

Personhood and coma: A reversible proposal

Personalidad y coma: una propuesta reversible

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Abstract

The theory of psychological persistence defines persons as beings capable of creating a concept of themselves through the continuity in time of their mental states. In debates about life and death of some humans who have lost their conscious faculties, it is discussed whether they are persons or not and, therefore, whether it would be lawful to terminate their lives. The coma is presented as a counterexample to theories of *personhood*, which justify the right to life on the basis of the psychological persistence of the individual. This right would be granted not in terms of persistence or mental continuity, but by the conditions that make possible its prompt recovery in the clinical framework of the disease.

Keywords: persistence, identity, person, coma.

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*To answer the question «Who am I?»
is to tell the story of a life.
(Paul Ricoeur)*

1. Introduction

For several decades, the question of the right to life of certain human individuals, among whom we can find people with some incurable neurological diseases such as coma, dementia or Alzheimer's disease,¹ has been discussed. In this discussion there is a certain tendency within the academic sector to appeal to a series of concepts, which grant a greater or lesser moral status, depending on the cognitive capacities possessed by such individuals. Specifically, there has been a constant use (and sometimes abuse) of the concept of *person*.² This concept, which has a long historical trajectory, gained certain fame during the second half of the 20th century within these debates, as a result of the interpretations made on its meaning and characterization based on John Locke's *Essay Concerning Human Understanding* (1).

The English philosopher described people as beings with a certain level of mental sophistication, through which they were able to understand that they possessed a concept of themselves and that their lives passed through time, implying the possession of a past and a future. This description was the subject of debate in the field of philosophy and of the nascent discipline of bioethics, mixing directly with questions about the right to life of humans in marginal situations or cases.³

With regard to the debate on the right to life of some human persons who experience (or are experiencing) some kind of mental illness (such as dementia or Alzheimer's disease), or prolonged loss of consciousness for natural or artificial reasons (e.g., a car accident), the case of coma⁴ is particularly relevant. In this specific case, there is a temporary interruption of the *individual's* conscious activity due to the damage suffered in some parts of the brain.

However, coma has the peculiarity that it is reversible, as long as there are clinical and neuronal conditions of the *individual* that make possible its recovery in a relatively short period of time (14, 15). Specifically, in this case there is a temporary change of the conscious faculties through different time lapses in which the person ceases to exist, according to the cognitive characterization of the concept, until he/she recovers consciousness again at a later time.

This means, broadly speaking, that it is not possible to decide on the right to life of individuals who are in a coma, since the *individual*, during the period of time in which he is unconscious, continues to possess the neural substrate that enables him to remember who he was before the coma and, thus, to return to being the *person* he was before (8, 16). All this happens independently of the psychological continuity that it is claimed must be necessary and sufficient for a *human being* to qualify as a *person* and, thus, possess a moral status that guarantees his right to life.

In order to develop this argument, we will begin with a brief exposition of the concept of *personhood* and how its meaning has had a direct impact on the reflection on the right to life of some classes of humans who, due to their mental condition, find it difficult to decide on the continuation of their lives. At this point we assume the definition of the concept offered by Jeff McMahan (2), Peter Singer (6), or Michael Tooley (12), who take it from the work of John Locke (1).⁵ Then it will be presented how the concept has been characterized from the psychological theory of identity through the existence of a persistence or psychological continuity of mental states (beliefs, desires, or intentions of a certain type), and its relation with coma (distinguished from the persistent vegetative state).⁶

To conclude, it will be argued that there is a temporary change in the mental faculties of individuals in coma, but that it is not possible to determine whether they are persons or not through the persistence of their mental states. This is due, mainly, to the fact

that certain conditions occur whereby it is possible to recover the cognitive condition prior to the coma. From this, it can be concluded that, during the period of time in which a suspension of mental capacities was suffered, individuals in this situation never ceased to be persons, nor did they lose their moral status by which their right to life would be guaranteed.

