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SOME THEORETICAL THOUGHTS ON MENTAL DISORDERS AND PERMANENT DEATH AS A CAUSE FOR “DISCIPLINARY EXTINCTION”

ALGUNAS REFLECIONES TEÓRICAS SOBRE LAS ALTERACIONES MENTALES Y LA MUERTE PERMANENTE COMO CAUSAL DE “EXTINCIÓN DISCIPLINARIA”

Cómo citar el artículo:

Méndez R, Daza M, (2025). Some theoretical thoughts on mental disorders and permanent death as a cause for “Disciplinary Extinction”. Derecho Global. Estudios sobre Derecho y Justicia, X (30) <https://DOI.org/10.32870/dgedj.v10i30.876> pp. 441-460

Recibido: 26/03/2025 Aceptado: 01/06/2025

ABSTRACT

Using neurosciences as a teleological framework, this article explores a broad set of conceptual considerations to allow the reader to relate the so-called mental alterations and permanent death, and to present them as a cause of disciplinary extinction. In that order, it begins by characterizing the brain, as an organ, and our body as those that always give an account of the things that happen, and extend the signal for us to make the propitious decisions in our lives, then for them to be built in consciousness (for example in some calamity), which explains, among other things, the alarm of these, (somatic intelligence) to superimpose the things that have to be done to avoid some mistake, in this way, the intuition ends in our case in the plane of the deliberations that we take daily even if there is or not mental alteration. Subsequently, we continue with the theoretical exploration, deciphering, for example, how the movement from the frontal cortex affects the thoughts that are not as intimate or private as we thought, a mention of the human right of cognitive freedom, among other subtopics.

KEYWORDS

Neuroscience, mental disorders, theory of law, disciplinary law, and disciplinary extinction.

RESUMEN

Recurriendo a las neurociencias como marco teleológico, este artículo explora un amplio set de consideraciones conceptuales con la finalidad de permitir al lector relacionar las denominadas alteraciones mentales y la muerte permanente, y presentarlas como causal de extinción disciplinaria. En ese orden, se inicia caracterizando al cerebro, como órgano y a nuestro cuerpo como aquellos que siempre dan cuenta de las cosas que suceden, y extienden la señal para que nosotros tomemos las decisiones propicias en nuestras vidas, luego para que se edifiquen en consciencia (por ejemplo en alguna calamidad), lo cual explica, entre otras cosas, la alarma de estos, (inteligencia somática) con tal de sobreponer las cosas que haya que hacer para evitar algún error, de este modo, la intuición termina en nuestro caso en el plano de las deliberaciones que tomamos a diario inclusive si existe o no alteración mental. Posteriormente se continua con la exploración teórica descifrando, por ejemplo, como incide el movimiento desde la corteza

frontal, los pensamientos que no resultan tan íntimos o privados como creíamos, una mención al derecho humano de la libertad cognitiva, entre otros sub-tópicos.

PALABRAS CLAVE

Neurociencia, alteraciones mentales, teoría del derecho, derecho disciplinario y extinción disciplinaria.

Sumario: I. Introduction. II. Mental alterations of disciplined subjects. III. On the death in general. IV. Encephalic brain death. V. Permanent death as a cause of disciplinary termination. What is the legal treatment to be followed?. VI. What is the legal treatment to be followed?. VII. Conclusions. Bibliografía.

I. INTRODUCTION

For the Argentine neuroscientist Mariano Sigman not being able to converse with someone brings its consequences -and not in the philosophical sense-, because many may feel this way despite being surrounded by people, (regarding this, you can review the research of Dr. Bahador Bahrami), in this way, having social affections and talking to others, becomes a palpable solution for the health in the mental alteration of the disciplined. If we analyze in a general way, we have that the author begins making an X-ray of the brain explaining graphically, what is the frontal lobe (something like the control tower), motor cortex, parietal (allows railroad detours) thalamus, etc, this last one is the one that regulates the switch of the conscience (it communicates between cortexes if it is turned off, the conscience disappears).

