

**SOME SCIENTIFIC CONTROVERSIES COMPELLING ON SOME NEUROSCIENCE CONTENT IN RECENT PUBLICATIONS****\*José Félix Estanislau da Silva**

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**Abstract**

In this article, the author aims to demonstrate some relevant controversies with scientific foundations, impersonal, objective and constructive in the direction of some experimental or mental contents and some understandings of these contents in Neuroscience, which have been published in recent scientific literature. Neuroscience is an interdisciplinary area of scientific study, which has attracted the attention of many researchers from different areas of knowledge. The reason for this is that technological advances in other areas of knowledge have been directed to promote rapid and applied development in this interdisciplinary area. As one of the results, some older concepts regarding the brain → mind relationship have been abandoned and others have been proposed that are not yet well defined.

**Keywords:** Neuroscience, Experiment, Controversy, Brain, Mind, Disease, Schizophrenia.**Highlights**

- ✓ New scientific trends in Neuroscience controversial to the foundations of Physical Theory
- ✓ Color a property that light and objects in the world can exhibit or does our brain create it?
- ✓ Does sound exist within the world or is the one our brain that creates it?
- ✓ Is the reality of the world impersonal or personal?

**1. Introduction**

Currently, it is known that scientific research has reached a very advanced stage of development compared to the beginning of the last century. This advance led to the development of innovative experiments and technologies in the scientific and social environment. This reality, in the last three decades, has triggered great interest in using these experiments and technologies for the field of Neuroscience. In this way, this has been done and it has resulted in Neuroscience moments of great scientific revolution in its own environment.

In this direction, recently, several new experiments and results have been produced and new scientific understandings have been introduced by a growing community of researchers in this multidisciplinary area of science. [Shapson-Coe *et al.*, 2024, 1], [Paul *et al.*, 2024, 2], [Gong *et al.*, 2024, 3], [Sandrone *et al.*, 2021, 4]. Thus, some old ideas and concepts regarding the functioning of the brain → mind, which had no experimental proof [Keshavan *et al.*, 2024, 5], began to be refuted, that is, the experimental results, nowadays, did not confirm some old scientific statements. Along this path, then, Neuroscience has been idealized and constructed as an essentially phenomenological theory, therefore some initial paradoxes, lack of completeness, need for objective definition and conceptualization, and so on, should also arise.

In this sense, the objective of this article by this author is to make some relevant, impersonal, objective and constructive scientific controversies regarding the contents of experiments or mental and some understandings of these contents published in current scientific literature in that area [Eagleman, 2015, 6], [Ramachandran, 2011, 7], etc. To this end, the modern Scientific Method of producing individual or group experimental or theoretical science is invoked to sustain clarity, objectivity and impersonality in that defense.

Thus, it is through this path that the motivation came to the author to write this article, beyond the own conceptualization of what Neuroscience is as motivating excitement. Strictly speaking, Neuroscience can be defined as the area of science where the nervous system and its functional and behavioral relationships with other parts of the body and formation of the mind are studied. As it is a multidisciplinary area, it is divided into five major areas of study: Neurophysiology, Neuroanatomy, Neuropsychology, Behavioral Neuroscience and Cognitive Neuroscience, which are related to each other forming a whole: brain → mind, control of the body by action-conscious or unconscious, voluntary or involuntary reaction. In this regard, in current Neuroscience it has been **postulated** that the mind flows as internal processes in the brain and not through something external to it.

Therefore, by the own definition of Neuroscience, naturally, several practical applications arise in society. One of them, which has been arousing great interest, is the part of Neuroscience that studies: how does the brain learn something? Knowing the answer, apply it to the education and teaching system with the aim of significantly improving the relationship between teacher (teaching) → student (learning) or books → student (learning) [Dubinsky *et al.*, 2024, 8], [Macacare *et al.*, 2018, 9].

**2. Topics in the Modern Scientific Method**

In this section, some basic topics of the modern Scientific Method are introduced with the aim of helping to clarify the

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current controversies between Neuroscience and the foundations of today's modern Physics.

