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Studi

Searle's New Mystery, or, How Not to Solve the Problem of Consciousness

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Riassunto *Il nuovo mistero di Searle, ovvero: come non risolvere il problema della coscienza* – John Searle ha più volte affermato di aver risolto il problema mente-corpo, in particolar modo per quel che riguarda il mistero della coscienza. Obiettivo di questo lavoro è presentare e analizzare la sua teoria del naturalismo biologico, dalla sua prima formulazione, alla metà degli anni '80, sino alle sue ultime manifestazioni. La nostra analisi mostrerà che il naturalismo biologico di Searle presenta molti problemi teorici e incongruenze logiche, che non depongono a suo favore come buona spiegazione sia per il problema della coscienza sia per il problema mente/cervello. In definitiva, lungi dall'offrire una soluzione al problema della coscienza, Searle finisce col fare della coscienza un nuovo mistero.
PAROLE CHIAVE: John Searle; Coscienza; Naturalismo biologico; Problema mente-corpo; Filosofia della mente.

Abstract John Searle repeatedly claims to have offered a solution to the mind-brain problem, especially as regards the mystery of consciousness. The aim of this paper is to present and analyse Searle's theory of biological naturalism, from its earliest expression in the 1980s to his most recent works. Our analysis shows that Searle's biological naturalism suffers from many theoretical difficulties and logical inconsistencies, which disqualify it as a sound explanation for consciousness and the mind-brain problem. We conclude that, far from offering a solution to the problem of consciousness, Searle ended up creating a new mystery of consciousness.
KEYWORDS: John Searle; Consciousness; Biological Naturalism; Mind-Body Problem; Philosophy of Mind.

JOHN SEARLE HAS BEEN RECOGNIZED as one of the most original and influential philosophers of recent decades. His undeniable style, his sharp criticism of intellectual fashions and absurd theories as well as his philosophical proposal of presenting a unified theory for all of human reality, have attracted many sympathizers and supporters. A contemporary philosopher has even claimed that «his work represents a new way of doing philosophy».[1]

The range of topics discussed by Searle is, indeed, impressive, even bringing to mind the philosophers of the late nineteenth century and their ambition of system-building. Following the Oxford analytical tradition of the mid-twentieth century, Searle began his career in the field of the philosophy of language, developing a theory of speech acts from the early

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works of John Austin.[2] However, some years later, he began to realize that language itself, though crucial to philosophy, needed a non-linguistic basis, which led him to address issues in the so-called philosophy of mind and to the investigation of the biological and psychological aspects of human beings.[3] From the second half of the 1990s, he turned his attention to society and its institutions, in search of a social ontology.[4]

Since then, he has revised and developed his initial positions, seeking to integrate all of his analyses into a general theory of reality.[5]

This brief overview of Searle's work serves as a warning and general indication that, within the space limits established here, it is impossible to analyze his thinking as a whole, unless, of course, in a caricatural way. Therefore, what I propose to do here is something much more modest, significantly restricting the scope of my analysis.

I will present and discuss in its essential aspects Searle's *biological naturalism*, namely, his alleged solution to the mind-body problem, especially in regard to consciousness.[6] In fact, he firmly believes that he has transformed the mystery of consciousness into the problem of consciousness by treating it as a natural biological phenomenon like digestion or photosynthesis.

To conduct my analysis, I will follow this path: 1) initially, I will explain the meaning of the term "biological naturalism" in the context of the philosophy of mind; 2) then I will outline Searle's theory of intentionality and its connection with biological naturalism; 3) third, I will analyze specifically how Searle addresses the question of consciousness; 4) finally, I will discuss what I consider to be the main obstacles to this approach.

The definition of biological naturalism

The term "naturalism", although widely used in scientific and philosophical discussions since the twentieth century, does not always designate a single theory or idea. In a very general sense, we can say that it designates a kind of philosophical monism, by rejecting all forms of dualism.[7] However, when we turn our attention to its more specific meaning, we no longer find a single characterization. On the contrary, there is little or no consensus regarding its meaning, as acknowledged by one of its contemporary defenders.[8] We should, therefore, always pay attention to the meaning it acquires in each specific context of use.

In spite, however, of the lack of a consensual definition, it is possible to at least outline a more general classificatory framework, in order to delimit, albeit incompletely, some conceptual limits to the use of the term. In general, we can distinguish between ontological and methodological naturalism.[9] In the former, emphasis is placed on the structure and contents of reality. In other words, on clearly stating what type of thing exists or does not exist (e.g., trees exist, angels and disembodied spirits do not exist). In the latter, only a commitment to how to investigate and obtain knowledge of reality is established, maintaining a neutral stance with respect to ontological questions (e.g., regardless of what the ultimate reality of things is or should be, we can only know something about the real world through science). What is important is to safeguard the authority of the scientific method and of the empirical sciences.

Also useful for our purposes is the distinction suggested by Craig and Moreland[10] between "strong naturalism" and "weak naturalism": the former corresponds to a strict physicalism and is directed toward the description and/or explanation of all phenomena in terms of physics, chemistry or biology, whereas the latter concedes the existence of properties and/or irreducible emergent entities, such as, for example, the mind and consciousness.