2. Between humans and persons

What is a *person*, what distinguishes *persons* from *human beings*, and why, in order to possess the right to life, must one be a *person*? These and other similar questions were at the forefront of the problem of personhood in ethical and bioethical reflection from the 1970s to the present, giving rise not only to the emergence of disparate opinions and theories, but also raising new problems about the possible *personhood* of humans in their early stages of gestation, non-human animals, or individuals with coma, dementia, or Alzheimer's disease.⁷

The latter are called marginal cases, because they are cases in which it is difficult and controversial to establish the moral status of certain individuals whose cognitive capacities do not allow them to account for their lives through spoken language (2, 3, 17, 18, 21, 22, 23). Concretely, these situations refer to individuals who are at the very «margins of life»⁸ (8, p. 55).

Within the debate on the right to life of individuals in these marginal situations, reference is often made to the concept of personhood in order to defend that they possess a certain moral status, whereby their lives should be protected and safeguarded at all costs. This presumption is based mainly on the idea that, in order to have the right to have the life of a *human being* continue uninterrupted, it is necessary for that being to possess persistence or continuity in his or her mental states (in his or her present and future beliefs, desires, or intentions).⁹ In more restrictive cases, the

person must be able to account for such continuity through spoken language.

As will be seen below, this argument presents serious problems with respect to some *human beings* who have temporarily lost consciousness and cannot account for their lives, or their psychological persistence, through language or narrative. However, before moving fully into these issues, it would be important to answer the first question with which this argument began, in order to situate the philosophical context of the debate on *personhood*.

In the beginning, the concept of *person* was used in Greco-Roman antiquity to designate firstly the mask used by theater actors to play a specific role (26) and, secondly, to refer to slaves excluded from legal personhood: «*Servus non habet personam*» (26). Later on, history was responsible for offering different interpretations of the concept according to the era and the philosophical current that approached its definition. Thus, towards the Middle Ages (5th-15th century), the meaning of the concept adopted a more metaphysical interpretation, linked to the Christian conception of the nature of God or of angels (26, p. 20). Subsequently, through the philosophy developed from the sixteenth century and well into the eighteenth century, this meaning abandoned its religious connotation, acquiring a more political, ethical and, above all, cognitive character.

In this regard, and as mentioned above, the work of John Locke (1) on how a *person* should be understood and what were the moral or political implications of considering a *human being* under this label is noteworthy. Specifically, Locke defined *a person as a thinking and intelligent being endowed with reason and reflection, and who can regard himself as himself, as one and the same thinking thing in different times and places* (1, p. 318).

In the first place, this definition presupposes that such an *individual* must possess a superior cognitive capacity, with which he would be able to establish a reflection not only on himself, but also on his environment and other individuals. Secondly, it is under-

stood that this being is not only aware of his own existence in the present time, but also understands that he possesses a past and a very probable future. Such an *individual* is properly constituted as a *person*, understanding himself as «a persistent subject¹⁰ who has had experience(s) in the past and will continue to have experience(s) in the future»¹¹ (4, p. 94).

On the other hand, Locke does not only make the relevant presumptions as to the cognitive characteristics that should be possessed for us to think that someone is a *person*. Specifically, the English philosopher mentions that «the term *person* is a forensic term» (1, p. 330),¹² by which it is given a moral and political interpretation by making it known that the *human being* in question who receives this qualifier is responsible for his life and can be charged for acts perpetrated both in his past and in his present. Specifically, the normative aspect of the concept implies that one must understand oneself as a being whose «present is conditioned by the past and has implications for the future» (5, p. 36).

Locke's (1) interpretation of what a *person* was and its distinction from *human beings* had a notable influence on philosophical reflection in later centuries. It is this interpretation that has permeated the debate in bioethics in the second half of the 20th century, extending into the 21st century in disciplines as disparate as artificial intelligence (27, 28) or ethology (29, 30, and 31). Without going any further, theorists of *personhood* such as Jeff McMahan (2), Peter Singer (10), Michael Tooley (12, 19), or Eric T. Olson (13), understood that, for a *human being* to be a *person*, it was necessary for that being to possess an idea of itself as a living being that persisted through time and space, possessing experiences and mental states of which it could give an account through spoken language. This definition has serious moral implications since, if we consider a certain biological entity X to be a *person* then «X has a (serious) right to life» (12, p. 40).