After the previous anatomical preamble, what is the origin of thought? For him, the answer is from the moment we are born, it is there when we begin to execute abstractions, and for this, he brings up what Locke (and later Pinker) knows as a tabula rasa, therefore, we are not born with a blank sheet, since there are established functions, which over time we see that it is not so (it is a half empiricism) as they are described to us, and this is because we are not born empty. Since we are small we have sophisticated thoughts, and we can form numbers and build a moral,

such as the one that is determined with the disciplinary legal ethics, but that at the beginning is unconscious and that is why we talk about the mirror neurons (an imitation) which encodes certain aspects, such as the actions of gestures towards others (in this regard you can read the research of Ghislaine Dehaene-Lambertz) of which as children we already know the difference between good and bad.

II. MENTAL ALTERATIONS OF DISCIPLINED SUBJECTS

The mentioned doctor is insistent in his two (2) books cited in the references, from which he manifests that babies are born with fundamentals about mathematics, morals, and social bonds (knowing this, these are aspects that can be worked from with delinquents, offenders or disciplined), that is, they are not born with a *tabula rasa*, as Locke thought (a subject that has already been treated by Steven Pinker in one of his first famous texts written in 2003), that is why we should train our memory from an early age, trying to connect images, stories, (using creativity for this), since it is composed by a physiological, verbal, scriptural, behavioral picture, not by a photo, which can be edited at any time, which ultimately identifies us as we are, the same happens with emotions, in trying to describe it as that space to fill through the power of language (expressions according to the culture of each country).

What the author is trying to tell us once again, is that we have to know how to choose the right words and always be positive (because that identifies you), even I dare to say, to take the right behavior, think for public servants, and even socially speaking in terms of the message that gives to ideal society, how to be dressed, to have a good physical complexion, to have a splendid attitude, a state of mind according to (faults or catalog in the General Disciplinary Code), and all that is part of the language as power especially when we resort to it in conversations with other people and even in terms of the emotional theme (and I include here, the somatic) which is not always by our behavior.

Something we should know and the record is that the brain as an executing organ often does not distinguish between fiction and reality, and even we do not know if it has stopped working, for it, our bodily expressions are reflected according to what we feel, this means that you must live accordingly, as it was said by the stoics,

that is, interpreting the judgments as the things are given (paraphrasing Epictetus), that is, learning to live with the problems rooted in it, for example, when with fear (controlling it), with anxiety, stress (minimizing them), or loneliness, that is, altering in the end, the mental states of people, in this case, that the disciplined could have even when presumably all brain activity has already ceased.

It may be that the power of the mind (or soul) in this case alters the consciousness in certain cases and is reflected most of the time in the strength of the language, including that of the disciplined, but this becomes useful when it is accessible to others, precisely to avoid all kinds of criminal, administrative or disciplinary behaviors, for this reason, we must describe and learn through ideas, but conversing, reflecting with the example (mirror neurons) on the part of the superiors or nominators for our effects demonstrating, the clarity of their words with their acting and this is thought mutual processes in which he interacts several actors, mentioning Seneca: *docendo discimus*, teaching is that one learns.

Seeing it this way, the brain is founded as if it were an executive system, distributed in a scaffolding, just as it happens in many other areas within its geography (radiography), so following the argument of the previous paragraph, our neural network is prepared from early to use the language since we are born we do it, it is an example of wild children who learn skills from early (grammar, words, phonemes) -imagine the hunter-gatherers- just as an ordinary citizen does with morals, If it were not so, this phenomenon would not be explained, this, unlike when we are adults, who do it through consciousness, like those people who speak several languages, this is accompanied by the activation of more brain areas, such as those that are determined by those functional duties to be fulfilled by public servants or those people tied to a special relationship of subjection.