Based on these preliminary considerations, we can then begin our analysis of Searle's proposal. In a recent paper, entitled "Biological Naturalism" intended to explain consciousness as a biological phenomenon, the philosopher clarifies his position as follows: «"biological naturalism" is the name I have given to an approach to what is traditionally called the "mind-body problem"»; more specifically – he adds – «biological naturalism is a theory of

mental states in general».[11]

From this simple statement, we can deduce that Searle's naturalism is first and foremost an ontological naturalism, as its central concern is to present a solution to the problem of the real relationship between the mind and the brain. In other words, Searle wants to explain what the mind, consciousness, beliefs, etc. are, which presupposes, therefore, the acceptance of their existence. But the adjective "biological" means something more, namely, that Searle wants to explain them as part of biology, which suggests, in principle, a strong naturalism. However, this first impression soon reveals itself as inadequate. Later in that same text, we find him defending emergentism, first-person ontology, the irreducibility and the causal efficacy of consciousness, which leads us to classify his proposal as a weak naturalism. Now, the question immediately arises of whether and in what sense it would be possible to sustain a weak biological naturalism without dualism.

Before answering this question, which in my view is crucial to Searle's entire undertaking, it is necessary to analyze in greater detail the foundations and the general articulation of the central elements of his approach. This is what we shall do in the following two sections.

Intentionality and the mind-brain problem

As some interpreters of Searle's work have aptly noted, the notion of intentionality is the central element in his thinking.[12] Not only biological naturalism, but his entire philosophical program is based on this notion. Our analysis, therefore, takes the book *Intentionality*, originally published in 1983, as its starting point.

Right in the *Introduction*, Searle makes it clear that the fundamental aim of the book is to provide a foundation for his previous two books on language.[13] In other words, what he intends to do is to explain the essential characteristics of language starting from the fundamental characteristics of the mind. However, in the next pages, he reveals a much more ambitious project, which involves both the solution to the mind-body problem and a general explanation of human behavior.[14] And it is precisely in the context of this broader project that the concept of intentionality, considered as an irreducible feature of the human mind, is introduced.

According to Searle himself, «Intentionality[15] is that property of many mental states and events by which they are directed at or about or of objects and states of affairs in the world».[16] Thus, every belief implies something that is believed (e.g., "I believe in the existence of corrupt politicians"), as every desire implies something that is desired (e.g., "I wish every politician involved in corruption would be arrested and removed from public life."). It is worth noting, however, that not all mental states have Intentionality. A state of generalized anxiety, for example, which is not directed at any particular situation, is a not an Intentional mental state. Likewise, still according to Searle, we must not confuse Intentionality with consciousness, since there are, on the one hand, unconscious Intentional states (e.g., a dormant fear), and, on the other, non-Intentional conscious states (e.g., a general feeling of well-being).[17] In summary, Intentional mental states represent things and states of affairs in the world.

Later, Searle provides a more detailed account of his theory. «Every Intentional state» - he says – «consists of an *Intentional content* in a *psychological mode*».[18] This means that a single Intentional content (the existence of corrupt politicians) may be combined with different psychological modes (belief, satisfaction, indignation, etc.), and a single psychological mode (belief) may be associated with several Intentional contents (the existence of corrupt politicians, the corruption of the legal system in general, etc.) In addition, every psychological state has a *condition of satisfaction* with regard to that which is necessary for its being successful.[19] For example, my belief in the existence of corrupt politicians will only be satisfied if indeed at least one corrupt politician has existed or still exists, my wish that those involved in corruption be arrested will only be satisfied if they are indeed arrested, and so on.

Another central point of Searle's theory is the distinction between intrinsic and derived

Intentionality, which allows us to understand the relationship between mind and language. Only mental states are intrinsically Intentional, in the sense that Intentionality is a basic and irreducible characteristic of the mind. Speech acts, which involve a physical realization (e.g., a sound, a graphic sign, a gesture), have their Intentionality derived from that primitive Intentionality of the mind.[20] Human actions (e.g., my commute from home to the university to give a lecture) also derive their meanings from human intentions, which are a type of primitive Intentional state.[21] But how is this possible? How does this transmission of intentionality occur?

To explain this possibility, Searle uses the concept of *Intentional causation*, which is a kind of efficient causality related to the capacity of the mind to impose Intentionality on non-Intentional entities and phenomena.[22] In the case of human action, for example, an Intentional state (my intention to give a lecture) causes a movement of my body (my commute to the university), and it is in the experience of the action itself that we become aware of the existence of that causation. It is, therefore, through this kind of efficient causality that the mind interacts with the non-mental world, generating linguistic events, communication with other organisms, social institutions, etc.

Our presentation of Searle's theory thus far is still insufficient to address the central problem of this article, since we have not touched on the question of the brain processes involved. One could ask: but, after all, what is the relationship between the theory of intentionality and biological naturalism? Or, more specifically, how can the Intentional states approach solve the mind-brain problem?

