



Vol. 15 No. 4

Diciembre de 2012

# ¿DAMASIO HA CONSEGUIDO RESOLVER EL PROBLEMA DE LA MENTE? Y EL DUALISMO SE MANTIENE EN EL CAMINO

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## RESUMEN

Damasio es uno de los más famosos escritores neurocientíficos de nuestra era. Sus ideas relativas al dualismo, self y conciencia marcan las últimas dos décadas. Con este artículo haremos hincapié a algunos de los dos principales errores que Damasio sigue presentando en sus artículos y libros. Nunca tuvo coraje para reparar el error injusto atribuido a Descartes, y su propia teoría de la mente está lejos de ser aceptada claramente. Se presentarán algunas consideraciones sobre su trabajo y sus declaraciones filosóficas bien como su papel como un guardián del monismo de Espinosa o, al contrario, como un científico dualista que no se declara como tal.

**Palabras clave:** Damasio, Descartes, monismo, dualismo, Self, conciencia.

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# DID DAMASIO SOLVE THE PROBLEM OF MIND ANYWAY? AND THE DUALISM KEEPS ALONG THE WAY

## ABSTRACT

Damasio is one of the most famous neuroscientist writers of our era. His ideas about dualism, self and consciousness marked the last two decades. With this short paper I will stress some of the two major errors that Damasio keeps presenting in his papers and books. He never had courage to repair the unfair error attributed to Descartes, and his own theory of mind is far away of being clearly accepted. Some considerations about his work and his philosophical statements will be presented and his role as a Spinozian monism guardian or, *on contraire*, a hidden dualistic scientist will also be debated.

**Key words:** Damasio, Descartes, Monism, Dualism, Self, Consciousness.

With this article I will try to bring to discussion some of the hypothesis, assumptions and certainties presented by Antonio Damasio, related with the theory of mind, in the almost last 20 years. The four principal books of Damasio, which will be in an integrative analysis, are *Descartes' Error: Emotion, Reason, and the Human Brain* (1994); *The Feeling of What Happens: Body and Emotion in the Making of Consciousness* (1999); *Looking for Spinoza: Joy, Sorrow, and the Feeling Brain* (2003) and *Self Comes to Mind. Constructing the Conscious Brain* (2010).

In any moment I will be discussing the man (as a person), but the author (as an international opinion maker). I will never present any criticism with bad intentions, but it is time to clarify some aspects and, presenting already a first consideration: Damasio completely failed in the explanation of *how the mind is produced* and was really unfair with the inevitable Descartes. Considering the tools, the context, the sociocultural acceptance of problems related with the body and the mind, the support and knowledge that these two magnificent thinkers lived and received (Descartes at XVII Century, and Damasio at XX and XXI), I believe

that Descartes was a true visionary but also promoted a revolution yet sustained today in its principles, and Damasio is no more than a wonderful scientist, with a huge ability to transform his ideas in axiomatic realities, for the general readers.

### THE FORM

Firstly, I will consider the *form* as Damasio formulate their hypothesis. As a matter of fact, he does that in a way that always seems to be on the edge of a new paradigmatic discovery. In the book *Self Comes to Mind: Constructing the Conscious Brain* (2010), he states, in its Portuguese version, that more than try to explain the purpose of the book in the frame of a theory, he would try to present not a hypothesis but a “theoretical frame” (that is the same to say, a theory!). This is maybe the first great contradiction in this book because it is clear, at the end of the book, that Damasio pretended to present a consolidation of a theory that he started a long time ago with, probably, his most famous book, *Descartes’ Error* (1994), and yet he failed!

Let us take into consideration his major theory about Descartes: Damasio said that Descartes was wrong about the body & mind dualism. The question is, Damasio has a lot of other influential philosophers to attack or disagree, like Plato, that with his “Dialogue” (1952) presented a differentiation between the *matter* and the *form Kosmos aisthetos - Kosmos noetos*, in other words, *body* and *reason*. Why to choose Descartes? First, by his notoriety (has the proper Damasio assumes), and second, in our humble opinion, because if someone could really shows that Descartes committed such a great error this would be of remarkable importance! So, let’s look for the major Cartesian error, according to Damasio and his followers: Dualism, embodied in the famous expression *Cogito ergo sum* (*I think, therefore I am* – Descartes translated by Jhon Cottingham, 1984; 1641, 1644).

The regular reader could assume that with that expression Descartes stated that we only exist, as a human being, by the expression of the reason, and therefore, *I can only exist, if I think*. Not only this is not the principal Cartesian message as it has been misunderstood along centuries, even by Damasio!