Thus, the modern Scientific Method<sup>[1]</sup> was invented to establish safe criteria and principles in the direction of carrying out experiments and theories through an objective, impersonal scientific path and in a language that is as free as possible from figures of speech that mystify the unknown and, even the already known. This method was established in opposition to the creation and propagation of deceptions, occultism, mysticism and charlatanism that can be done through science in an involuntary or conscious way on the part of those who produce it in human civilization. A fact that occurred a lot in the scientific language used by scientists or not in antiquity and in the "dark ages" as a result of various causes at the time.

In this direction, three of the principles of the modern Scientific Method for observing an experiment occur and its result are as follows:

- a) When seeing an experiment take place, it is convenient for the observer to just describe what he is seeing without interfering or participating or giving his opinion in the course of the event that occurs and its result towards his eyes and where he is.
- b) It is important for the description to be just a description, in other words, the description must be impersonal, it must be the same for every normal observer in that place where everyone watches.
- c) If the experiment is not a natural and spontaneous event, when carried out it is convenient not to be **contaminated**<sup>[2]</sup> by external actions, if not the final result may be compromised by grotesque or subtle errors.

In relation to the invention and construction of a pure scientific or phenomenological theory, it is convenient to follow the two principles described below, to avoid mistakes as much as possible:

- d) All theories invented by normal human minds, until today, are built from a minimum number of postulates (principles) and a minimum number of definitions (or concepts) that are not refutable in the objective proposed by the nascent theory.
- e) The language used to formulate a theory is convenient to be impersonal, without unnecessary multiple meanings, without controversies, without figures of speech that generate a personal point of view, ad so on.

There are other important procedures<sup>[3]</sup> for developing a new scientifically acceptable theory or experimental elaboration. But, here, the aim of this article is not to demonstrate a new

<sup>[1]</sup> Many scientists have written about the modern Scientific Method, for example: Issac Newton, René Descartes, Ibn Al-Haythan, *et al.* More currently, the Vienna Circle has given these principles the content of verification and the inductive method. Karl Raimund Popper logically assured that neither verification nor induction alone served the purpose in question, such as understanding reality as it is and not as one would like it to be, as the scientist must work with falsification, that is, he must make a hypothesis and test your hypotheses by looking not just for evidence that it is right, but above all for evidence that it is wrong. If the hypothesis does not stand the test, it is said to have been falsified. If not, it is said to have been corroborated [Popper, 1935, 10], [Popper, 1963, 11], [Wikipédia, 2023, 12].

<sup>[2]</sup> Here, the word contaminated means that, in the experiment, interferences or conclusions are being introduced, which are not a real part of it or the experimental setup does not correspond to the reality it proposes or what is actually happening.

<sup>[3]</sup> Ditto footnote 1

theory or experimental development, then remembering these five Principles dictated in the words of this author should be enough to help arrive at the proposal for this article in manuscript.

### 3. Some well-founded controversies regarding some experimental formulations and their results in Neuroscience

In this section, through the foundations of current Physical Theory, some controversies arising from the new scientific trend in current Neuroscience are analyzed and discussed. Some books and scientific articles in the field of Neuroscience were written following this new trend, however, the foundations and advances of Physical Theory were distorted in these literatures.

In this direction, in the reference [Eagleman, 2015, 6], the observer notices that the writer reports some experimental arrangements, their results and infers conclusions from each one. In relation to these facts, in what follows, the author of this article makes some well-founded scientific controversies regarding some experimental arrangements, their results and conclusions.

#### 3. 1) On pages 44 and 45, chap. 2, there is a report on the experimental arrangement of two cats inside an arrangement consisting of two cylinders, as follows:

"[...] two researchers at MIT, placed two kittens into a cylinder ringed in vertical stripes. Both kittens got visual input from moving around inside the cylinder. But there was a critical difference in their experiences: the first kitten was walking of its own accord, while the second kitten was riding in a gondola attached to a central axis. Because of this setup, both kittens saw exactly the same thing: the stripes moved at the same time and at the same speed for both. If vision were just about the photons hitting the eyes, their visual systems should develop identically. But here was the surprising result: only the kitten that was using its body to do the moving developed normal vision. The kitten riding in the gondola never learned to see properly; its visual system never reached normal development.