In fact, throughout the first nine chapters, what Searle does is simply defend the actual existence of a class of primitive, irreducible and non-eliminable basic primitive mental phenomena: the Intentional states. However, by opting at the beginning to do a primarily logical analysis of Intentionality (in terms of Intentional contents, conditions of satisfaction, etc.), he must restrict himself to the description of its basic features, without being able to say anything about the ultimate reality of these phenomena. Nevertheless, it is precisely to overcome this limitation that he changes direction in the tenth and final chapter of his book, trying to show how mental states are actually present in the natural world. In this context, the expression "biological naturalism" appears for the first time:

> On my account, mental states are as real as any other biological phenomena, as real as lactation, photosynthesis, mitosis, or digestion. Like these other phenomena, mental states are caused by biological phenomena and in turn cause other biological phenomena. If one wanted a label, one might call such a view "biological naturalism".[23]

To defend the viability of his proposal, Searle uses two different arguments. In the first, he says there is no problem in assuming that mental states are at the same time caused by the brain and realized in the brain. To illustrate how this would be possible, he uses an analogy with the property of water being liquid:

> The relation between the molecular behavior and the surface physical characteristics of the water is clearly causal. If, for example, we alter the molecular behavior, we cause the surface features to change; we get either ice or steam depending on whether the molecular movement is sufficiently slower or faster [...] The liquidity of a bucket of water is not some extra juice secreted by the H_2O molecules. When we describe the stuff as liquid we are just describing those very molecules at a higher level of description than that of the individual molecule.[24]

In the second argument, Searle addresses the question of Intentional causation. How is it possible to explain, for example, that the intention to lift my arm is the cause of the fact that my arm is being raised? Once again, he appeals to an analogy with the physical world:

> Consider the explosion in the cylinder of a four-cycle internal combustion engine. The

> explosion is caused by the firing of the spark plug, even though both the firing and the explosion are caused by and realized in phenomena at a micro level, at which level of description terms like "firing" and "explosion" are entirely inappropriate. Analogously, I want to say that the intention in action causes the bodily movement even though both the intention in action and the bodily movement are caused by and realized in a microstructure at which level terms like "intention in action" and "bodily movement" are inappropriate.[25]

At the end of his presentation, Searle admits that his analogies are imperfect and that, in fact, we have no idea of how the brain produces Intentional mental states. However, he clearly believes in the future progress of neuroscience as the key to solving the problem:

> For all we know the type of realizations that Intentional states have in the brain may be describable at a much higher functional level than that of the specific biochemistry of the neurons involved. My own speculation, and at the present state of our knowledge of neurophysiology it can only be speculation, is that if we come to understand the operation of the brain in producing Intentionality, it is likely to be on principles that are quite different from those we now employ, as different as the principles of quantum mechanics are from the principles of Newtonian mechanics.[26]

Consciousness as a biological phenomenon

One year later, Searle published *Mind, Brain and Science*, where he again defends the biological naturalism outlined above, reinforcing and further expanding the scope of his analogies with physics through the macro- and micro-structural levels of description. This time, however, on presenting the basic features of mental phenomena, he says that «the most important of these features is consciousness»,[27] and also that it «is the central fact of the specifically human existence».[28] This means that Intentionality ceases to be Searle's central target, giving way to the broader problem of consciousness. However, not yet having a more precise definition and treatment of the problem, does not prevent Searle from saying that his solution is simple: we do not know how, but we are certain that specific electrochemical activities between neurons cause consciousness.[29]

It is only with *The Rediscovery of the Mind*, published in 1992, that Searle presents for the first time a systematic treatment of consciousness, thus justifying his earlier declaration that it is the mental phenomenon par excellence. In the Introduction, he reiterates that he considers consciousness to be the principal mental phenomenon and sets as one of the objectives of the book offering «a serious examination of conscience on its own terms».[30] Thus, he intends to overcome what he sees as the main misconceptions of the philosophical tradition (dualism, materialism, etc.) and to lay the foundation for an innovative approach to mental life. Let us see how this happens.

After denying the possibility of a precise definition of consciousness, whether in terms of necessary and sufficient conditions, or by the method of *genus et differentia*, Searle announces his goal of placing it as a natural phenomenon within the scientific worldview. And it is precisely here that we receive the first big news of the book: he presents two scientific theories he considers to be already proven and unquestionable, namely, the atomic theory of matter and the theory of evolution. The former states that subatomic particles and their causal and systemic relationships are the ultimate reality of the universe, so that many macro-phenomena can always be explained by micro-phenomena (e.g., water boils because the released kinetic energy increases the internal pressure of the H_2O molecules). The latter theory analyzes biological phenomena in terms of the genetic mechanisms that, acting at the molecular level, produce the molar characteristics of living beings (e.g., plants perform photosynthesis because their biochemical structure de-

termines the secretion of auxin, causing the leaves to turn toward the sun). It is, therefore, in relationship to both theories that Searle sees the only possibility of understanding consciousness.[31] As a summary of his proposal, he presents the following picture:

