capability of being “influenced”, “modified” by the environment, without necessarily become a pessimistic sense of negative affectation; only it is understood the term as “openness” to the interaction processes, interchange and modification –internal and external– of a reality.

<sup>16</sup> Cfr. KENNETH, J. *Mental disorder, moral agency and the self*. In Steinbock B. *The Oxford Handbook of Bioethics*. Nueva York: Oxford University Press; 2007. p. 90.

<sup>17</sup> GALERT, T. *Impact of brain interventions on personal identity*. In CLAUSEN, J., LEVY, N. Op cit. p. 408-410.

<sup>18</sup> It is suggested the reading of the section *Neuroenhacement from Bert Godjin* in CLAUSEN, J., LWVY, N. Op cit. pp. 1167-1177.

<sup>19</sup> Cfr. BALAGUER. *Determinism and its relevance to the free will question*. In CLAUSEN, J., LEVY, N. Op cit. pp. 231-253.

<sup>20</sup> Understanding by classical theory the one that is drawn on the line of the Aristotelian-Thomistic thinking, in which it is claimed that the human existence has an intern “telos” which leads it, in Aristotle to search for its happiness, and in Thomas Aquinas to the good which is inscribed in natural law that, in turn is engraved in the bosom itself of their being. Cf. GARCÍA J.A. *Philosophical Anthropology: an introduction to the philosophy of man*. 5th ed. Navarra: EUNSA; 2010. pp. 156-161.

<sup>21</sup> See the idea of Saint Thomas who claims that the two main goods that have to be pursued, are the conservation of the own life and the spread out of the species. Cf. DE AQUINO T. *Theological Summary: Part I. Questions 97 y 98*. (Access on 26.03.2016 In: <http://biblioteca.campusdominicano.org/1.pdf>).

<sup>22</sup> Ver BUBLIT, C., DESLE, M. *A duty to remember, a right to forget? Memory manipulation and the law*. In CLAUDEN, J. LEVY, N. Op cit. pp. 1279-1309.

<sup>23</sup> Ver GOOLD, I., MASLEN, H. *Responsibility enhancement and the law of negligence*. In CLAUDEN, J. LEVY, N. Op cit. pp. 1363-1381.