Even today this interpretation continues to arouse some controversy in debates about the life and death of individuals who are at

the very boundaries of life. However, this definition not only establishes certain moral consequences in these debates within ethics committees, but its problematic also extends to the debate on abortion or infanticide (20, 32) or to the possession of the right to life in nonhuman animals (33, 34, 35, 36, 37, 38).

More precisely, the narrative perspective on *personhood* and the self (3, 4, 5, 39, 40), gave a more explicit account of the need for any being who possessed a spatio-temporal persistence to be able to offer sufficient reasons that he really possessed a verbally manifested psychological continuity.¹³ This idea stems from the discussion by MacIntyre (41), Ricoeur (42) and Taylor (43) on the nature and life of individuals, which was understood entirely from a narrative point of view.

Thus, the concept under which this whole problematic is discussed still continues to raise questions about the conditions under which individuals could be called persons, depending on their mental condition. However, although there seems to be a certain consensus with its interpretation in bioethics debates, it is important to specify the distinction between the concept of *person* and that of *human*, since both refer to different things and confusion between the two could lead to argumentative errors in the debate that is intended to be exposed.

Mainly, the use of the notion of *human* was motivated by the discussion of whether humans (at the very moment of their birth) were qualified as persons by the simple fact of belonging to the human species. Thus, the need to possess some kind of sophisticated cognitive capacity was presupposed in order to receive that qualification and, thus, to have a strong moral status (10, 19, 32, 44). Unfortunately, this thesis was perfectly framed within a speciesist¹⁴ frame of thought, in which belonging to a species was a guarantee of possession of certain rights (6), especially the right to life in cases of abortion or infanticide (8, 9, 2, 10, 32, 33, 45).¹⁵ From this perspective, the notion of *human* was taken as a request of

principle, on the basis of which a member of our species could be granted a certain moral status, a widely criticized idea that did not take long to find its detractors.¹⁶

3. Psychological persistence and coma

When discussing whether certain classes of humans in a comatose state continue to possess the right to life, an analysis is made of the mental or psychological state of the *individual*, in order to determine at what exact moment in his life he completely lost his mental faculties or began to decline into various deep stages of cognitive degeneration. It is quite common to find through this argumentation a certain constancy in the use of the concept of *person* among different authors. Through this concept it is intended to grant a moral status by which the life of the *individual* is protected, attending to the possession of certain cognitive qualities that establish sufficiency for *personhood* (3, 4, 6, 8, 17, 25, and 30).

Within the theories of identity or psychological persistence there are two fundamental questions around which the identity of a *person* through time is questioned: one is synchronic and the other is diachronic. The first asks «by virtue of what thing something is a person at a given time» (24, p.118), while the second asks «by virtue of what thing there is a single person at two different times» (24, p. 118). Mainly, the second question is the most important, since it exposes what the problem of personal identity through time consists in: *What are the logically necessary and sufficient conditions for a person P_2 , at a time t_2 , to be the same person as a person P_1 , at a previous time t_1 ?* (46, p. 223).

To answer this question, a number of competing answers have been given, not without problems and objections. Some of them defend that the personal identity of an *individual* is determined entirely by the persistence of his or her body through time. Others

argue that this continuity of the person would be determined by the persistence of the physical condition of the brain, or the existence of a soul that does not disappear until the moment of death (24), from more theological positions. However, in the debate on the existence of the «same» *person* (1, p. 318), in cases such as coma, there is typically a specific appeal to whether or not the *individual* possesses continuity in his mental states, has lost it due to an accident, or begins to suffer a progressive degeneration of his conscious faculties. In these cases what is being debated is whether there would be a psychological continuity in the mental states of the *person* at different times.

Specifically, the theory of psychological continuity describes that there are causal links between the mental states of an *individual* at a given time and at a later time, which establish the conditions of persistence of that *individual* through time (8, 47). At the same time, this psychological connection may come in degrees or levels of intensity (2). For example, in the case of a person suffering from Alzheimer's in the early stages of the disease, the connection or causal link of their mental states from one moment to the next will begin to decline, due to the deterioration of the parts of the brain responsible for memory collection and storage. This causes one to lose track of oneself until the particular *person* has completely ceased to exist.¹⁷ From the point of view of the psychological perspective, *the (late) Alzheimer's patient will clearly not be psychologically continuous with the person in the early stages of the disease* (2, p. 44; parentheses mine).