> Our world picture, though extremely complicated in detail, provides a rather simple account of the mode of existence of consciousness. According to the atomic theory, the world is made up of particles. These particles are organized into systems. Some of these systems are living, and these types of living systems have evolved over long periods of time. Among these, some have evolved brains that are capable of causing and sustaining consciousness. Consciousness is, thus, a biological feature of certain organisms in exactly the same sense of "biological" in which photosynthesis, mitosis, digestion and reproduction are biological features of organisms.[32]

Soon after, however, Searle acknowledges that conscious states have a particularity not found in other natural phenomena: subjectivity. And he understands this characteristic in ontological terms, that is, it concerns a way of being. When, for example, I am sad, it is a phenomenon that exists only for me, in the first person. If I were eliminated from the experience, that sadness would immediately cease to exist. Another person can believe me, understand and even empathize with my sadness, but he or she cannot feel "my" sadness. It is inherent to consciousness, therefore, to exist always for someone, to be always tied to a subject. However, this mode of being entails an epistemological problem, in that consciousness, being essentially a first-person phenomenon, cannot be understood in the third-person perspective, like other natural phenomena. This is the reason why we can never observe another person's consciousness, but only his expressions and behavior.[33]

The next step is to explain this irreducible ontology of the mental. It is at this point that Searle introduces another innovation in his approach, namely, the defense of emergentism. Again, the strategy consists in offering analogies with other examples from the natural world. Let us suppose, for example, according to Searle, the existence of a particular chair. This chair, considered as a system of molecules, has some characteristics, such as its overall shape and its total weight, which are not characteristics of any of its individual molecules, only of the system as a whole, but that can be deduced from the combination and arrangement of those individual elements. There are, however, other characteristics of the "chair" system, such as solidity, which cannot be understood only by the composition of the individual molecules, requiring an explanation in terms of their causal interactions. In this case, we would be facing a causally emergent characteristic of the system.[34] Based on these analogies, Searle sees no difficulty in explaining this aspect of consciousness:

> On these definitions, consciousness is a causally emergent property of systems. It is an emergent feature of certain systems of neurons in the same way that solidity and liquidity are emergent features of systems of molecules. The existence of consciousness can be explained by the causal interactions between elements of the brain at the micro level, but consciousness cannot itself be deduced or calculated from the sheer physical structure of the neurons without some additional account of the causal relations between them.[35]

But would this not represent a form of reductionism? According to Searle, we can say that his position implies a causal reduction, to differentiate it from other forms of reduction (logical, theoretical, ontological), but his main concern is to prove that his proposal does not entail an ontological reduction. In other words, although consciousness is a causally emergent property of neuronal processes, and its existence can be thus explained, it is not possible to reduce it ontologically, saying, for example, that it is nothing more than that same set of cerebral

processes X that causes it, because, in this case, we would be losing sight of its very subjective characteristic.[36]

This leaves unanswered the question of why only this phenomenon or property of the natural world resists an ontological reduction, while in all other cases a causal reduction implies an ontological reduction. Why, after all, can we not redefine sadness in terms of the underlying neurochemical processes, in the same way that we redefine heat in terms of the kinetic energy of molecules? The answer, according to Searle, is that in the former case we cannot neglect the subjectivity of the experience in question, as it is the very reality that we want to investigate.[37]

Finally, even acknowledging the irreducibility of consciousness, Searle insists that throughout this discussion there is no mystery involved at all. It is only a consequence of the mode of knowledge that we choose. Nothing prevents, however, an epistemic revolution from happening in the future, thus enabling an ontological reduction.

> Consciousness fails to be reducible, not because of some mysterious feature, but simply because by definition it falls outside the pattern of reduction that we have chosen to use for pragmatic reasons. Pretheoretically, consciousness, like solidity, is a surface feature of certain physical systems. [...] When I speak of the irreducibility of consciousness, I am speaking of its *irreducibility according to standard patterns of reduction*. No one can rule out a priori the possibility of a major intellectual revolution that would give us a new – and at present unimaginable – conception of reduction, according to which consciousness would be reducible.[38]

After the publication of *The Rediscovery of the Mind*, Searle has addressed the problem of consciousness in other works, among which *The Mystery of Consciousness* and, more recently, *Biological Naturalism* stand out. However, as there is no change in the structure of his arguments and no new elements in his approach, we can say that these works simply repeat the same elements presented here: consciousness as a biological phenomenon caused by the brain; analogies with biological functions such as digestion.[39] However, as in previous works, Searle acknowledges that we still do not know how the brain causes the mind, which leads us to postpone its definitive solution.

Criticisms of Searle's approach

Despite Searle's self-confidence, his biological naturalism as a solution to the mind-brain problem, especially to the problem of consciousness, presents some problems and inconsistencies, and has received many criticisms, which I would now like to analyze and discuss.