It is the (a) power of language (as proposed by the neuroscientist Antonio Damasio in his text *And the brain created man*) proper to human beings, this, since we are born, but there are also other constructs, such as (b) logical reasoning and (c) morality which is natural to us *homo sapiens* (the same will be true for someone who was born 100.000 or 200,000 years ago) of which has repercussions for these purposes in the disciplinary law, especially in the third point, thus, when a legal operator initiates an investigation, he uses first the communication, then the

argumentation of the statement and subsequently assess the evidence along with the charge, generating in this a human judgment.

In this way, the social experiences of one of the architects of the program of Decision-making of the Human Brain Project are vital of which can have repercussions in our case for the disciplinary aspects of the mental alterations, among them, the kisses, caresses, and the words since they serve as sustenance to leave a base for the growth of the brain, properly, of it that adds the biological with the social this last one is the one who sculpts it, deciding what to do with our vision, either in a conservative or risky way -libertarian-, better said, we are decisions including the hunches that well makes part of the intuitive (in fact from the latter can be found love), from there come other phenomena such as confidence or optimism, or see about cognitive biases or noise generated in the disciplinary decisions.

Once explored the geography of the brain we have that the theory of the mind is forged in this first, having as the importance the right temporoparietal part, its location that is the one that makes it noticeable, from there that copper tuning then the arguments that we expose as operators or disciplined and make these rational or emotional, as a way to intervene (hack) its management, this, connecting in last the culture and the brain as if it were a loop, of which it contributes in its alteration that can only be seen with tools like the neuro tests (of which we are still in process of implementation): functional magnetic resonance imaging, positron emission tomography, visual stimuli coding, BEOS, or the P-300, among others.

It is clear then that the brain (hardware) executes reality from the mind (almatic consciousness) -software- and thus determines for our case the juridical aspect if you will of an altered unconsciousness of the unlawfulness of the disciplined, for the author of the conduct, within the free will and this is a bit porous, because all activity of the mind is unconscious (at least the majority), since what remains of the conscious (it is a front man, an interpreter, a narrator) are sparks of the first one, which in the end can dominate it without realizing it (remember the experiment of Benjamin Libet) think of the illicit behaviors committed by the disciplined. More simply, it is the corpus callosum that coordinates this transition, what happens with language, emotions, morals, and decisions which can ultimately determine the action of what is ultimately done.

The cortex, either in the ventral or dorsal way, is organized in a learning, this, when it is transferred from one system to another, either in the slow or fast way (think of the text of Daniel Kahneman), taking into account the mental processes if you will of the offenders, delinquents, disciplined, starting to compile the information created, which takes effort, automating everything, including habits, among them the reading for example, the writing, the exercise, from there that comes again the language, as a function from the birth in being welcomed, of which it is also generalized (captcha), in that plasticity, thus building a memory palace and all this is taught from the language, not only from the speech but also from the body (gestures, signals, movements) and the morality that is built based on a legal-ethics.

If we start analyzing different research that has been done among them. Then it was estimated that close social and personal relationships have an important way of how your body is managed, thus influencing physical and mental health and of course your thoughts. In short, loneliness summons loneliness, according to Sigman, following Iranian neuroscientist Bahador Bahrami, atrophies brain regions that regulate social cognition increasing dementia, anxiety, depression, etc., and this of course can have an impact on the behavior of offenders, delinquents or disciplined. I would say that it plays if or if it increases the oxytocin and vasopressin, with affections and conversations with others, so biology is important to treat these legal problems.

In another study conducted by the University of Vienna and published in Psychological Science, entitled: *Homeostatic Regulation of Energetic Arousal During Acute Social Isolation: Evidence From the Lab and the Field*, it was found that people experiencing social isolation for eight (8) hours reported higher levels of fatigue. The findings suggest that low energy may be a basic human response to a lack of social communication. Evidence shows that lack of social contact induces a craving response in our brains comparable to hunger, which motivates us to reconnect. The hypothesis is related to social homeostasis, therefore, hence we say that the lack of freedom, in this case of public servants, may not be the best solution to these problems, because it creates others even more serious from the point of view of their official behavior (Stijovic et al. 2023).