Vision isn't about photons that can be readily interpreted by the visual cortex. Instead it's a whole body experience. The signals coming into the brain can only be made sense of by training, which requires cross-referencing the signals with information from our actions and sensory consequences. It's the only way our brains can come to interpret what the visual data actually means. [...]"

Well, after many theoretical and experimental scientific studies regarding movement<sup>[4]</sup>, today, it is consolidated that movement is a relative concept, which may depend on the position (x, y, z), where the observer of the experiment or event is located. However, in the account of the experimental arrangement of the two cats given, in this subsection (3.1), it appears that one

<sup>[4]</sup> In the formulation of the Classical Theory of movement, we have for example: Galileu Galilei (1564-1642), Issac Newton (1643-1727), Joseph Louis Lagrange (1736-1813), William Hamilton 1788-1856), Carl Gustav Jakob (1804-1851), and several others of equal importance. These last two make important contributions to the formulation of the Classical Hamilton-Jacob Theory. In the formulation of the Theory of Relativity of movement, we have for example: Albert Einstein (1879-1955), [Einstein, 1905, 13], among many other relevant ones.

cat moved as it wanted, while the other was positioned on a gondola attached to a central axis. Then we cannot conclude that both cats see exactly the same thing. The two should see the tracks move differently from each other. Thus, we can infer that the vertical stripes for one cat moved at one speed, while for the other cat, the vertical stripes moved at another speed. This discrepancy may become greater when placing a cylinder inside another cylinder, because there will probably be some interference between the tracks of one cylinder and the other cylinder and vice versa. The effect of this interference is seen differently by each cat in its own position within the cylinder. Therefore, the experimental arrangement and the conclusive results are controversial with the principles of movement predicted by Physical Theory. In addition, they also aren't in accordance with the three principles of the modern Scientific Method formulated in section 2 of this article.

### 3.2) On pages 45 and 46, chap. 2, there is a report of the experimental arrangement of prism glasses in a person's eyes, as follows:

"[...] On a beautiful spring day, I strapped on the prism goggles. The world flipped – objects the right now appeared on my left, and vice versa. [...] When I reached out to grab an object, the sight of my own hand didn't match the position claimed by my muscles. [...]. Although my eyes were functioning and taking in the world, the visual data stream wasn't consistent with my other data streams. This spelled hard work for my brain. It was like I was learning to see again for the first time. I knew that wearing the goggles wouldn't stay that difficult forever. Another participant, Brian Barton, was also wearing prism goggles – and he had been wearing them for a full week. Brian didn't seem to be on the brink of vomiting, as I was. [...]. With enough practice, my brain would get trained up by a continual cross-referencing between the senses, just the way that Brian's brain had been doing for seven days. With training, my neural networks would figure out how various data streams entering into the brain matched up with other data streams. [...]. The brain doesn't really care about the details of the input; it simply cares about figuring out how to most efficiently move around in the world and get what it needs. [...]"

Well, in this subsection (3.2), the report of the experimental arrangement of prism glasses in the eyes of a normal observer is a little outside the predictions established by modern scientific theories<sup>[5]</sup>. In this sense, light can be treated as a wave or wave superposition. Through this scientific path, light transports information from where it comes from and the environment through which it passes and presents a coherent behavior. Then, the eyes of normal observers see what information the light carries to them and, in this direction, this