Descartes never stated that *body* and *soul* (the expression most used at his time for the actual word *mind*) were completely separated realities. When he states “*Cogito, ergo sum*” (1637, 1644) or “*Sum res cogitans*” (1641) he states that although separated realities they have the same meaning: I am, I exist! I exist as a feeling and thinking thing, I exist like reasoning, I exist *because* and *while* I think. So, we have to consider that Descartes lived in a very philosophical and religious influenced context, and these statements strengthened his contemporary views: we only exist as thinking human beings, otherwise, we would be no more than things (but obviously we would exist!). That is why Descartes states that thinking is the human way of existence! Damasio (1994) considered that idea as a reductionist vision, attributing to Descartes the intention of saying that thinking and consciousness were the essence of the word *existence*. Damasio (1994) stated that Descartes understood the act of thinking as a separated process of body, and therefore, sustained the differentiation between body and mind. Again, this is not true! Descartes himself stated that the act of thinking was related with the influence between the body and his mechanical parts (in his words, *res extensa*) and the soul or mind or in his proper words the “*res cogitans*” (Descartes, 1637, 1641, 1644).

Damasio (1994) in his particular way of sustain his certainty that Descartes was wrong, almost use jokes about his own vision of a reductionist Cartesian Model of Pineal Gland.

The idea that the Pineal Gland could play a strong role in the connection between the body and the soul or mind, was firstly referred by the philosopher Herophilus, in a written record of the 3<sup>rd</sup> century B.C. (Arendt, 1994). Descartes, 13 centuries after that, stated that, associated with those ancient ideas about the interconnection of the body and mind, explained what was trying to say with the phrase *Cogito ergo sum* (*I think, therefore I am*), but, in an era that did not exist all the technology that Damasio and every one of us has to study the brain and its functions (!):

*“Although the soul is joined with the entire body, there is one part of the body [the pineal] in which it exercises its function more than elsewhere ... [The pineal] is so suspended*

*between the passages containing the animal spirits [guiding reason and carrying sensation and movement] that it can be moved by them...; and it carries this motion on to the soul ... Then conversely, the body machine is so constituted that whenever the gland is moved in one way or another by the soul, or for that matter by any other cause, it pushes the animal spirits which surround it to the pores of the brain" (p. 357).*

When I read this passage, for the first time, I understood that Descartes was having a glimpse of brightness. He reinforced the importance of the Pineal Gland (stated more than 13 centuries ago from his time, opening a window for all the discussion about the interconnection of body and mind), and also stated the importance of this relation on the different manifestations of body. He stated that the influence of the soul above the body, were such that "*whenever the gland is moved in one way or another by the soul, or for that matter by any other cause, it pushes the animal spirits which surround it to the pores of the brain.*" (Arendt, 1994, p. 357).

Obviously, words as soul, animal spirits, pores of the brain, were not the most indicated when Damasio wrote his *Descartes' Error*, but is also true that if Damasio probably wrote his book in a computer, and made a profound research about the mind machinery, with internet resources, that allow him to achieve unthinkable and incomparable amount of scientific demonstrated data (considering his own clinical and scientific experience, in an era of knowledge globalization), Descartes used, perhaps, his most powerful tool: his Cartesian clever human intuition!

I, as a young neuroscientist, just had to read this particular paragraph and automatically understood that Descartes was breaking a strong tradition of strong dualism, socially, culturally and religiously determined (remember what happened with Galileo Galilei, that had to deny his own convictions when he faced that mighty powerful Church Inquisition, in the *anno Domini* of 1633! – Boller & George, 1990 - the same years that Descartes had to choose to accept the identity of the soul, now named as mind, but also, keep some way of maneuver to rise the importance of the body, in interaction with cerebral functions).

Rodriguez-Pereyra (2008) explained this very well with his paper *Descartes's Substance Dualism and His Independence. Conception of Substance*. He stated that

*"Descartes maintained what I shall call 'substance dualism', namely that no substance has both mental and material properties. His main argument for substance dualism, the so-called 'separability' argument of the Sixth Meditation, has long puzzled readers. Descartes had at least two different conceptions of substance: one is a conception of substance as a subject of properties; the other is a conception of substance as an independent entity" (p. 69).*

So, my understanding of Descartes propositions (in XVII century, I shall remember) is that body and mind (soul) were independent entities (in his purely conception of entity – body is body, mind is mind and, at the same time, they had different properties, that Descartes already assumed as influencing each other).

I regret to state that, by his own means, Descartes and Damasio are as dualistic as each other. They are not equal, but their ideas are not so strongly opposed. The great differences are that Damasio has the strength, technology, the scientific and clinical knowledge and the collaborations of XX and XXI Century, which Descartes never had.