The brain is the organ the prelude translator of the mind, and that gives as a result that loop of consciousness, and that can even be read in vegetative patients, through functional magnetic resonance, this will be the apparatus that allows examining these states on a large scale (think now of the neuro tests), which makes note that if they understand when they are spoken to, to these, as to babies or the disciplined with altered consciousness.¹ That is why we must analyze when there is or not a permanent encephalic brain death² before an eventual functioning of the same, we do not know if it has arrived or not previously if a public servant has committed a disciplinary fault or not, even in a state of non-permanent death³.

To synthesize, it is the brain, as an organ and our body that always realizes the things that happen, and gives the signal for us to make the right decisions in our lives, then to be built in consciousness (for example in some calamity), so it is important the alarm of these, (somatic intelligence) superimposes the things to be done to avoid any error, thus, intuition ends in our case at the level of the deliberations we take daily even if there is or not mental alteration. In these cases it is already possible seconds before an action is determined to know what is going to be said, thought, or done (mental states), deciphering its movement from the frontal cortex, that surely this, in the future will have risks or dangers for humanity, but it is uncertain, since the thoughts may no longer be as intimate or private as we thought, for this reason that we speak of the human right of cognitive freedom.

¹ Ultimately entering the mind of a baby, newborn, or vegetative person is no longer a problem for science because we can enter their consciousness from tools such as functional magnetic resonance imaging, therefore, today we can turn off, turn on, read and recognize this consciousness by far (now think for the judicial aspect to use it).

² Between the concepts of “encephalic brain death”, “permanent death” and the “extinction of disciplinary responsibility” a gradual conceptual succession can be seen. Regarding “brain death” it is the neurological part of the human being, from which it extends to “permanent death” (total), biological, as a whole (holistically speaking) which may or may not coincide, in any case, it must be differentiated as the irreversible form on the one hand of the brain, in the absence of the functions of the brain part and on the other not only of the organs, but also of the complement, of which the latter must give rise to the extinction of disciplinary responsibility seen as the termination of the sanctioning process itself, thus legally decreeing the extinction of responsibility by means of a legal act.

³ Now, if the consciousness can be manipulated and its states altered, how could we have a kind of switch when the brain cannot function, when it stops working in the event of sudden death, because even when we are not asleep we do not turn off, we remain in REM sleep (rapid eye movements), like short naps, which are also important for the consolidation of memory, which is why it is important to define what we mean by a permanent brain death from neuroscience with effects on the legal-disciplinary aspects.

III. ON THE DEATH IN GENERAL

Death, openly is a subject that is talked about ancestrally and spiritually but softly, since no one wants to deal with it in practice (they are very few), even so, it is a tacit resolute condition in legal terms that is immersed in the contract of our lives, and at any time will be resolved by the eternal judge, indistinctly of how we conceive it. As we see, this matter is a chimera, which we can distinguish philosophically according to writings, or religiously in books, but this will not be the mission of this article this time, but simply to analyze a little from the scientific and legal-sanctioning point of view when the death of the person is specifically used as a cause for exclusion of liability in disciplinary law.

Death for legal aspects was based on medical descriptions (usually in the 70s-80s and before) on the absence of heartbeat (asystole) and breathing (apnea) of all circulation and tissues, today, it is understood with brain death (here is the problem) taken as the sign of cessation of life because the brain has irreversible functional compromises that affect the whole individual. However, even if the brain does not function, the organs can continue to operate if the person is connected, for example, to an artificial respirator and other technological support systems.