<sup>[5]</sup>After studies on the behavior of light by Descartes and several others, Isaac Newton studied the behavior of light and, for example, published *The Optical Lectures* (1670–1672), [Newton, 2012, 14]. Right away, a wave treatment for light, mainly, was defended by Robert Hooke (1625-1703), Christiaan Huygens (1629-1695) among several other scientists. Progressively, the Electromagnetic Theory was built in this wave direction, which was compiled by James Clark Maxwell [Maxwell, 1864, 15]. Not so distant, mainly by Niels Henrik David Bohr (1885-1962), Werner Karl Heisenberg (1901-1976), Louis Victor Pierre Ramon de Brogli (1892-1987), Erwin Rudolf Josef Alexander Schrödinger (1887-1961), Paul Adrien Maurice Dirac (1902-1984), among several others, using the dual treatment, that is, the wave-particle treatment for the behavior of light, continuously, Quantum Theory was founded [Bohr, 1935, 16]. A book that contains compiled Quantum Theory, for example, is [Cohen-Tannoudji et al, 2019, 17]. In progress, currently, there are several modern versions of Quantum Theory, for example, given by Richard Phillips Feynman (1918-1988) and several more recent ones.

information is the reality formed in the eyes and brain of normal observers. Now, when the prism glasses is introduced between the environment and the eyes of the observer, it changes the environment. The light passing through the prism glasses will carry this information to the observer and, therefore, another conscious or non-aware reality is formed for the eyes (observer). If the observer is not aware of the presence of the prism glasses between his eyes and the environment and does not know what the prism glasses do, he begins to learn this first reality, a reality of image displaced from the physical object (duality). But, if the observer and his body are aware of the presence of the prism glasses, then he and his body are trying to learn through logic and comparison what they are seeing (calibration) in relation to the absolute reality they lived in for a long time before putting it on the glasses. In this scientific direction, everything leads to your brain caring a lot about the details of the information that reaches it. However, the observer is not fully aware of this fact immediately and, perhaps, later, he will not become aware of this or that through current standard means of understanding, but, the information is registered in the brain without the observer's awareness.

Therefore, for the reasons explained in the previous paragraph, the analytical result of the experimental arrangement in this subsection (3.2) is in conflict with the foundations of the Physical Theory of optics to describe the behavior of light and show the reality that surrounds the observer. In addition, again, it is disagreement with the three principles of the modern Scientific Method given in section 2 of this article. In this case, the observer is part of the experimental setup and makes conclusions by self-induction, which can introduce unintentional mistakes in the analysis of the experiment.

### 3.3) In pages 56 and 57, chap 2, there is the report of the experimental arrangement of thought for seeing a color and another for hearing sound and some affirmatives and conclusions were made, as follows:

"We think of color as a fundamental quality of the world around us. But in the outside world, color doesn't actually exist. When electromagnetic radiation hits an object, some of it bounces off and is captured by our eyes. We can distinguish between millions of combinations of wavelengths –but it is only inside our heads that any of this becomes color. Color is an interpretation of wavelengths, one that only exists internally. And it gets stranger, because the wavelengths we're talking about involve only what we call "visible light", a spectrum of wavelengths that runs from red to violet. But visible light constitutes only a tiny fraction of the electromagnetic spectrum – less than one ten-trillionth of it. All the rest of the spectrum – including radio waves, microwaves, X-rays, gamma rays, cell phone conversations, wi-fi, and so on –all of this is flowing through us right now, and we're completely unaware of it. This is because we don't have any specialized biological receptors to pick up on these signals from other parts of the spectrum. The slice of reality that we can see is limited by our biology.

Each creature picks up on its own slice of reality. In the blind and deaf world of the tick, the signals it detects from its environment are temperature and body odor. For bats, it's the echolocation of air compression waves. For the black ghost knifefish, its experience of the world is defined by perturbations in electrical fields. These are the slices of their ecosystem that they can detect. No one is having an experience

of the objective reality that really exists; each creature perceives only what it has evolved to perceive. But presumably, every creature assumes its slice of reality to be the entire objective world. Why would we ever stop to imagine there's something beyond what we can perceive?