Let us finish this point with this question: what was the great contribution of Descartes and Damasio. In my humble opinion, Descartes had the courage, at his time, to bring mind / soul manifestations to the brain, and have the courage to present several written reports of that (1637, 1641, 1644). He presented a dual relation (body is body, mind is mind), but *on contraire* of what is too many times stressed, he already accepted the inter influence between these two set of entities. That was a great jump for humankind perception of body-mind relationship. And Damasio, what, in fact, has he brought to knowledge that could be considered a scientific revolution, a change of paradigm, a true new perspective of understand mind, scientifically proved? In my opinion, Descartes presented a change in the *mind paradigm*; Damasio "only" produced a strong field of knowledge and contributed to understand several particularities of body-mind relationship.

I would like to sustain this idea with this question: Damasio himself is not dualistic? Obviously it is!

In his late famous book *Self Comes to Mind: Constructing the Conscious Brain* (2010), he state that the two principal ideas that he pretend to show is, a) How brain produces the mind? and b) How the brain allows that this mind comes to conscious field?

The great conclusion for the first question, in the words of Damasio, was that mind is a product of neuronal activity. He presents his ideas about the *structure* (that he called *neural maps*), with the contribution of all parts of neuroanatomical structures, neurons, axonic properties, neuronal ensembles, and so on, and the results of its activation, that he called *images*. I don't know about other readers but, is there such a difference between this and what Descartes started, let us stress this, started to propose? I do not believe so!

Assuming the natural particularity of the brain structures and then accepting that the brain functioning is strongly related with his production (the mind and its influence in the entire body) and that the mind itself can produces changes from an ontogenetic point of view, in the structure of the brain is a natural and unavoidable form of the most pure dualism. Also in Damasio, Mind is Mind, and Body is Body. The harder and repeatedly one try to persuade scientific and general population, the greater is the flop produced in the brilliant Damasio career as a neuroscientist.

### **How brain produces mind?**

In my humble opinion, this question has never been answered in any of the four book of Damasio (1994, 1999, 2003, 2010). The only thing that Damasio presents are models of cognitive and emotional processes. More than that, many times I had the perception that Damasio was only giving deferent names for well-known processes in neuroscience history.

Let's take three of the major assumptions of Damasio: *Somatic markers*, *neural maps* and *images*.

With the expression Somatic markers, particularly on the field of emotions, Damasio stated:

*“... emotion is the representation and regulation of the complex array of homeostatic changes that occur in different levels of the brain and body in given situations. When making decisions, a crude biasing signal (a somatic marker) arising from the periphery or the central representation of the periphery indicates our emotional reaction to a response option. For every response option contemplated, a somatic state is generated, including sensations from the viscera, internal milieu, and the skeletal and smooth muscles” (Dunn, Dalgleish, Lawrence; 2006, p., 241).*

He also stated (Bechara & Damasio, 2005) that *“Because the term emotion tends to mean different things to the layman, the psychologist, and the physiologist, we have used the term ‘somatic’ to refer to the collection of body related responses that hallmark an emotion. Somatic refers to the Greek word ‘soma,’ i.e., body” (339).*

Finally, and concluding the idea, *“Somatic markers can reflect actions of the body proper (the ‘body’ loop) or the brain’s representation of the action expected to take place in the body (the ‘as-if’ loop). In other words, the brain can construct a forward model of changes it expects in the body, allowing the organism to respond more rapidly to external stimuli without waiting for that activity to actually emerge in the periphery” (Dunn, Dalgleish & Lawrence; 2006, p. 241).*

Well, for me, these descriptions are not so strongly different than what was supported for motor activity conditioning, as well as almost every one of human response to a given stimulation that at a given time in history was stressed as Classical and Operating Conditioning. William James (1890, 1911) proposed a model emotions activation and is understandable that Damasio disagree. Obviously, the brain (as a structure) and the mind (as a result of brain activity) should have an important role in preparing the body and its different states to respond face a particular stimulation. But, to state that both James and Damasio are wrong is, in my opinion results from a strong dichotomist view. Obviously, sometimes, is the body that is activated first, and it prepares the mind to react more rapidly in the next time that the experience occurs. And obviously, sometimes is the mind that has the opportunity to process all somatic and emotional (as well



as cognitive) data, speeding up its ability to respond, in the next time that occurs. And sometimes both processes occur at the same time! Why to claim one only hypothesis? Why do not accept the coexistence of both?

Watson (1913) with the first great scientific studies in mind and conscience in the origin of actions – or behavior, a word more used in that time, Pavlov (1927) with the conditioned reflexes theory, Thorndike (1901) with his Law of Effect and Skinner (1953), with his theory of learning, together explained the relation stressed by Damasio between the somatic experiences and its major coordinator, the mind (even Pavlov, in a very physiologist point of view, because there is no mind without brain physiology!).