Since the comparative study (which in Colombia or Mexico is often subjected in medical scientific matters to the academic conclusions in the USA) it was in 1981 when the brain began to be assessed when it has stopped working, and not precisely the heart, at the right time to declare death, since this is the organ that defines the end of life, and it is the what but the how, as far as brain death is concerned, which occurs when a person's entire brain is destroyed (a) completely, (b) irreversibly, with cessation of all neuronal activity, i.e., (c) permanently, in this case, the heart may continue to function for a while but the part of the brain that makes us people in the rational sense has died, although one can lead to the other.

IV. ENCEPHALIC BRAIN DEATH

Well, encephalic death and not simply brain death (although the latter sounds more complete, it is not), that is why the concept of permanent death should be taken as a cause for the extinction of disciplinary liability (and even in the criminal

field and any other branch) taking into account the consideration of what science has said so far (to date), this, of what is death in reality, which may well be rethinking commonly, in a recent research conducted in the United States, realized the majority of scientists, that is, more than 80% agreed in determining that this should not be taken from the moment of brain death (seen openly) but defined from its permanence.

If before the ‘’’ ‘’’80s-’70s it was determined that death should be declared when the heart stops beating, and one could not breathe independently (although this should still be the natural criterion), scientific updates have arisen according to the appearance of neurotechnology (or biomedical sciences), from which it has come to rethink or to assume when the event is generated, for example, in the United States that still follow the Uniform Determination Act of 1981, for some time now they have begun to rethink some serious modifications to the matter, but for good, not for bad, looking that the current support carries with it a negative bioethical contrariety of what it means when the death of the persons should be taken, this, in the criterion of being able to declare the extinction of the responsibility (in our case, sanctioning-disciplinary).

According to what has been said, there is no conclusive evidence, determined in the existing law either in the USA and as it can also happen in Colombia or Mexico regarding the conceptualization of brain death, although if it is proposed what is indicated in this country, it recognizes the updated national and international medical standards for death according to neuroscientific approaches, of this means that we are predisposed to elaborate a soft standard of what death means then that are the new medical protocols defined in our country (which should be improved), which should not necessarily be understood as the loss of hormonal function because this notion would be very simplistic but should also be extended to the encephalic death understood as permanent death (total), as a whole (holistically speaking).

If you make a quick study of the history of these definitions especially of brain death (since the notion of the absence of heartbeat or tissues does not serve them) was introduced by a Committee in 1968, under a Report, having as a focus the irreversible coma, (See, *A definition of irreversible coma. Report of the Ad Hoc Committee of the Harvard Medical School to examine the definition of brain death*)

that if you see is a much broader notion than we have now, that is why the change is supposed to go according to the new stages of science, such as the one already exposed in one of the last studies published in the present decade, October 2023, understanding it now, as the loss of the encephalic trunk but in a permanent way and not merely with deciphering a brain death (which can be partial), that is to say, to express that it is irreversible is not enough, hence the term is changed for the term of permanence which is more accurate and which should also be indicated to declare the extinction of the disciplinary action, according to the guidelines that will emerge in soft law (soft law).

These neuroscientific and legal changes are important in society as they are precise as to which functions (according to scientific and technological advances) and prevent mass murders, therefore, demonstrate that brain operations with alleged brain death still have some action in the hypothalamus or some function in part of the brain as has already been verified in electroencephalograms, (which curiously was eliminated in 1970 such criterion), being validated such analysis, unfortunately for organ transplantation, and its trade which is a definition that in our opinion is anti-bioethical and goes against human dignity.

Countries like Canada, have already taken as a new clinical practice guide on the definition of death based on this type of situation, that is, they define a new concept (which is nothing new, but adjusted to the reality of the dignified nature of the human being) about the criteria to be followed to say when a person (in this case a public servant) is deceased or not, (See, Chandler JA, Pope TM), now conceiving it as permanent death, in this way our legislation must take such reference through soft rules standardized only in this way.