So what does the world outside your head really “look” like? Not only is there no color, there's also no sound: the compression and expansion of air is picked up by the ears, and turned into electrical signals. The brain then presents these signals to us as mellifluous tones and swishes and clatters and jangles. Reality is also odorless: there's no such thing as smell outside our brains. Molecules floating through the air bind to receptors in our nose and are interpreted as different smells by our brain. The real world is not full of rich sensory events; instead, our brains light up the world with their own sensuality.”

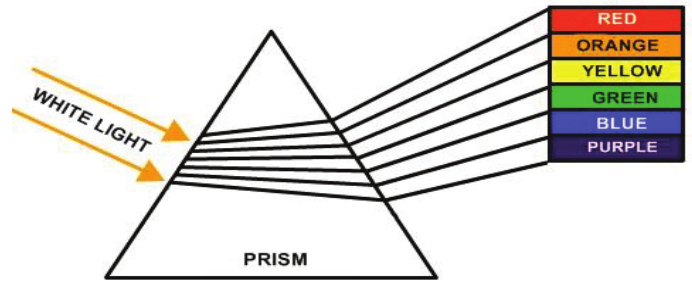
Hmm, right at the beginning of the experimental report of thinking about seeing colors in this subsection (3.3), there is the affirmative that they do not exist in the outside world, but it is inside our head (brain) that each wavelength of visible light turns into color. In other words, we are the ones who have the property of color or of manifesting color. Thus, we stand as the center of creation of the world by stimuli or self-induction.

This affirmative, which resembles a postulate, is going against Newton's Classical Mechanics, Hamilton-Lagrange's Classical Mechanics, Electromagnetic Theory, and so on<sup>[6]</sup>, because in these theories it is substantiated that white light can be decomposed into light spectra as if it were a rainbow (Newton's prism experiment, Fig. 01) or in a spectrum of light bands (by Quantum Theory). In this sense, light carries the property of manifesting color, in other words, light carries color information, which can be manifested by interaction with the environment, for example, when passing through Newton's prism. Now, with our eyes closed, we don't see color, we see through light through our eyes taking information from the environment to our brain. In this direction, color is going to be revealed inside our brain or we are going to be aware of color only within our brain. Or, we can see color by imagination, logic or dream.

All of these theories were invented to describe the behavior and nature of the world in which we live, that is, to describe the total or partial reality of the world as it is. However, these theories are not complete in describing the reality of the world, therefore, they bring some limitations, impositions and consequences that are momentarily inexplicable. In this sense, many things in the world we cannot see with our eyes, but we can be aware of their existence through other ways than the eyes, for example, through effects, safe logic and its experimental verification devoid of mistakes. Air, for example, we don't see with our eyes, but we see its effects with our eyes,

<sup>[6]</sup>The same scientists mentioned in footnotes 4 and 5 studied the behavior of sound and published several articles and books on the subject with the foundations of Classical Theory and Electromagnetic Theory. In ref. [Strutt, 2011, 18] a summary of the Theory of Sound can be found. With the principles of Superposition and Resonance and the introduction of the concept of particle-wave duality in the foundations of Quantum Mechanics, it was possible to develop several technologies that dominate sound reproduction intentionally, for example: destroying bridges through Sound Resonance effects, manufacturing CDs and DVDs and etc. An interesting part of sound is Noise, which has been extensively studied in the last century and continues to arouse great scientific interest in other areas of human knowledge [Ebben et al, 2021, 19], [Berkely News, 2020, 20] and [Jafari et al, 2019, 21].

we need it to stay alive and we are aware that it exists not in every universe.



**Fig. 01. Symbolic representation of the Newton prism experiment: white light enters from the left<sup>[7]</sup> of the prism and exits from the right decomposed as if it were a rainbow of colors**

In the last paragraph of this subsection (3.3), there is another experimental report of thought, but about hearing sound and it is affirmed that: “So what does the world outside your head really “look” like? Not only is there no color, there's also no sound: the compression and expansion of air is picked up by the ears, and turned into electrical signals”. This allegation is also similar to a postulate and goes against Newton's Classical Mechanics, Hamilton and Lagrange's Classical Mechanics, Electromagnetic Theory, Quantum Mechanics, and so on, because in these theories it is well-founded that sound needs a medium to propagate. The medium through which sound propagates is air and then it enters our ears → brain and we became aware of its existence. Without the air medium, the sound does not manifest itself, it does not propagate to our ears. [...]