The opposite happens in the early stages of a human being's growth after conception. Between the first and third year the mental activity of the *individual* is not complex enough to create a causal connection of one's mental states over time. It is approximately between the age of 4 or 5 years that the *individual* becomes a *person*, acquiring a notion of self in a diachronic sense (2, 8). In the first stage of development (from 1 to 3 years), the *human being* is shaped

as a *pre-person*; that is, a *sub-personal subject of consciousness that begins to exist when the organism becomes capable of sustaining consciousness and mental activity, and ceases to exist when the person comes into existence* (2, p. 46). From these positions, the interpretation of *personhood* assumes a linear perspective, according to which this qualification is only acquired to the extent that one grows physically and mentally in an exponential way towards a future time. Contrary to this assumption, there are moments in the life of an *individual* in which, in spite of having suffered a temporary suspension of his mental-conscious activity, it is possible to recover such personality at a later time t_3 , t_1 being the moment in which the *person* existed with full use of his faculties, and t_2 when he suffered the cessation of conscious activity.

This is the case of coma, which is characterized mainly by *the lack of consciousness and response to external stimuli* (14, p. 2064). Mainly in this state one experiences the *continuous absence of eye opening (spontaneously or after stimulation) and the absence of oriented or voluntary motor or verbal responses (including vocalization)* (48, p. 2). Its causes range from damage to one or two cerebral hemispheres, hypoglycemia, intoxication, poisoning, and hypothermia, in the brainstem (48, 49, and 50).

At this point it is important to note that coma does not mean the same as persistent vegetative state (PVS). The latter refers to a *clinical condition of complete unconsciousness of the self and the environment, accompanied by sleep-wake cycles, with complete or partial preservation of both the automatic functions of the hypothalamus and the brainstem* (51, p. 1500). PVD may be present one month after *acute traumatic or non-traumatic brain injury* (Ibid., p. 1499), and these may be one of its main causes. Although it can also be caused by *degenerative and metabolic brain disorders, or by severe congenital malformations of the nervous system* (Ibid., p. 1500).

In the case of coma, depending on the treatment received and the severity of the damage that produced it, it can have several different conclusions: brain death, persistent-permanent vegetative

state, or a conscious state which includes both the complete recovery of the *individual* and a minimal state of consciousness in which the patient possesses more basic perceptual or visual capacities (50).

There are other similar cases in which a certain degree of irreversibility is present such as: (i) dementia, in which the *individual's* cognitive abilities suffer progressive deterioration as time passes (51); (ii) locked-in syndrome, which refers to a state in which both the *individual's* consciousness and perceptual abilities function perfectly, but he is unable to move a single part of his body (52); (iii) or brain death, a notion introduced by Mollaret and Goulon (53), when there is a complete absence of response or perception to external stimuli, movements of any kind or voluntary breathing, or physical reflexes such as blinking or eye movement. In this particular case, the patient needs complete assistance in order to maintain the most basic vital functions active. In each of these situations there is evidence of damage or deterioration in the *individual's* cognitive and perceptual (and even motor) abilities, as a result of damage to certain areas of the brain or the nervous system as a whole, although the symptoms may vary from one particular case to another.

Coma has certain conditions by which it becomes reversible. In this case there would be a time past t_1 , in which there was a person with full use of his faculties, and a moment t_2 , in which the identity of the *individual* begins to become more and more diffuse. However, under this situation there is the possibility of a time t_3 , in which the *individual* returns to being the person he was before, recovering at best the vast majority of his mental faculties.

These conditions, by which the coma becomes reversible, are directly related to the causes that provoked it. Some of them, such as hypoglycemia or acute hydrocephalus, can be rapidly treated by returning the *individual* to a normal conscious state (54). Others, such as bacterial meningitis, may take somewhat longer to treat (14). Mostly, the recovery of the *individual* is associated with rapid

clinical intervention to ensure a speedy physical and mental recovery. Conversely, causes that may be reversible could become irreversible if not addressed immediately. For example, *a patient in coma from a subdural hematoma that is rapidly drained is likely to respond favorably, whereas one with a delayed diagnosis and treatment may fare worse* (14, p. 2065).