V. PERMANENT DEATH AS A CAUSE OF DISCIPLINARY TERMINATION

Articles 32 and 35 of Law 1952 of 2019 (Colombian General Disciplinary Code) state that the grounds for extinction of either the disciplinary action or the disciplinary sanction are death, understanding the former in that the State cannot prosecute the conduct transgressed by the public servant or private individual who performs a public function because he is no longer alive, and the latter is considered that although a process and a sanction resulted, this must be terminated because it

expired in time due to his death. Either one or the other, it is determined that the disciplinary process or the beginning of the same is extinguished either with the death of the person subject to discipline or before that (although the rule does not say so, for example, in the inquiry stage, without formal linking) or when the death of the person sanctioned occurs.

In Colombia, we have that a few years before with the issuance of Law 9 of 1979 regulated the issue of organ donation and also that of the certification of deaths (a blind hook), of which at no time was determined encephalic death as its cause in the declaration, it was later, with the Law 73 of 1988 that it was indicated under the same issue that brain death will be the starting point, but not to leave for its indication, defining again the what, but not the how, I should do that rigorous procedure or under what protocol or guide and indications that could show us a permanent death.

Hence, we boldly say that it was impregnated with a whiff of regulation more of wanting to donate organs and do transplants in conjunction with a rapid declaration of death, so that in each hospital or clinic (Perez P., Moreno A., Zarco L, 1998) have practically their procedure of that scheme and not a global standardized one, as for what is defined as encephalic death which is defined once again, as the irreversible form in the absence of the functions of the encephalic part of the brain, the question that later, in the Decree 2493 of 2004 (last norm until the moment) the definition of encephalic death is reaffirmed and some criteria of that diagnosis are defined, according to the age.

This guide is based on Colombian legal conditions and the clinical experience of experts in Colombia (taken -although they do not say so- from comparative studies, as in the USA), it is updated to date according to the latest revision of the American Academy of Neurology (which has already changed its criteria in October since 2023), stating that every patient with suspicion of brain death should be thoroughly investigated on the conditions conducive to the absence of their functions, to get a complete neurological evaluation that will lead to the diagnosis of brain death.

If a public servant is initiated a disciplinary investigation or is sanctioned (two different hypotheses), and dies, then it must be proved not only the irreversible cessation of the respiratory and circulatory functions, but of all the brain functions

(even if the first ones have not been given, because of having an artificial respirator), including that of the encephalic stem and this is what is now proposed in the current revision according to the figure indicated in the United States, so it can be said that one is dead, permanently, not before, and this is because many of the employees or public officials (as happens with any person) can remain alive, if we continue with the simplistic conception of brain death (understood in a mild way) of which it can happen that a part of the brain remains active (and this happens, many times) and as it has already been recorded in various neuro-tests, from this we have that there are still operational functions of the human being still functioning, and this contrary to human dignity, not only because they cut his life, but also to take into account bioethical obscure interests of donation and transplantation of organs.

This issue that the person (in this case the dead public servant) is dead when the brain death occurs (which is an indeterminate legal notion), is given more than anything (verifiably) - as we said - for bioethical issues, because they can then donate their organs quickly (so that they are fresh, although it sounds hard to say it) and this is something contrary to human nature itself (and for those of us who are believers, against the designs of our creator), precisely, in a recent research done by Doyen Nguyen, OP, MD, STD, whose title in Spanish is: “Las nuevas definiciones de muerte por donación de órganos: un análisis multidisciplinario”), member of a group at Harvard Medical School, I explain that this type of conceptualizations that we now have of death - unfortunately - is carried out by purely commercial dyes.