As a whole, Searle's position has been criticized for not offering any scientific novelty, for only restating an old commonsensical and popular view of mind. Dennett, for example, finds in Searle's *Rediscovery of Mind* a kind of popular psychology: «Unsullied common sense is his chief ally, and his frequent invocations of common sense and its endorsement of his views give the book a characteristic populist flavor».[40] Along the same lines, Churchland contrasts Searle's book with real science:

> What Searle's book resolutely rediscovers is not the mind, but our commonsense, prescientific, folk-psychological conception of the mind. The aim of science, by contrast, is to discover a new and better conception. In this endeavor, Searle's book is not likely to help.[41]

This line of criticism is not fruitful, unless one can accomplish two things: a) a systematic exposition of the fundamental tenets of so-called folk psychology or common-sense psychology, which would allow us to compare and classify similar theories; b) an empirical proof of a scientific theory which is radically opposed to the former, something both authors believe will happen in the future. Unfortunately, neither Dennett nor Churchland accomplish either, which leads me to the conclusion that their criticism is vague and has only a rhetorical character.[42]

The real difficulties with Searle's approach lie elsewhere. First, Searle does not seem to be too far from the philosophical tradition he criticizes and wants to overcome. Despite his repeated claims that his biological naturalism is novel with respect to its predecessors, what one can easily see, in fact, is a repetition of several elements from this same tradition. It is impossible not to note, for example, the influence of Brentano and Husserl on his theory of intentionality, neither of whom Searle ever quotes or mentions.

Likewise, the analogies employed by Searle between consciousness and biological functions such as digestion have been extensively used by materialists of different sorts since at least the eighteenth century, as I have shown elsewhere.[43] Let us consider, for example, the following citations of two leading representatives of materialism from different cultural traditions:

> To form an accurate idea of the operations from which thought results, it is necessary to consider the brain as a special organ designed especially to produce it, as the stomach and the intestines are designed to make the digestion, the liver to filter bile, the parotids and maxillary and sublingual glands to prepare the salivary juices.[44]
> ...
> I think that every natural scientist, who thinks in a logical way and with consistency, will come to the conclusion that all those capacities that we apprehend under the concept of mental activities are only functions of the brain substance; or, to express myself here in a more rudimentary way, that thoughts relate to the brain in the same way as the bile to the liver or urine to the kidneys.[45]

From these passages, we can easily see that Searle is repeating a very old discourse on how to conceive of the brain causing or producing the mind. There is nothing new at all, despite Searle's conviction that he is presenting a novel approach to the subject.

Moreover, contrary to Searle's intention to avoid Cartesianism,[46] his theory of consciousness reproduces some Cartesian elements, including the thesis that consciousness is the essence of the mental. This has led some of his critics to see his theory as a new form of Cartesianism.[47] Churchland, for example, states that «what unites him with Descartes is his firm insistence that mental phenomena form an *ontologically distinct class of natural phenomena*».[48]

Finally, the categories with which Searle constructs his arguments come from the same tradition he wants to avoid (subjective x objective, first-person x third person, etc.). Here he comes to mention some philosophers within the contemporary philosophy of mind, who have before him defended the irreducibility of consciousness, like Thomas Nagel[49] and Frank Jackson.[50] However, according to him, they have mistakenly treated subjectivity as merely epistemic, while for him it is ontological. This could constitute in fact the novelty of his contribution: to reconstruct the epistemic argument as an ontological one. Unfortunately, his efforts notwithstanding, Searle does not succeed in presenting an independent ontological construal, since everything he says is based upon the epistemic properties of human experience, as Churchland has also noted.[51] In the end, he gives no pure ontological criteria for discriminating mental states and processes as being in principle irreducible to brain states and processes, thus failing to fulfill his promise.

To sum up, despite his declarations to the contrary, Searle has not been able to escape the philosophical and theoretical tradition that he sees as fundamentally mistaken. Besides that, his position on the subject brings no big novelty to the debates in the field. Let us now analyze the way he presents his ideas.

Regarding the structure of his arguments, Searle's approach is anchored in at least three fundamental theses: 1) consciousness is a biological phenomenon, that is, physical; 2) it is entirely caused by the behavior of cerebral micro-phenomena; 3) it has causal power.

Starting with the thesis of mental causation (thesis 3), it is important to mention Kim's critique.[52] According to Kim, if a mental state X

has causal power over another mental state Y, then Searle has to accept two sufficiently distinct causes for a mental event: a mental phenomenon and a biological phenomenon. However, Kim argues, if every mental event can be causally explained by a biological process, why appeal to its mental cause? If an intention Y was caused by the desire X, why not replace it with its causal biological processes?

Still concerning mental causation, we should ask how exactly consciousness, which is an emergent cerebral property, is able to cause, for example, the movement of my arm? Searle admits only, as an obvious fact, that it happens, but never explains the manner in which this happens.

But the main problems of Searle's proposal, in my view, are related to theses 1 and 2. First, Searle seems to have an obsolete and simplified view of the working of the human brain. As Freeman and Skarda[53] have pointed out, he still understands the overall functioning of the brain in terms of the behavior of neurons, whereas many scientists have abandoned the cellular level of explanation. In fact, it is worth adding that there are now several competing theoretical models of the brain. So, it would be necessary to first to decide which one is the candidate for explaining consciousness, in order to subsequently judge its adequacy.[54] This means that Searle's model is far from corresponding to a model of the human brain well accepted in contemporary science, to which he claims to be faithful.

