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The Death of Personhood and the Rise of the Expressed-Self: What Neuroscience Tells Us About Self and Death

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I. INTRODUCTION

Increasingly more complex medical techniques and technologies have created a contemporary bioethical branch of philosophy. One of the most controversial bioethical debates is that of euthanasia in cases of brain death, coma, and persistent vegetative states (PVS). Political rhetoric, religious retorts, highly emotional cases, and complex ethical distinctions make it difficult to investigate the problem of euthanasia. Understanding the conditions that make up life and the end of life are integral to determining the ethical obligations to a patient. Our current legal system defines death as brain death. Yet, our intuition seems to tell a different story. Jeff McMahan argues that brain death is an insufficient theory of death. Instead, McMahan appeals to our intuition with two major criteria for death: the death of life and the death of self or person. Indeed, McMahan offers in words what many

have felt in cases of euthanasia. These two distinct approaches to defining death—the legal concept of brain death and McMahan's articulation of two elements of death—pivotaly determine our moral directives in cases of euthanasia, and often in very different ways.

In this paper, I argue that although McMahan's criticism of brain death is notable, it does not resolve all the questions about death. Furthermore, I will show that McMahan's argument for a dual criteria for death implicitly posits dualist notions, which we have good reason to doubt. Instead, a third definition of death is necessary to respond to the difficulties with brain death, one that acknowledges our intuitions about life and personhood, while avoiding dubious features of dualism.

II. BRAIN DEATH

Early definitions of death, or traditional definitions, hypothesized that life and death hinged on the operation of the cardiac and respiratory systems. Today, section one of the Uniform Determination of Death Act states that death is, "The irreversible cessation of all functions of the entire brain, including the brain stem [...]"¹ This legal definition of death has been

adopted by most states, and has gained large support by neuroscience research beginning in the 1960s and 1970s that revealed a strong correlation between the brain and bodily function.ⁱⁱ According to this theory, persons are indistinguishable from their bodies. Implicit is that unconsciousness is the cessation of personhood and, therefore, death. In other words, when the body dies, personhood is extinguished simultaneously. Brain death differs from traditional theories of death because it defines life and death through the processes of the brain, instead of other vital organs like the lungs and heart.

Those who support brain death include Charles M. Culver and Barnard Gert who explain, "Death is a biological concept. Thus in a literal sense, death can be applied directly only to biological organisms and not persons. We do not object to the phrase 'death of a person,' but the phrase in common usage actually means the death of the organism which was the person."ⁱⁱⁱ Culver and Gert mean to say that the person is dependent on the body such that speaking about the person as a discrete entity is confused. In this view, there is no distinction between the person and the body in life or death. A person is extinguished if the organism dies, and the person cannot die separately from the organism, or biological body. These premises are the foundation of the legal definition of death. Yet, there are those who argue we have good reason to doubt this notion.

III. DEATH OF PERSONHOOD

When Rene Descartes mused upon his existence he found that his self could be separated from his body. He imagined the body melting away, while the person thrived. What personhood is, Descartes thought, is an immaterial, non-spatial, spirit, soul, or mind of a different substance than the body. Dualism has received significant criticism since its inception, although the intuition has not subsided.^{iv} Indeed, even the most passionate materialist will fancy material dualism with a body on one side and a material person on the other. Jeff McMahan argues he can propose an intuitive theory of death without "having to embrace a controversial dualism that treats the person and the organism as distinct substance."^v