We have to join to this discussion the works of Hebb (1949), which with his book *Organization of behavior: A neuropsychological theory*, presents the bases of what were known as neural ensemble (Sherrington, 1906). Together they present us with the greatest contributions on the understanding of how a conjunct of neurons can adapt and promote the necessary neural plasticity according with brain stimulation. And they do not restrict this knowledge to the brain. For instance, in the late years of XX Century Georgopoulos, Lurito, Petrides, Schwartz & Massey (1989) and Gergopoulos, Kettner & Schwartz (1988) stressed the way neurons could influence and engrave structured motor activities, in order to promote his activation, in a very similar way that Damasio promoted with the Somatic Marker Theory.

More than that, I believe that Damasio tried unsuccessfully to create a new theory of mind. Damasio founded his hypothesis in the monism theory of mind, particularly with the books *The Feeling of What Happens* (1999) and *Looking for Spinoza* (2003). Spinoza and others tried to elaborate a monist vision of the world, in which the human mind is conceived as being immersed in nature, and Damasio tried to redeem the Spinozian monism, proposing that the mind is based on biological bases, without, however, be reduced to these known microbiological mechanisms (Damasio 1994; 1999, 2003).

Although we have to accept that this attempt of Damasio to actualize the Spinozian monism is acceptable (although it seems very forced try to present

Spinoza as a proto biologist), we have to remind that Damasio and Spinoza assumed that for Descartes, *soul* and *body* were two completely independent and unrelated entities. We have seen that this is not entirely true. And even that Descartes had stated that, we have this question: what exactly Damasio wants to say when states that mind is based on biological bases, without, however, being reduced to these known microbiological mechanisms?

Does this separate them? No! Does this allow us to understand how the mind arises from microbiological bases? No!

The neural maps, as an hypothesis of how the brain produces a “map” of body states and mental “images” (as the mind results), proposed by Damasio, although similar to Spinoza’s concept of mental activity as a conceptualization of body processes do not solve the problem of mind.

Damasio himself assumes that the problem of mind is not solved, and yet it is abundantly stressed in the propaganda to his late book *Self Comes to Mind* (see the last paragraphs of part III).

Damasio assumes that what we do know in nowadays is how brain works (with neurons, structures, biochemical processes, etc.). He assumes that we understand some processes of mind construction but he clearly assumes that we have to continue to fight in order to not be defeated, because we do not know yet how the *Self Comes to Mind* and what is that processes that Damasio called *Constructing the Conscious Brain!*

## CONCLUSION

Several authors do not accept Damasio ideas.

Fudjack (2000) criticized the way Damasio claims to be a solver of the consciousness problem, almost ignoring the great efforts made by scholars until 1980 (like for example C.O Evans and others).

Like Fudjack, Searle (2011) states that probably one of the greatest errors that Damasio is committing is stressing the role of self and not of the conscious mind:

*"I am sympathetic with the basic intuition that drives Damasio's investigation, namely that in any account of consciousness we need to explain how our conscious states are experienced, not just as a sequence of isolated qualitative subjective events, but as 'my experiences.' This is part of what we need to explain. He proposes that we should take this characteristic of the self and treat it as the basis of consciousness. In the end that may be the right approach, but he does not give convincing reasons to suppose that it is. I believe a more plausible approach is to suppose that nonpathological forms of consciousness already come with a sense of the self. Our sense of self is a product of a certain sort of consciousness, not conversely. That is why we can lose that sense in certain pathological forms of consciousness".*

Brinkmann (2006) presents strong critics to four of the major ideas of Damasio saying that is unbearable to state *a) that we observe our feelings, b) that feelings necessarily involve experiences of changes in body states, c) that feelings are private, and d) that feelings are always caused* (p. 366).

The somatic marker hypothesis is also very criticized by several authors like Dunn, Dalgleish and Lawrence (2006), particularly in what they call some *"conceptual reservations about the novelty, parsimony and specification of the somatic marker hypothesis"*.

We could present dozens of other authors that scientifically disagree with Damasio ideas, and I believe that this occurs because in every book that Damasio publish, at the beginning he present such remarkable pitfalls that he will be explain and solve, and at the end remains, in the great majority of the ideas, that not only they were not solved as, probably, Damasio is losing himself in the attempt to solve too many giant scientific problems at a single time life.

Damasio, could start to slow down his intents. Should focus in particular investigation, which could help to solve general problems (scientifically and clinically speaking). Could start accepting his own difficulties and limits. Could repair some errors (like that committed with Descartes). Could assume himself as a dualist, once he cannot explain how the mind emerge from brain structures and becomes conscious, and with all respect, could give to his next novel the name: *My remarkable Best Seller of Errors*.

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