As has been seen, coma has the peculiarity among the various diseases described that it has conditions under which it is possible to achieve full recovery of the *individual's* conscious abilities. In this case there is a *person* P_1 at a time t_1 , who undergoes a change through t_2 , losing his conscious capacities and self-identity. The theory of psychological persistence would claim that *person* P_1 ceased to exist (in purely cognitive terms) at a time t_2 , because of an accident and, therefore, his identity is no longer the same or no longer exists. However, there is a possibility that the comatose *person* P_2 not only regains his consciousness, but also returns to who he was at t_1 .

Some might argue that the P_3 *person* resulting from coma recovery could be a replica or copy of the former P_1 , with identical physiological characteristics and a different mental constitution. However, this assumption is somewhat unlikely, because *a person who revives from a coma is not a replica of the person who existed before* (7, p. 153). This is because the areas of the brain responsible for memory storage and subsequent retrieval may still be intact. And although *coma may well involve brain damage that temporarily destroys the constitutional basis of rational consciousness* (7, p. 153), the *person* who awakens at time t_3 from his or her coma during time t_2 would still be the same as he or she was at t_1 . Beyond real-world clinical capabilities, in a hypothetical case *it might well be possible to repair such damage, and that the result of doing so might be an organism that was not only capable of rational consciousness, but had the memories, beliefs, attitudes, personality traits, etc., characteristic of the person who existed previously* (7, p. 153).

4. The argument of temporal change

This idea can be summarized through the temporal change argument, or ACT (8, 16). This argument claims that there are moments in our lives when we experience temporal changes, either because we are unconscious under anesthesia, during sleep, or in a coma. In those moments we possess a higher moral status, above anything else or any other form of life, thanks to the fact that during that lapse of time we still retain our *higher-order capacities* (16, p. 482).

To make this argument more understandable, it is necessary to frame it in the debate on the conditions of psychological persistence of patients with a reversible coma. In these cases, the person P_1 at time t_1 possesses both *the first-order capacity and the immediate capacity* (16, p. 482) to have conscious thoughts. Here «capacity» is understood as a certain ability or potential to perform both physical and mental activities (8, p. 17).

On the one hand, *first-order capacity* is understood as the substrate or neural basis that one eventually forms over time and through different experiences. For example, Mary would possess the *first-order capacity* to swim if and only if she learned to swim over time, and is not incapacitated to perform that activity. Whereas *immediate ability* refers to Mary's willingness to swim at a specific time.

In either case, if Mary goes into a coma she would lose the *immediate ability* to swim, walk, or write her next philosophical dissertation. However, she would still possess the *first-order ability* to perform any of those activities at either t_1 , t_2 , or t_3 , given that the parts of the brain responsible for these activities are intact and undamaged. In that case he would have neither the *immediate* nor *the first-order capacity* to do anything at all (8, 16). Through the *second-order* or higher-order capacity Mary would have the ability or potential to read or write if she first learns to read or write. In short, *an individual has a higher-order ability to perform some activity as long as*

she has the ability to obtain the immediate ability to perform that activity (16, p. 482).

What ACT seeks to show, in cases such as those of reversible coma, is that individuals in these situations never lost their higher moral status, and continued to qualify as *persons* despite there being a time t_2 in their lives when they did not possess the *immediate capacity* to think, speak, or move. However, before, during and after the coma they continued to possess higher-order (or *second-order*) capacities. It is for this reason that their moral status did not disappear or undergo any change of gradation; it simply continued to be in the possession of the *individual* in the course of his illness, thanks to its conditions of reversibility.

For this reason it would be incorrect to determine whether someone is a *person* (thus possessing a higher moral status) during the course of the illness from the perspective of psychological continuity. This is because, despite the fact that the causal links between different mental times have been disrupted at t_2 , the *individual* still possesses the higher-order capacity to think, remember, and identify himself as the *person* he was before the coma at t_1 .