I would like to discuss further his thesis of the causal relationship between the macro and micro levels. If reality, as Searle states, is actually composed of particles in hierarchical relationships, it seems then arbitrary to determine that consciousness as a physical phenomenon should be explained by the neuronal level of activity, unless we have a good justification for this. Why not appeal to the level of molecules, atoms or subatomic particles? Why not seek explanation for cerebral phenomena in quantum physics, as seems to be the new scientific hope? The atomic theory of matter accepted by Searle does not predict a priori any ontological privilege at any level of activity of the particles, which makes, in my view, his proposal arbitrary and lacking in scientific evidence. Moreover, Hannay[55] noted that the *bottom-up* relationship defended by Searle to explain natural phenomena is over simplified, in that it isolates molecules from their dynamic context, thus ignoring *top-down* systemic influences. In this case, consciousness could not be entirely explained by *bottom-up* causation, as Searle states.

It is true that he sometimes shows awareness of the hypothetical character of his model, when he says, for example:

> I have been mostly talking as if the neuron is the basic functional unit, and perhaps that is right. But at the present we do not know that it is right. [...] It might turn out that the functioning causal mechanisms require lots of neurons, as is suggested by Edelman's explanations at the level of neuronal maps, or perhaps the explanatory units are much smaller than neurons, as is suggested by Penrose's discussion of microtubules.[56]

This does not stop him, however, from continuing to talk as if it had already been demonstrated *that* or *how* the brain causes or produces the mind.

The great weakness of Searle's proposal, however, lies in its incoherence and inconsistency. First, biological naturalism is, contrary to what he continues to assert,[57] a form of dualism, in that it involves two very distinct types of biological phenomena: one with subjective ontology and another with objective ontology. To classify this new kind of dualism, Corcoran coined the term "biological dualism".[58] But how is it that a property of the brain can be accessible only to itself (consciousness) and how could the natural world have bifurcated this way, producing subjective and objective biological properties? Unfortunately, Searle does not offer an explanation for this curious fact.

Another point related to the inconsistency of biological naturalism is that the analogies presented by Searle are irrelevant to the understanding of consciousness. Comparing the so-

lidity of a rock or the liquidity of water to a conscious state is to lose sight of the very essence of the phenomenon under investigation. Now, if all emergent physical properties can be observed in the third-person, with the sole exception of consciousness, which can only be accessed in the first-person, what is exactly the sense of comparing it with phenomena from which it diverges? And if there is no other emergent physical property comparable to consciousness, then what is the reason for insisting on the fact that it is still a physical phenomenon? Here as well, Searle offers us no answer.

I would like to consider, finally, Searle's contradictory statements relating to the biological nature of consciousness, which reinforce my assumption of the inconsistency of his biological naturalism. Since he first used this term in his book *Intentionality*, he has repeated that the solution to the mind-brain problem is simple and that there is no mystery regarding consciousness, as it is a biological phenomenon as natural as digestion. Simultaneously, however, Searle himself has also repeated for nearly 30 years that we do not have the slightest idea of how this would be possible. In one of his most recent works, he again recognizes the difficulty: «As yet, nobody knows the answer to these questions – how consciousness is caused by cerebral processes and how it is carried out in the brain?»[59] Nevertheless, if no one knows the answer, what sense is there in a statement like «we know in fact that brain processes *cause* consciousness»?[60]

Final remarks

Our brief presentation and discussion of Searle's biological naturalism had the objective of highlighting the essential characteristics of his proposal. We are aware that some details could not be dealt with here due to space restrictions. However, this does not prevent us from concluding our analysis with a general assessment of the same.

Based on what has been presented, we can say that Searle's biological naturalism presents serious difficulties. If our analysis is correct, it is inconsistent, which disqualifies it as a theory of explaining consciousness and mental phenomena in general. Now, if it is not possible to reduce the first-person ontology of consciousness to the third person ontology of traditional biological phenomena, how can a philosopher or scientist explain consciousness via the brain, that is, in the third person? The overall proposal is, therefore, unachievable, if we accept Searle's own premises.

But if biological naturalism cannot be a theory per se, what status could be conferred upon it? In truth, it seems to resemble more a prophecy, anchored in a dogmatic and, in my view, ingenuous attitude toward modern science. Like almost all prophecies, Searle does not announce the precise date of its fulfillment, because if announced, he would be running a serious risk of being refuted. Instead, he only provides very general and vague ideas, so that they can continue to be maintained indefinitely as a promise to be fulfilled in an indefinite future. Maybe it is exactly this feature that has allowed Searle to maintain it already for thirty years, even without any empirical evidence, something which would hardly be conceded to a scientific theory. What Searle has to offer, therefore, is not even remotely a solution to the problem of consciousness, but simply the repetition of an old rhetorical strategy, which can be renewed indefinitely. In his attempt to transform the mystery of consciousness into the problem of consciousness, all he has managed to do is create a new mystery, to which he does not know the solution.

Notes

[1] B. SMITH, *John Searle: From Speech Acts to Social Reality*, in: B. SMITH (ed.), *John Searle*, Cambridge University Press, Cambridge 2003, pp. 1-33, here p. 29.