Finally, the only disciplinary source that has determined death as a cause for disciplinary extinction, in the current rule is Law 1952 of 2019, like the previous rule (now repealed) Law 734 of 2002, which in criminal aspects (but which is not pertinent to bring up) may be Law 599 of 2000, as the one derived from other administrative sanctioning processes, but here we are only dealing with the disciplinary problem, therefore only the first law is applicable, today called the General Disciplinary Code, described in its articles 32.1 and 35.1.⁴

⁴ Within Ecuadorian legislation we can find regulations such as the Protocol for the diagnosis and certification of brain death (2015), Link: <https://www.salud.gob.ec/wp-content/uploads/2016/09/Protocolo-muerte-encef%C3%A1lica.pdf> which is followed by the procedure for the extinction of the sanction in the legal system as a soft law, although it does not speak of permanent death itself. In Ecuador there is no general code of disciplinary law per se that we can apply in this sense, but it is dispersed because it is developed, as in Colombia, under the same aspects.

VI. WHAT IS THE LEGAL TREATMENT TO BE FOLLOWED?

This is where other criteria come in, such as conscientious objection, the will of the relatives, and religious freedom, which of course must be respected by the Commission, Doctors, and others, which for our purposes must be followed until permanent death occurs and not brain death, plain and simple, and this definition is the one that must be included in the legal texts and other jurisprudences of the State, for example the General Disciplinary Code (for a next revision), although it seems obvious to say that death is death and already, but it is not as you see it, because there is as if there is an artificial or vegetative death, of which one still lives (this, due to the birth of science, it is necessary to distinguish it now).

If we look at the disciplinary doctrinal analysis of this type of situation we do not find but it is anything, concerning this issue, in the thesaurus of the Procuraduría General de la Nación in Colombia only two (2) cases are detailed related to concepts on death understood as grounds for extinction, but for purely procedural purposes, in this case, one in a situation in which it was determined that an appeal of the order decreeing the extinction of the disciplinary action due to prescription or death of the disciplined, but nothing more (See, Concepts C- 039 - 2017 and something in the same sense in C-183 - 2022), but never without touching the core of the matter that we want to describe.

Think about the request made in your office (as a legal operator) about the death of a disciplined person or a sanctioned person, and how to take it, some will say according to what the law says, that it will be understood when death is declared, which would be brain death, but even if this happens, and his cognitive faculties are diminished, he is still living for biological purposes and his different mental alterations, in many cases neuronally (that in the end life would be ceasing, when there is still brain communication). This is a criticism that we not only make here, legally speaking, (nor did we invent them) but that is made by many of the scientists surveyed in the United States, (more than 80%) and in the rest of the countries as can be seen.

In fact, many neuroscientists have already realized that the brain remains with brain activity, even when brain death is declared, this is due to the simplistic definition of

brain death, and even the extinction of the functions of the brain stem, so we must adapt to the new recent scientific criteria, and establish that death must be permanent, and not partial (because it would then be a homicide justified by law, mass murder) as has already been demonstrated through functional magnetic resonance imaging, positron emission tomography, (computerized axial tomography), codification of visual stimuli, brain signature of electrical oscillation (BEOS), (radiography in the encephalon), or P300 (Brain fingerprinting) that the neuronal activity is still alive -mental alterations-, and even with partial brain death (as it is still declared) can serve to solve later cases (due to these nanotechnological devices), but it is something that in practice they do not do it, because they are not interested (mobile: commercial).

In this case, the only death declared should be permanent (total) brain death of all brain functions, if we take into account the latest regulation in Colombia (which should be updated) such as Decree 2493 of 2004, which even in the flimsy Law 1805 of 2016 continues to speak of brain death, but without defining general or standardized protocols, It only mandates or suggests to have suitable resources to declare it, which has been conceptualized in the universal protocol (soft law) of what health professionals must follow to declare brain death but also placed in brain death which is a method that must be reevaluated, as expressed also (not in its redefinition, but in its scope) in the Constitutional Court Ruling C-233 of 2014.

It is so chaotic that only by declaring brain death (partial) not in a rigorous way as you see, you can already present a certificate of death and with this state determine the extinction of the action or disciplinary sanction, being that there are no parameters to apply for a permanent death, it is also expressed that it can be done with encephalic death, but this can still be considered partial, (depending on the concept) but also with less than this, even without checking the other functions of the brain and not with simple methods, but with a rigorous guide as the one proposed today (according to the research of October 2023), that is, with all the suitable resources available.