5. An inverse proposal on personhood

As noted at the beginning of this paper, the theory of psychological persistence understands a (human) *person* as a living being with certain cognitive qualities, which allow him to have a notion or concept of himself. This is because he is able to understand that his life develops through time in a diachronic way (2). The main reason behind this idea is that there are causal links between the thoughts of the same *person* at different moments and times, which ensures that his life has a certain space-time continuity. In the debates on the right to life of some humans, who for one reason or another experience significant changes in their mental faculties, the

fact that they are or are not *persons* is often raised quite insistently (2, 8, 9, 23).

Concretely, what psychological theory is saying is that (as long as they are one and the same *person*) there is a time t_1 in which a *human being* is in full use of his mental capacities and is aware of his existence at the present moment. Such a condition of persistence extends over different temporal ($t_1, t_2, t_3, t_n \dots$) and also spatial ($e_1, e_2, e_3, e_n \dots$) moments, ensuring the survival of the *person*. However, this theory presents some problems, which clearly show that there are cases in which it is not possible to determine the existence of the *person* from its psychological persistence.¹⁸

In order to show this fact, the specific case of coma was presented, which is shown as a counterexample to the theory of the psychological persistence of persons. As it could be noted, this type of coma presents the peculiarity that it has conditions by which the suspension of the *individual's* mental activity becomes reversible, as long as the necessary clinical conditions are met. In terms of neurological effects, this *individual* suffers a temporary change of his conscious faculties. During this period of coma, the *individual* still possesses the higher order capacity (by which he can recover his mental faculties), because he still retains the neural substrate or first order ability to think (8).

However, people in this state do not have the immediate ability to activate their mental faculties, remember who they are, or simply be aware of their surroundings while in the coma. Despite this, they still possess the potential (the higher-order capacity) to be and remember who they were at a time t_1 prior to the coma (at t_2), since they still retain the neural substrate from which they could recognize themselves as the people they were in their past.

This is possible mainly because coma meets the clinical conditions sufficient to consider that the *person* (and his moral status) never disappears, despite the fact that there is an interruption of neuronal activity. For these reasons in coma it is not possible to determine the moral status of this *individual* at t_2 through the conditions

of persistence of his mental states. As a consequence, it is also not possible to decide that the *person* has completely ceased to exist due to the suspension of his neuronal activity, since there is a case that he can recover it again. From this it follows that the coma patient never ceases to be the same *person* and, therefore, continues to retain his superior moral status by which his right to life is guaranteed, despite having undergone this temporary change in his conscious capacities. For these reasons it would be incorrect to decide on the right to life of someone in this situation, based on the theory of psychological persistence.

6. Conclusion

To conclude, the central idea of all this argumentation could be summarized as follows: if and only if the damage suffered by some *individual* is reversible and the resulting person P_3 is the same as before the coma P_1 (in the clinical context of the disease), the destruction of the living organism at time t_2 would be equivalent to the destruction of person P_1 at time t_1 . This is because the *individual* still possesses the higher-order ability to think and establish a causal connection between different mental states (beliefs, desires or intentions) while in his coma state at t_2 .

What is intended to be shown through this argument is that it is not necessary for there to be psychological continuity of mental states across t_1 , t_2 and t_3 for the *person* to remain him/herself in that time span, because at t_2 the causal-psychological link is completely severed. In the case of reversible coma, in particular, it is shown that this continuity is not necessary for the survival of the *person* through time (i.e., to guarantee his personal identity). This is why it is not possible to decide on the right to life of an *individual* in this situation, since he still possesses the higher order capacity or the potential to be who he was before the coma.

This counterexample to the theory of psychological persistence shows that continuity of the *individual's* mental states across different temporal lapses is not necessary because: (i) he or she still possesses the neural substrate that makes recovery possible, and (ii) there are clinical factors that make recovery of the *person's* conscious state possible at a time t_3 subsequent to the coma. Specifically, the watershed in this discussion would not be delimited by the use of the *immediate capacity* to think and remember who we were before falling into coma at time t_1 , but by the existence of a *second or higher order capacity* that allows the *individual*, through t_2 , to return to being the person he or she was before the coma. This last thesis would be fulfilled if and only if conditions exist under which reversion of the disease is possible. For practical purposes, these conditions would be: (i) rapid clinical intervention, and (ii) the absence of brain damage that would make recovery impossible or difficult.