McMahan contends that we need two notions of death: one for the person and one for the organism.^{vi} This distinguishes McMahan from brain death theorists who find no reason to speculate on the death of personhood, as persons are bodies. According to brain death, such distinctions are unnecessary because the person dies with the organism. Moreover, McMahan contends brain death is neither necessary nor sufficient to explain the death of the organism. With two notions of death, McMahan aims to elude the inadequacies of brain death. For each notion he defines two distinct criteria. In the death of the organism he postulates death as a "thermodynamic 'point of no return,'" about thirty

minutes after cessation of the circulatory system.^{vii} This conjecture is distinguished from brain death by asserting failure of the vascular system, not the brain, as the death of the organism. The death of a person is far more difficult, McMahan admits, but finally supports destruction of the cerebral hemispheres as sufficient for the loss of personhood. In other words, the irreversible loss of consciousness denoted by the elimination of those brain regions necessary for awareness indicates the cessation of self. McMahan's primary motivation for constructing a dual notion of death is his impression that brain death does not sufficiently explain our intuition about personhood. McMahan outlines two kinds of scenarios he hopes diminishes brain death theorists and warrants the revision described above.

BRAIN TRANSPLANTATION

McMahan asks that we imagine a scenario in which one's entire brain were surgically transplanted into the head of one's identical twin. If the body from which the brain was transplanted was not placed on life support it would certainly die. In such a case, the body would be dead, yet the brain from that body would remain intact. The brain would be alive. In this scenario, although the body dies, the brain is "housed in a different organism."^{viii} McMahan suggests the reverse is possible: a living organism that has suffered brain death. An elementary example is found in the sea squirt. In the

larval stage sea squirts use a simple nervous system called the cerebral ganglion to navigate the ocean. Once the sea squirt has found a suitable bedrock, the cerebral ganglion is extinguished (not eaten as popularly described).^{ix} In other words, the organism that is the sea squirt continues to thrive even after suffering brain death. McMahan asserts that under certain conditions the same could be true in complex mammals, including humans.

LOCKED-IN SYNDROME

As further evidence against brain death, McMahan points to patients who have lost most regulatory function, yet remain conscious. In such cases, the brain stem is damaged, while higher areas are spared, and in most severe scenarios patients will be completely paralyzed, although remaining conscious. Certainly, a brain death theorist would not say that such a patient is not alive. Accordingly, it seems the tenet that the brain must necessarily regulate somatic function, opposed to mechanical systems, for life is inconsistent. McMahan concludes, "thus the brain death theorists' principle rationale [...] collapses."^x

McMahan believes these scenarios demonstrate that brain death is neither necessary nor sufficient to explain the death of the organism. Brain death also neglects the obvious intuition that the person is separable from the body. McMahan says we need not go as far as Descartes and posit distinct substances in the world,

but we can at least account for this difference in two notions of death. Succinctly, two deaths are necessary to deal with the limitations of brain death: the death of personhood and the death of the organism.

IV. THE CASE AGAINST MCMAHAN

On the onset, McMahan's two concepts of death seem reasonable and intuitive. Indeed, it was intuition that most motivated McMahan's revision. In his foreword, McMahan's focus is on the "powerful" intuition that *I*, self or person, is distinguishable from the body, to which he hopes to do justice.^{xi} For many, this inner self is conceived as immaterial, perhaps as a soul or spirit. However, a materialist view of personhood might describe the person this way: "The first-personal stream of consciousness running through our lives—this continuing jumble of thoughts, experiences, and emotions, all self-ascribe [...] in which I am both narrator and central character [...]"^{xii} In this way we separate ourselves in two: a self and a body. Although previous distinctions between the body and person have required the immaterial, it is not necessary. McMahan, for example, argues the self to be the cerebral hemispheres. Regardless, with this intuition humanity has developed languages, ethics, and notions of free will.

In history, other intuitions have had similar weight, yet have led us horribly astray. For example, the structuralists, a popular faction among psychologists in

the early 1900s, used first-person accounts to collect data. They met their demise as a result of their false intuition that people have a valid understanding of their minds.^{xiii} Is it possible that the intuition by which McMahan builds his revision is, too, dubious? Neuroscience has begun to answer this question. The results tell a much different story about personhood than we could ever imagine.