[2] See J. SEARLE, *Speech Acts*, Cambridge University Press, New York 1969; J. SEARLE, *Expression and Meaning*, Cambridge University Press, New York 1979.

[3] See J. SEARLE, *Intentionality*, Cambridge University Press, Cambridge 1983; J. SEARLE, *Minds, Brains and Science*, Harvard University Press,

Cambridge (MA) 1984; J. SEARLE, *The Rediscovery of Mind*, The MIT Press, Cambridge (MA) 1992.
[4] See J. SEARLE, *The Construction of Social Reality*, Free Press, New York 1995; J. SEARLE, *Mind, Language and Society*, Basic Books, New York 1998.
[5] See J. SEARLE, *Rationality in Action*, The MIT Press, Cambridge (MA) 2001; J. SEARLE, *Mind: A Brief Introduction*, Oxford University Press, Oxford 2004; J. SEARLE, *Freedom and Neurobiology*, Columbia University Press, New York 2006; J. SEARLE, *Making the Social World*, Oxford University Press, Oxford 2010.
[6] See J. SEARLE, *The Rediscovery of Mind*, cit; J. SEARLE, *The Mystery of Consciousness*, Basic Books, New York 1997; J. SEARLE, *Biological Naturalism*, in: M. VELMANS (ed.), *Blackwell Companion to Consciousness*, Blackwell, London 2007, pp. 325-334.
[7] See A. DANTO, *Naturalism*, in: P. EDWARDS (ed.), *The Encyclopedia of Philosophy*, vol. V, Macmillan, New York 1967, pp. 448-450.
[8] See D. PAPINEAU, *Philosophical Naturalism*, Blackwell, Oxford 1997.
[9] See P. MOSER, D. YANDELL, *Farewell to Naturalism*, in: W.L. CRAIG, J.P. MORELAND (eds.), *Naturalism: A Critical Analysis*, Routledge, London 2000, pp. 3-23: D. PAPINEAU, *Naturalism*, in: E. ZALTA (ed.), *Stanford Encyclopedia of Philosophy*, Spring 2009 Edition.
[10] See W.L. CRAIG, P. MORELAND, *Naturalism: A Critical Analysis*, Routledge, London 2000.
[11] J. SEARLE, *Biological Naturalism*, cit., p. 325.
[12] See J. RUST, *John Searle*, Continuum, London2009; B. SMITH, *John Searle: From Speech Acts to Social Reality*, cit.; S. TSOHATZIDIS (ed.), *John Searle's Philosophy of Language*, Cambridge University Press, Cambridge (MA) 2007.
[13] See J. SEARLE, *Speech Acts*, cit; J. SEARLE, *Expression and Meaning*, cit.
[14] J. SEARLE, *Intentionality*, cit., pp. vii-x.
[15] To be faithful to Searle's approach, I will follow from now on his capitalization of the words "intentionality" and "intentional".
[16] J. SEARLE, *Intentionality*, cit., p. 1.
[17] *Ivi*, p. 2.
[18] *Ivi*, p. 12 – italics in the original.
[19] *Ivi*, pp. 10-13.
[20] See *ivi*, pp. 26-27
[21] See *ivi*, chap. III.
[22] See *ivi*, pp. 117-132.
[23] *Ivi*, p. 264.
[24] *Ivi*, pp. 265-266.
[25] *Ivi*, pp. 268-269.
[26] *Ivi*, p. 272.
[27] J. SEARLE, *Minds, Brains and Science*, cit., p. 15.
[28] *Ivi*, p. 16.
[29] *Ivi*, pp. 23-24.
[30] J. SEARLE, *The Rediscovery of the Mind*, cit., p. xi.
[31] See *ivi*, pp. 84-93.
[32] *Ivi*, pp. 92-93.
[33] See *ivi*, pp. 93-100.
[34] See *ivi*, p. 111.
[35] *Ivi*, p. 112.
[36] See *ivi*, pp. 113-116.
[37] See *ivi*, pp. 116-122.
[38] *Ivi*, pp. 122-124.
[39] For example, in *The Mystery of Consciousness*, Searle claims: «in my view, we have to abandon dualism and start with the assumption that consciousness is an ordinary biological phenomenon comparable with growth, digestion, or the secretion of bile» (J. SEARLE, *The Mistery of Consciousness*, cit. p. 6).
[40] D. DENNETT, *Review of "The Rediscovery of the Mind"*, in: «The Journal of Philosophy», vol. XC, n. 4, 1993, pp. 193-205.
[41] P. CHURCHLAND, *Betty Crocker's Theory of Consciousness*, in: P.M. CHURCHLAND, P.S. CHURCHLAND (eds.), *On the Contrary. Critical Essays, 1987-1997*, The MIT Press, Cambridge (MA) 1998, pp. 113-122, here p. 122.
[42] I have argued elsewhere that Churchland's conception of a unitary folk psychology is very loose and problematic, and that at least some psychological theories which would thus fall under his general label of "folk psychology" (for example, in social experimental psychology) are indeed in accordance with his theses. See S.F. ARAUJO, *Psicologia e neurociência: uma avaliação da perspectiva materialista no estudo dos fenômenos mentais*, 2nd edition, EDUFJF, Juiz de Fora 2011.
[43] See S.F. ARAUJO, *Psicologia e neurociência: uma avaliação da perspectiva materialista no estudo dos fenômenos mentais*, cit. S.F. ARAUJO, *Materialism's eternal return: recurrent patterns of materialistic explanations of mental phenomena*, in: A. MOREIRA-ALMEIDA, F.S. SANTOS (eds.), *Exploring Frontiers of the Mind-Brain Problem*, Springer, New York 2012, pp. 3-15.
[44] P. CABANIS, *Rapports du physique et du moral de l'homme*, t. I, seconde édition, Crapelet, Paris 1805, pp. 152-153.
[45] K. VOGT, *Physiologische Briefe für Gebildete aller Stände* (1847), in: D. WITTICH (Hrsg.), *Schriften zum kleinbürgerlichen Materialismus in*