Bibliographic notes

¹ By the word «individuals» (plural) I mean beings belonging to the human species who do not possess a continuity in their mental states across time and space (their beliefs, desires, intentions, or future plans), nor do they have a self-concept in which the life of a human being is circumscribed as including a past, a present, and a future (2, 3, 4, 5, 6, 7). In generic terms, it is argued that they are merely sentient (feeling pleasure, pain, frustration, etc.) whose perception of themselves and their environment is limited to the present moment (2, 3, 6, 8, 9, 10, 11).

² Hereafter, a terminological distinction is made between the concept of *person*, *individual*, and *human being*. The former describes a being who is aware that his or her mental states have a temporal-space persistence or continuity, is self-conscious, can use spoken language, and possesses a concept of self-extended in time and space (2, 3, 4, 6, 12). The second refers to a being that does not possess this characteristic, but is a purely sentient being (can feel pleasure, pain, frustration, etc.), (8, 9, 12). The third refers to a biological category by which we refer to any living being that possesses a DNA belonging to the species *Homo sapiens* (1, 2, 3, 4, 6, 10, 12, and 13).

³ Marginal cases refer to a set of humans whose cognitive capacities are equal or similar to those of some species of non-human animals (2, 17, and 18).

⁴ Numerous authors (2, 6, 12, 19, and 20) describe that people, by virtue of possessing certain higher cognitive capacities such as self-awareness or the ability to make future plans, have the right to have their lives continue uninterrupted without any frustration towards their immediate or future interests.

⁵ Based on this definition, the counter-position towards the theory of psychological persistence will be developed at the end of this paper.

⁶ It is worth mentioning that the terms «coma» and «persistent vegetative state» are often used interchangeably in different debates. However, it is important to note that the vegetative state succeeds the coma after approximately four to five weeks of brain and body inactivity (15).

⁷ Personhood is a category by which we attribute to a human or non-human animal a certain moral status (6, 8, 12, and 24). Through this concept we understand the possession of certain rights and responsibilities, such as the right to life, or the obligation to answer for acts perpetrated in the past. Likewise, this idea refers to the existence of cognitive capacities in the living entity to which *personhood* is attributed. These could include the possession of self-consciousness and spoken language (1, 3, 6, 10, 12, and 25). Specifically, Mary Anne Warren (25, p. 3) expounds that «to have a moral status is to be morally considerable or to have a moral right. (...) If an entity has moral status, then we cannot treat it in any way we please; we are morally obligated to give weight in our deliberations to its needs, interests, or welfare.»

⁸ Translations hereafter are my own.

⁹ The terms persistence and continuity are used interchangeably.

¹⁰ «Persistent», adj. From «persist», Intr.: To last for a long time. RAE.

¹¹ The parentheses «(s)» are mine.

¹² Italics in this and the following quotations are mine.

¹³ Specifically, the various authors who have attempted to define the role played by the self in the process of narrative construction agree that narratives are explicitly told before an audience in a framework of social interaction where the self is the central axis of the narrative activity.

¹⁴ The qualifier «speciesist» comes from the word «*speciesism*». This word was coined by Ryder, R. (44) in his article «Experiments on Animals». Speciesism» is understood as: the belief that *human beings* are superior to other animals, and therefore can use them for their own benefit, RAE.

¹⁵ For more information on the right to life in abortion or infanticide: Tooley (12), Di Silvestro (16), Nelson (18), De Grazia (21), McMahan (20, 32), and De Grazia (33).

¹⁶ Among them are McMahan (2), Singer (6, 10), Tooley (12) or Bermúdez (45).

¹⁷ In the case of Alzheimer's disease, as the disease progresses, the person gradually loses his or her self-identity, being unable to recognize him or herself or others. That is why it is argued that in this particular case the *person* would cease to exist.

¹⁸ Primarily, the psychological perspective of identity would deny personhood not only to humans with certain neurodegenerative diseases, but a multitude of non-

human animals would also be out of place according to this perspective. This theory, in turn, provides the mental conditions by which a *human or non-human individual* could become a *person*.

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