When Descartes first looked inside himself he found a continuous self, separate from his body. Today, as neuroscientists peer inside the human brain they find nothing that resembles Descartes' duality and our intuition. In fact, neuroscience finds nothing at all that could support our beliefs about personhood. There are no indications for souls, spirits, or immaterial minds. There are no Cartesian Theaters or screens where the brain sends sensory input to be projected for the viewing of an inner self. Neither is there a central point or hierarchy in the brain that collects all the neural and chemical data to be bound together into one continuous stream of consciousness. Daniel Dennett, who has written much on self and consciousness, summarizes current findings in neuroscience this way: "The revisionist case is that there really is no proper-self: none of the fictive selves—including one's own first-hand version—corresponds to anything that actually exists in one's head."^{xiv} Succinctly, neuroscience has found only a de-

centralized organization of brain structures, such that an inner self is incoherent.

In this view, the self is either an elaborate illusion or is fragmented across various systems of the brain. This novel interpretation has a significant impact on our understanding of death. In particular, this view gives reason to doubt McMahan's death of personhood as the loss of cerebral function. First, McMahan makes the fundamental mistake of assuming that our intuitions about self tell us something true about personhood. It seems obvious that our reflections should have validity, and, yet, neuroscience has shown we are living a fantasy, a confabulation of our brains attempting to make sense of things. For this reason, there seems little evidence, on account of intuition, to support McMahan's revision. Second, although McMahan states he can do without Descartes' dualism, he implicitly employs a suspiciously dualist viewpoint. By hypothesizing that the person exists in the cerebral hemispheres, McMahan has created a boundary in the brain where consciousness happens, or where the person is bound together. There is no theater, no viewer, nor a place of neural integration that creates the person. McMahan's view is ultimately indistinguishable from the notion of a Cartesian theater because he posits the cerebral hemisphere as the seat of personhood; the screen to which sensory data is sent and projected for the benefit of the observing person. McMahan

seems to be what Dennett calls a Cartesian materialist: a person who claims to be a materialist, yet uses metaphor that indicates Cartesian dualism.^{xv}

Finally, McMahan's death of personhood is simply inconsistent with current knowledge of consciousness and self. McMahan correctly identifies the cerebral hemispheres as significant to the expression of self. Nevertheless, this does not capture the view that self is likely an illusion, or at best decentralized across the entire brain. Indeed, some neuroscientists argue self is decentralized across the entire nervous system.^{xvi} Others protest we need to zoom out further where the self is a combination of the body and environment in which it interacts.^{xvii} Simply, there are no persons to die to support McMahan's death of personhood.

V. MCMAHAN'S INSIGHTS

Despite limitations, McMahan has important insights on how we should understand death. For one, with his brain transplantation scenario, he accurately shows that the brain death theorists too strictly join the brain and organism as a unit. The possibility of a brain transplant shows that a brain can thrive without its body. Moreover, the rare and horrifying cases of locked-in syndrome demonstrate a division between bodily function and cognitive processes. This, too, is neglected by brain death theorists who may falsely claim such patients are ventilated corpses.^{xviii} Finally, McMahan points to

the importance of considering the person when defining death, doing justice to our intuitions about self. I also believe we should account for the person, yet not for the same reason that McMahan offers. Neuroscience shows that the self is experiences loosely linked. However, I argue this does not diminish the importance of a person, illusion or otherwise, when considering ethics. Our ethical obligation to those patients who consider themselves persons, even if an illusion, are greater than those in persistent comas lacking such convictions. The illusion of personhood is as morally consequential as a person itself.

We are left with a potentially muddled conclusion. There are two theories that fail to describe death in its entirety. Brain death seems too blunt in handling ambiguous cases like locked-in syndrome. Meanwhile, McMahan's revision does not correspond with evidence that reveals there is no place for an inner self in the brain. How can we assimilate the strengths of both McMahan and brain death?