Now, if as it is considered in Colombia (as it can happen in Mexico) presumably death and not in the United States this irreversible damage of the encephalic stem, is determining then by the inoperability of the whole brain, in a permanent

way, yes we can accept this concept, before not, due to due irregularities that can happen, not only by the cessation of the encephalon, but also of the other parts as the hypothalamus, cerebellum and all its operations, not some isolated, although there is partial death, therefore, it should not be taken as it is being done, as the 1968 publication cannot serve as a basis (anachronistic), according to what the Ad Hoc Committee of Harvard Medical School considers, but what the Academy of Neurology also determines now, based then, on the total absence of brain bioelectrical activity, and the cessation of intracranial circulation (and the entire brainstem), through all the strict compliance with the guidelines (soft law) -soft law- of the case, taken as permanent cessation.

Hence, electroencephalograms can be used as a first measure, as a shock to these irregularities, but not enough due to their low cost, but it may not be accurate, hence other devices and resources must be used, more forceful either at the discretion of the forensic ethic doctor as presented in CT scans, transcranial ultrasound (and as a whole), and those that will emerge over time (those dictated by the neurotechnology), futuristically speaking, within the BD/DNC criteria.⁵, implementing the greatest possible number of examinations and examiners, periods, improvement of processes, the relation of images, and times, for the permanence of death of the cerebral hemispheres of the brainstem (see, Escudero, D, 2009).

Hence, brain death and permanent death should be indicated and then be specified in a guide (soft law) to determine the criteria or parameters for this critical situation, distinguishing between reversible and irreversible comas, vegetative states, apnea, asystole, brain death, encephalic death, and permanent death to implement these soft norms in the different ESE, Hospitals or Clinics of the country according to what is determined in the scientific norm -updatable-, in favor of a rigorous bio-ethical or legal-ethic uniform rule.

VII. CONCLUSIONS

The suggestions usually indicated by these recent but interesting guidelines is that permanent brain death should be understood as the cessation of -all the

⁵ Brain Death / Death by Neurological Criteria).

brainstem, which should emerge from an evaluation of the BD/DNC i.e. of the criteria and qualifications for the total determination of its states, including the functioning or not of the mind (soul), and all its components, according to the resources (including the mental alterations) and other examinations performed, accompanied by all types of tests and even as a whole that is taken as auxiliary, tests to make then that determination of whether it is permanent, which is now defined with a much more rigorous instance as to the declaration of permanent death for children and older adults.

Examples can be taken from other countries, as is being done in the USA and Canada, with the “*Consensus Practice Guideline on Brain Death/Death by Neurological Criteria in Children and Adults*”, recently published on October 11, 2023, as well as in the studies of the American Academy of Pediatrics, the Child Neurology Society and the Society of Critical Care Medicine, among others to date.

Finally, the origin of the BD/DNC must be verified in three (3) points, according to this guide (soft standard) that -lege ferenda- must also be attended and applied in Colombia, Mexico and other countries, such as (a) Permanent loss of all brain function (including brainstem -areflexia-); (b) Irreversible coma; and (c) Apnea (according to the determined scientific context).

This new terminology, which should not be ignored at any time, is being used and has been used in the World Project on Brain Death and must be applied by the legal operator in its entire context, thus taking for granted that notions such as irreversible, comatose, comatose, brain death, etc. are part of the common but legal jargon and that they are sufficient to be specified as indeterminate legal notions, with the analysis of the BD/DNC, which must always be expressed in neuroscientific terms that can be updated, brain death is part of the common but legal jargon and that they are sufficient to be specified as indeterminate legal notions, with the analysis of the BD/DNC which must always be expressed in neuroscientific terms that can be updated in rigorous application, such as the one derived from the permanent death within the development of disciplinary processes.

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