### **3. 4) Continuing the controversial ones, on the pages. 58 and 59, chap. 2, there is an experimental report of what they called schizophrenia, as follows:**

“Elyn Saks [...] sporadically experiencing schizophrenic episodes since she was sixteen years old. Schizophrenia is a disorder of her brain function, causing her to hear voices, or see things others don't see, or believe that other people are reading her thoughts. Fortunately, thanks to medication and weekly therapy sessions, Elyn has been able to lecture and teach at the law school for over twenty-five years. I spoke with her at USC, and she gave me examples of schizophrenic episodes she's had in the past. “I felt like the houses were communicating with me: You are special. You are especially bad. Repent. Stop. Go. I didn't hear these as words, but I heard them as thoughts put into my head. But I knew they were the houses' thoughts, and not my thoughts.” In one incident, she believed that explosions were being set off in her brain, and she was afraid that this was going to hurt other people, not just her. [...]

Now, having escaped those delusions, she laughs and shrugs, wondering what it was all about. It was about chemical imbalances in her brain that subtly changed the pattern of signals. A slightly different pattern, and one can suddenly be trapped inside a reality in which strange and impossible things unfold. When Elyn was inside a schizophrenic episode, it never struck her that something was strange. Why? Because she believed the narrative told by the sum of her brain chemistry.

<sup>[7]</sup>The point of reference for knowing which side is the left is the observer looking straight ahead at the page of this article

I once read an old medical text in which schizophrenia was described as an intrusion of the dream state into the waking state. Although I don't often see it described that way anymore, it's an insightful way to understand what the experience would be like from the inside. The next time you see someone on a street corner talking to himself and acting out a narrative, remind yourself what it would be like if you couldn't distinguish your waking and sleeping states.

Elyn's experience is an inroad to understanding our own realities. When we're in the middle of a dream, it seems real. When we've misinterpreted a quick glance of something we've seen, it's hard to shake the feeling that we know the reality [...] that is, in fact, false, it's difficult to accept claims that it didn't really happen. Although it's impossible to quantify, accumulations of such false realities color our beliefs and actions [...] Elyn believed that what she was experiencing was really happening. [...]"

Oh, shortly after the beginning of the schizophrenia experimental report, in this subsection (3.4), there is an excerpt, where Elyn Sacks said that: *"It felt like the houses communicated with me. I didn't hear it as words, but as thoughts placed in my head. But I knew they were the houses' thoughts, not my [...]"*. Also, there are several other excerpts similar to this, which are reported. Thus, during the report, it was said that doctors considered her to have schizophrenia and, consequently, she was subjected to medical treatment, where medications (drugs) were prescribed to promote a supposed cure in the brain → mind.

Well, invoking the branches of Modern Science and its advances<sup>[8]</sup>, in the short term, analyzing these facts as being schizophrenia is going against the technologies and scientific advances produced in Physics, Engineering, Computing, nowadays. In this sense, sound and its effects have been studied extensively by humanity to be used for various purposes, for example, communication via wireless telephone, communication in outer space by NASA, satellite monitoring in Earth orbit, GPS location, and so on. Thus through this scientific path, a coherent and acceptable answer can be given to the phenomenon called the schizophrenia experiment.

In this direction, today, sound understood as a wave or wave packet can be moved from one point to another point, at a sound frequency subtle to the human ear and introduced into the observer's ear, without the observer being directly aware of this fact. The dog, for example, hears sound frequencies and has aware of it, which we humans do not have. In that way, the observer will receive these subtle sound frequencies inside their head as if they were thoughts or voices. Thus, the observer will be able to understand that they are his thoughts or that they are external thoughts coming from non-speaking objects.