VI. DEATH OF THE EXPRESSION OF PERSONHOOD

Many look to the brain to find the neural correlates of personhood. These researchers and philosophers hold one of two positions: either (1) the self is "in" or correlated with a defined region of the brain or, (2) the entire brain, through the summation of all its activities, is responsible for personhood. Yet, whenever we

probe a neuronal region, the inner self is reliably absent. When considering the entire brain, which seems to eliminate the futile search for a structure that houses the person and Cartesian traps, we are led back to the mistakes McMahan identifies in brain death. In reality, both positions are wrong. We will never find the self in any neuronal structure or in the entire brain. The inner self is a false impression. There are no persons to be found in the brain.

The predicament can be summarized this way: when we define the death of personhood as the extinction of one or several brain structures (e.g. the cerebral hemispheres) we have missed the self entirely; the self is nowhere. When we posit the entire brain as death of personhood we are too blunt, and generate unacceptable moral directives in cases like locked-in syndrome. To remove ourselves from this unavailing debate, a paradigm shift is obligatory.

The necessary revision is that our answer to the death of personhood is not in the brain. Neuroscience reveals that the inner self cannot be found in the brain and is likely an illusion. Therefore, any theory of death that attempts to explain the death of persons by a particular malfunction of the brain is bound to fail. For this reason, many may be tempted to forgo considering the death of personhood in ethical debate. This is simply unjustified. I argue that we have as equal a moral duty to hu-

mans who are under the illusion of self, as others who may be true persons. In other words, there is no ethical distinction between a person and the illusion of personhood. I submit we should focus our attention on the *expression* of personhood, namely the belief that there is an inner self. I propose that the death of personhood is the death of expressed personhood (DEP). DEP is when there is no longer a belief, intuition, or concept of an inner self, as indicated by the agent in question. Such expressions may be as simple as communicating one's existence, for example "I am alive." These declarations are even possible among the paralyzed locked-in patients with use of modern technology.

DEP is stronger than previous notions of death because it is consistent with current research and does not assert a particular place in the brain where the person exists. Also, DEP is flexible to case studies that show the illusion of self can continue even when there is significant damage to the brain, as in locked-in syndrome or minimally conscious states. Crucially, DEP offers clear and reliable ethical directives that treat obscure cases with respect.

McMahan was correct when he argued that death should be divided between the body and the person. His mistake was believing this dichotomy reflected something true in the world. Instead, two deaths are necessary because we have a moral obli-

gation to those who express personhood, even if a delusion. For example, McMahan shows how brain death neglects the moral duty for locked-in syndrome patients. Despite total paralysis and significant brain damage, these patients are not dead. These patients express personhood, and DEP is prepared to account for our moral obligation to them as such.

Nonetheless, there are limitations that DEP must address. Most significant is the question of what precisely constitutes an expression of personhood? DEP must specify the demonstrations (e.g. behaviors, vocal and written communications, etc.) that serve as clear evidence to the belief of a self. In healthy humans, this task seems straightforward with the use of a survey or oral accounts that are likely to indicate intuitions about self. However, when faced with patients that are 'locked-in,' such techniques are ineffective. These patients cannot take a simple written survey or respond orally to questions that might probe their expression of personhood. We must find new ways to probe this expression. Modern techniques and technology, such as E-tran frames and eyegaze computers, have given new ways to enable patients with limited ability of expression to communicate thoughts and emotions.^{xix} Even so, what of patients who are minimally conscious who display less awareness than locked-in patients but more than PVS patients? At what point does DEP draw the line that indicates the cessation

of an awareness of personhood? To answer these questions a thorough inquiry of what precisely defines expressions of personhood will be necessary. With precise criteria, DEP can become a pragmatic tool in ethical debate.

