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IN DEFENSE OF BRAIN DEATH: REPLIES TO DON MARQUIS, MICHAEL NAIR-COLLINS, DOYEN NGUYEN, AND LAURA SPECKER SULLIVAN

– John P. Lizza –

Abstract. In this paper, I defend brain death as a criterion for determining death against objections raised by Don Marquis, Michael Nair-Collins, Doyen Nguyen, and Laura Specker Sullivan. I argue that any definition of death for beings like us relies on some sortal concept by which we are individuated and identified and that the choice of that concept in a practical context is not determined by strictly biological considerations but involves metaphysical, moral, social, and cultural considerations. This view supports acceptance of a more pluralistic legal definition of death as well as acceptance of brain death as death.

Keywords: death, definition of death, brain death, persons and death, irreversibility and death, organic integration, decapitation and death, social construction of death, organic integration, persons and death.

I would like to thank Don Marquis, Michael Nair-Collins, Doyen Nguyen, and Laura Specker Sullivan for their critical commentaries on my article. I will first respond to Nguyen and Marquis and then to Nair-Collins and Specker Sullivan.

It is puzzling that Nguyen thinks that support for a consciousness-related or "higher-brain" formulation of death "flows from a Lockean view of human persons," especially when she mistakenly attributes a Lockean view to me.[1] While there have been Lockean-inspired arguments for a consciousness-related formulation of death, perhaps most notably Michael Green and Daniel Wikler's,[2] other philosophers in favor of this formulation, such as Robert Veatch, Karen Gervais, and I, have not relied on a Lockean understanding of the human person.[3] Veatch

[1] Nguyen (2018): 51.

[2] Green, Wikler (1980).

[3] Green, Wikler (1980), in fact, emphasize the importance of the cessation of the "biological processes" underlying consciousness in order for someone to have died. In their view, death involves the irreversible cessation of consciousness concurrent with the irreversible loss of whatever biological processes underlie consciousness. The biological nature of the substantive being underlying consciousness matters to them in a way that it does not matter to Locke. Thus, it is not clear that they endorse a Lockean view of the human person, at least in the way Derek Parfit has developed that view, in which the psychological continuity by any causal process would be sufficient for all

holds that an understanding of the human person as a substantial union of mind and body in the Judeo-Christian tradition supports such a formulation of death.[4] Gervais also proposes a substantive view of the human person in support of a consciousness-related formulation of death and is critical of Lockean-type arguments.[5] In Chapter 7 (the longest chapter) of my book, *Persons, Humanity, and the Definition of Death*, I reject the Lockean view, including its current and most influential incarnation in the work of Derek Parfit.[6] In Chapters 4 and 5, I argue explicitly for the view that human persons are substantive beings constituted by, but not identical to, human organisms. They are not phases or properties of human organisms, which is how persons are treated in the Lockean view.

Nguyen says that I "provide no ontological discussion" in support of my view.[7] Don Marquis says the same thing, when he asks for my metaphysical argument for not identifying the human being with the human organism.[8] What they say is true, if that means that I have not presented my constitutive account of human persons in my article for this issue of *Diametros*. My aim in this paper was not to provide an ontological argument about the nature of a human person and how it supports acceptance of a consciousness-related formulation of death. Instead, it was to argue more narrowly that any practical definition and determination of death for the kind of being that we are must invoke some sortal concept by which we are individuated and identified and that the choice of that concept is not determined by strictly biological considerations but involves metaphysical, moral, social, and cultural considerations. Moreover, even if there is a strictly biological concept of death, it does not follow that that concept should be used in the social and cultural context in which we determine death. D. Alan Shewmon, Nair-Collins, and Specker Sullivan recognize this, whereas many others, such as Nguyen and Marquis who reject brain death as death, do not. Moreover, I argue that the biological concept of "human organism as a whole" invoked by the proponents of whole-brain and non-brain formulations of death is vague. It is unclear to me whether a sharp line can be drawn between Condic's "coordinating" functions and Shewmon's "integrative functions" without relying on some notion of

that matters to us about our survival. However, if Green and Wikler do not rely on a Lockean view, then it is unclear whether any of the main proponents in the literature of a consciousness-related formulation of death actually base their view on a Lockean account of personhood.

[4] Veatch (1993).

[5] Gervais (1986).

[6] Lizza (2006).

[7] Nguyen (2018): 45.

[8] Marquis (2018): 23.

what it means for a particular kind of organism to exist "as a whole." I have more to say about this below in my discussion of Nair-Collin's view.