That sound intrusion can induce or harass the observer to do something or not, but without the observer being directly aware of any sound: this is what may be called subtle sound disturbance induction. It resembles a tiny headset inserted into the observer's ears to listen to music, for example. In this case, you have already noticed that the sound seems to be inside your head. Well, now, imagine that the headset is invisible to

your eyes, in other words, that the headset is not a tangible material object: this is what can be called a non-material headset or wireless telephone without tangible material.

Then, through this or another more subtle means of communication, it is possible to make someone imagine that he is hearing houses talking, dogs talking, lampposts talking or that he is taken with strange thoughts, and so on. But these are subtle sound instruments resulting from advances in Physical Theory and their applications in low-frequency sound engineering to human ears. Therefore, it should not be considered as a brain→mind disease of the type schizophrenia and treated with medication (drugs), which, momentarily, can block or anesthetize auditory sensitivity and the observer's awareness of the presence of something.

Thus, these subtle auditory phenomena are not diseases, they are scientific experiments that can be used to promote the good, the evil or promote a complex deception. But if someone is subjected to this intrusive subtle sound experiment frequently, unconsciously or consciously, it may result in brain→mind damage. That way, some type of experimental unbearability or some type of illness may be manifested in that person, which can be detected by means of modern medical examinations. Furthermore, in this context of explanation through current Physical Theory, it can be assured that the suggestion of the invasion of the dream state into the observer's waking state, to generate schizophrenia, has no correspondence with the real facts that occur experimentally.

### **3. 5)Another controversial one is on the pages 21, 22 and 23, chap. 1, where Charles Whitman's experimental account is described thus:**

"[...] On August 1st 1966, Charles Whitman took an elevator to the observation deck of the University of Texas Tower in Austin. Then the twenty-five-year-old started firing indiscriminately at people below. Thirteen people were killed and thirty-three wounded, until Whitman himself was finally shot dead by police. When they got to his house they discovered that he had killed his wife and mother the night before. There was only one thing more surprising than this random act of violence, and that was the lack of anything about Charles Whitman that would seem to have predicted it. He was an Eagle Scout, he was employed as a bank teller, and he was an engineering student. Shortly after killing his wife and his mother, he'd sat down and typed what amounted to a suicide note:

I don't really understand myself these days. I am supposed to be an average reasonable and intelligent young man. However, lately (I cannot recall when it started) I have been a victim of many unusual and irrational thoughts ...After my death I wish that an autopsy would be performed on me to see if there is any visible physical disorder.

Whitman's request was granted. After an autopsy, the pathologist reported that Whitman had a small brain tumor. It was about the size of a nickel, and it was pressing against a part of his brain called the amygdala, which is involved in fear and aggression. This small amount of pressure on the amygdala led to a cascade of consequences in Whitman's brain, resulting in him taking actions that would otherwise be completely out of character. His brain matter had been changing, and who he was changed with it. This is an extreme

<sup>[8]</sup>Ditto footnote 6

example, but less dramatic changes in your brain can alter the fabric of who you are. Consider the ingestion of drugs or alcohol. [...]"

In the experiment reported in this subsection (3.5), Charles Whitman said that he had been the victim of many unusual and irrational thoughts. Again, this experimental case, as it is associated with the intrusion of strange thoughts in the observer's head, can be understood through the same scientific explanations given in subsection (3.4). Therefore, it is appropriate for the observer reader to first read the content of this subsection (3.4).

Starting from this point, the brain tumor probably arose as a consequence of the experimental unbearable by the brain → mind of intrusive sound damage: from the outside to the inside of the heard → brain. Simultaneously, these damages may have been aggravated by the presence of some chemical substance in gaseous, vapor or liquid form, which the observer has not-spontaneously or spontaneously come into contact with during some period of time. In this way, it reinforced the appearance of the brain tumor in the observer.