Another concern DEP must address is: how are we to handle scenarios when individuals are temporarily unable to express personhood, for example, while sleeping or in a coma? No reasonable person would argue that an individual lacks the moral obligation of a person while they sleep. Yet, DEP seems to imply as much. Appropriately, ethical debates must consider both DEP and the probability that an individual will recover the capability of expression. In cases of sleeping and comas, our ethical duty towards a potential expressed person should take precedence over its absence because there is significant evidence that this individual will again express their personhood within an explicit period of time. Only in those cases when there is a low probability that expression will be restored should our consideration of DEP dominate. In other words, when patients have a minimal chance for recovery, like those in PVS, it is morally sensible to consider them dead according to DEP.

Recapitulated, DEP is successful because it accommodates neuroscience research, which reveals that there are no selves, only the illusion of such persons. It does this by probing not the brain, but, in-

stead, the belief of an inner self. I maintain there are two deaths: one, death of the body, as McMahan described, "a thermodynamic 'point of no return.'" Two, DEP, when a test of cognition shows no evidence of the belief, intuition, or concept of an inner person by the patient in question.

VII. DEP AND EUTHANASIA

In most cases of euthanasia, a patient is in a PVS. These patients lack many biological functions and are entirely unresponsive. Using the criteria for DEP, these patients must demonstrate a belief of personhood. PVS patients will consistently fail such measures and, as a result, must be considered dead. In these situations, DEP determines euthanasia is ethical. This answer can be identically found in other models of death, including brain death theorists who would consider a PVS patient dead because they are often brain dead, or McMahan's death of personhood that would show the person is lost in cases where the cerebral hemisphere is destroyed.^{xx} DEP offers a clarification to those cases of euthanasia in which the patient lies between PVS and a healthy individual. Here is where debate is muddled and theories diverge. DEP best handles such bewildering cases like locked-in syndrome.

How we manage bioethical questions depends pivotally on the definitions for morally consequential elements like personhood, life, and death. In cases of euthanasia, the definition for death is most

crucial in treating patients ethically. Unfortunately, the legal definition of death, or brain death, is unable to morally distinguish between the body and the person when a difference clearly persists. McMahan aimed to revise this failure by creating a second death, the death of personhood dependent on the function of the cerebral hemispheres. Nevertheless, death of personhood implicitly uses dualist metaphor and disregards recent discoveries that reveal there are no persons to die. What DEP provides is a third notion of death that eludes the failures of the previous two, while remaining sensitive to ambiguous bioethical cases. DEP is a theory of death that treats all people with dignity.

End Notes

ⁱ National Conference of Commissioners on Uniform State Laws. *Uniform Determination of Death Act*. Chicago, Illinois, 1980.

ⁱⁱ McMahan, Jeff. "Endings." *The Ethics of Killing: Problems at the Margins of Life*. Oxford: Oxford UP, 2002.

ⁱⁱⁱ As cited in: McMahan, 425

^{iv} Blackmore, Susan. *Consciousness: An Introduction*. 2nd ed. Oxford: Oxford UP, 2012. Page 9.

^v McMahan, 426

^{vi} McMahan, 424

^{vii} McMahan, 439

^{viii} McMahan, 429

^{ix} Chadderdon, Lisa. "Brainless Fish in Topless bar." *Fast Company*, 1999.

^x McMahan, 433

^{xi} McMahan, 426

^{xii} Ismael, Jenann. "Saving the Baby: Dennett on Autobiography, Agency, and the Self." *Philosophical Psychology* 19.3 (2006). Page 345.

^{xiii} Blackmore, 12

^{xiv} Dennett, D. C., & Humphrey, N. Speaking for our selves. In D. C. Dennett (Ed.), *Brainchildren: Essays on designing minds*. Cambridge, MA: MIT Press, 1998. Page 39.

^{xv} Blackmore, 52

^{xvi} Blackmore, 124-126

^{xvii} Ibid

^{xviii} McMahan, 430

^{xix} Rohrer, Finlo. "How Do People Cope with 'locked-in' Syndrome?" *BBC News Magazine* 25 Nov. 2009.

^{xx} McMahan, 441

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