Deutschland, Bd. I, Akademie Verlag, Berlin 1971, pp. 1-24, here p. 17.

[46] See J. SEARLE, *Response: The Mind-Body Problem*, in: E. LEPORE, R. VAN GULICK (eds.), *John Searle and His Critics*, Blackwell, London 1993, pp. 141-146.

[47] See D.M. ARMSTRONG, *Searle's Neo-Cartesian Theory of Consciousness*, in: E. VILLANUEVA (ed.), *Consciousness: Philosophical Topics 1*, Ridgeview, Atascadero (CA) 1991, pp. 67-71; P. CHURCHLAND, *Betty Crocker's Theory of Consciousness*, cit.

[48] P. CHURCHLAND, *Betty Crocker's Theory of Consciousness*, cit., p. 114.

[49] See T. NAGEL, *What is it like to be a bat?*, in: «The Philosophical Review», vol. LXXXIII, n. 4, 1974, pp. 435-450.

[50] See F. JACKSON, *Epiphenomenal Qualia*, in: «The Philosophical Review», vol. XXXII, n. 127, 1982, pp. 127-136.

[51] See P. CHURCHLAND, *Betty Crocker's Theory of Consciousness*, cit.

[52] See J. KIM, *Mental Causation in Searle's "Biological Naturalism"*, in: «Philosophy and Phenomenological Research», vol. LV, n. 1, 1995, pp. 189-194.

[53] See W. FREEMAN, C. SKARDA, *Mind/Brain Science: Neuroscience on Philosophy of Mind*, in: E. LEPORE, R. VAN GULICK (eds.), *John Searle and His Critics*, cit., pp. 115-127.

[54] There is now a strong appeal to quantum mechanics as the ultimate frame of reference for understanding how the human brain gives rise to consciousness. See e.g. S. HAMEROFF, R. PENROSE, *Orchestrated reduction of quantum coherence in brain microtubules: A Model for consciousness?*, in: S.R. HAMEROFF, A.W. KASZNIAK, A.C. SCOTT (eds.), *Toward a Science of Consciousness – The First Tucson Discussions and Debates*, The MIT Press, Cambridge (MA) 1996, pp. 507-540; S. HAMEROFF, *Quantum Computation in Brain Microtubules. The Penrose-Hameroff "OrchOR" Model of Consciousness*, in: «Philosophical Transactions of the Royal Society of London», Series A, n. 356, pp. 1869-1896; J. STATINOVER, *The Quantum Brain*, John Wiley & Sons, New York 2002; J. TUSZYNSKYI (ed.), *The Emerging Physics of Consciousness*, Springer, New York 2006. However, a closer look at this debate reveals huge conceptual problems and strong disagreements on how to conceive and interpret quantum mechanics, since the latter has also been used to defend new versions of dualism. See e.g. M. BEAUREGARD, *Brain Wars*, Harper One, New York 2012; C. CLARKE, *No-collapse Physics and Consciousness*, in: A. MOREIRA-ALMEIDA, F.S. SANTOS (eds.), *Exploring Frontiers of the Mind-Brain Problem*, cit., pp. 55-78; H.P. STAPP, *Quantum Interactive Dualism*, in: «Zygon», vol. XLI, n. 3, 2006, pp. 599-616. This is obviously a logical absurdity, which must be eliminated before we can take quantum mechanics seriously as an explanation of consciousness or as a solution to the mind-brain problem.

[55] See A. HANNAY, *Consciousness and the Experience of Freedom*, in: E. LEPORE, R. VAN GULICK (eds.), *John Searle and His Critics*, cit., pp. 129-139.

[56] J. SEARLE, *The Mystery of Consciousness*, cit., p. 198.

[57] See J. SEARLE, *Making the Social World*, cit., chap. VIII.

[58] See K. CORCORAN, *The Trouble with Searle's Biological Naturalism*, in: «Erkenntnis», vol. LV, n. 3, 2001, pp. 307-324.

[59] J. SEARLE, *Making the Social World*, cit., p. 26.

[60] J. SEARLE, *The Mystery of Consciousness*, cit., p. 191 – italics in the original.