In relation to the violence practiced by Charles Whitman, excluding the result of advertising, it may have arisen as a joint consequence of the harassment of intrusive thoughts, the experimental non-comprehension of the observer and those around him, the experimental unbearable of the observer's brain → mind and of self-defense to resolve the problem objectively and definitively. Therefore, the violence practiced by the observer Charles Whitman does not arise gratuitously as the writer claims. [...]

#### 4. Conclusion

In addition to these controversies analyzed, discussed and explained in section 3 of this article, there are other experimental reports, for example, the chessboard experiment, on page 39, chap. 2, from the same reference cited and in others<sup>[9]</sup>, which also indicate that they are controversial in relation to the reality described by modern Physical Theories and others. But, as, essentially, these controversies arise from the addition of new postulates and absolutes introduced by the authors, then it becomes an extensive and arduous work to make all the scientific considerations or refutations. But the means to contradict are the foundations and technological advances of modern Physical Sciences and Engineering.

In this way, continuing the explanations of the causes of the supposed experimental phenomena described in section 3, we must take great care and explore towards the fact that sound → hearing and image → vision, when we are awake, can also be excited externally and subtly without the science of the observer in experiment or observation. In this direction, the new foundations adopted in current Neuroscience are in disagreement with the foundations of modern Physical Theories and Engineering. Thus, as one unfavorable result among others, it will cause great difficulties for the unification of sciences as a single whole or for a deeper relationship between the Sciences. In relation to sound → hearing, it is possible to fill a house, a building, a subway station, etc, with subtle sound excitations as if they were a non-material

earphone or a wireless telephone without tangible material. When someone is present, send these excitations specifically to his ears and brain without him becoming directly aware of what is actually happening and where exactly it comes from. Regarding image → to see, remind the observer that we can see with our eyes closed too. For example, this can happen when someone is sleeping with their eyes closed and dreaming. In this direction, as brain → mind results can be understood through internal and external electromagnetic interactions, it is possible to make subtle visual excitations and send specifically to someone's brain without that person being aware of it, even while awake. In this way, as we are aware of seeing the final result in our brain, we can see the images sent without being aware of their origin, where they come from, this is video communication without cables and physical material.

Thus, it is viable that these events or experiments are not illnesses or exceptionalism in someone specifically subject to them. Remember that we dream strange things (nightmares, etc.) and, even so, we are not considered sick: schizophrenic, paranormal or crazy, and so on. But, if these experiments occur with great intensity of evil and frequently, then it can result in brain → mind damage and some kind of disease can be manifested. This damage can be detected through modern medical examinations, but it arises as a consequence of experiments that the observer has been maliciously subjected to for some time, that simultaneously, it may have been accompanied by external chemical aggressions without the observer's awareness. Another consequence is that the observer during the experimentation phase may react violently with the aim of definitively stopping evil: brain → mind unbearable. Communication by induction of subtle sound disturbance<sup>[10]</sup> and by induction of subtle visual disturbance<sup>[11]</sup> sent specifically to the ears → brain or to "the eyes" → brain of someone, without the person being aware of it, it is an extremely viable technology to already exist, for example, as a weapon of war and communication. Remember that most inventions, for example: telephone, satellite, computer, bombs in general, and so on, they were not given to knowledge to the public immediately, they were used in secret for a long time. Only, when they became inventions almost surpassed by better ones, they become known to the public for common use within society: i.e. to modernize the common population (the majority of the total population).

In continuation of the discussions, to avoid unnecessary repetitions, more specific details of the causal explanations for the controversies contained in each experimental report and their conclusion can be found in section 3 and its parts in this article.

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<sup>[10]</sup>It is the modern non-material headset or the modern cordless telephone without tangible material.

<sup>[11]</sup>It's modern video without cables and tangible material.

<sup>[9]</sup>For example in ref. [Ramachandran, 2011, 7]



## 6. Statement of conflict of interest

Additionally, this author declares that there are not potential conflicts of interest in the authorship and participation of the scientific work studied and prepared here for submission to institutions of foreign or national scientific publications. Grateful!

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