If Nguyen and Marquis wish to take issue with my metaphysics, i.e., my constitutive view of the human person, their target primarily should be chapters 2 through 7 of my book[9] and my article, "Where's Waldo: The 'Decapitation Gambit' and the Definition of Death,"[10] rather than mistakenly attributing a Lockean view to me. They should also take issue with the work of Lynne Rudder Baker,[11] who has developed and defended constitutionalism much more fully than I have. I agree with much of Baker's view, although I think it needs to be modified in certain ways to do justice to the social, relational nature of persons.

It would take too much space to adequately review the arguments that I have given for accepting constitutionalism and how that view applies to the problem of defining death in a practical context. However, here is a brief outline of multiple arguments in my book for constitutionalism over what I take to be its two main rivals, the animalist and Lockean views. My arguments fall into three main groups. First, in Chapters 3, 4, and 5 I argue that constitutionalism is a useful theory to address purported cases of relative identity and that it can be extended to understanding the relation not just between mass terms and count nouns but between two kinds of substances that we commonly admit into our ontology. I then show how treating human persons as constituted by, but not identical to, human organisms (1) is consistent with Peter Strawson's arguments for treating persons as a primitive kind; (2) coheres with David Wiggins's general (and in my view, correct) position in *Sameness and Substance*, although it develops the concept of the human person in a way that Wiggins did not; (3) gives central importance to the irreducibility of the first-person perspective and is therefore consistent with the arguments of those philosophers who have argued independently for this idea; (4) allows persons to have essential relational properties, like works of art, and in this way does justice to the ideas that we are essentially social and cultural beings and that our identity is, in part at least, determined by our relations to others. All of these salient points cannot be said about animalism or the Lockean view, and they are thus reasons for why constitutionalism is better than those alternative views when it comes to understanding our nature.

The second group of arguments in favor of constitutionalism over its rivals is that it provides a better explanation of intuitions about clinical and hypothetical

[9] Lizza (2006).

[10] Lizza (2011).

[11] Baker (2000).

cases in which the human person may diverge from the human organism that constitutes it. For example, it provides a more coherent explanation of why many of us accept the loss of all brain functions as death, even though a biologically integrated organism may remain alive. It explains why many of us think that the corpse or an artificially sustained decapitated human body is the remains of a human person and not the human person. This view also accords with many moral theories that value at a minimum the potential for consciousness as a mark of personhood and moral standing.

The third group of arguments contains criticisms of the alternative views of animalism and the Lockean/Parfit view. In Chapters 6 and 7, I show how problematic these two main rivals are when it comes to holding in a single focus our nature as biological, psychological, moral, and social beings. Thus, my strategy is to bring together my own work, as well as a good deal of work by others, on particular issues concerning human persons to support the constitutive view over its rivals.

In his commentary, Don Marquis gets off on the wrong foot by mistakenly claiming that "Shewmon and the President's Commission believed that the key property that made an organism living was not an organism being 'integrated as a whole', but the integrated functioning of the body's major organ systems,"[12] and that the 1981 President's Commission "endorsed the following *definition* of death" (emphasis – J.P.L.):

> An individual who has sustained either (1) irreversible cessation of circulatory and respiratory functions, or (2) irreversible cessation of all functions of the entire brain, including the brain stem, is dead.[13]

The above is not actually a "definition" of death but two criteria that the Commission proposed for determining death. The Commission defines death later in the report when it states that

> [...] death is that moment at which the body's physiological system ceases to constitute *an integrated whole*. Even if life continues in individual cells or organs, life of *the organism as a whole* requires complex integration, and without the latter, a person cannot properly be regarded as alive.[14]

[12] Marquis (2018): 21.

[13] Ibidem: 20.

[14] President's Commission for the Study of Ethical Problems in Medicine and Biomedical and Behavioral Research (1981): 33 [emphasis – J.P.L.].

The distinction between the Commission's definition and criteria for death is also clear when the Commission writes,

> The 'integrated functions' view would lead one to a 'definition' of death recognizing that collapse of the organism as a whole can be diagnosed through the loss of brain functions as well as through the loss of cardiopulmonary functions.[15]

Also, as cited in my article, Shewmon's critique of brain death as death is consistently expressed in terms of how the brain is not necessary for the integration of "the organism as a whole." This is not a trivial clarification, since Marquis distorts how the Commission actually defined death and ignores the subsequent debate over this key concept. Defenders of brain death as death, including the 1981 President's Commission and the 2008 President's Council on Bioethics, admit that there may be significant integration among major organ systems, but deny that such integration is sufficient for the integration of the organism as a whole.[16] Indeed, almost the entire internecine debate over brain death among those who work within the biological paradigm of death has focused on whether the brain is one of the major organs necessary for there to be a living human organism as a whole and without which, in the Commission's terms, "a person cannot properly be regarded as alive."[17] Consider, for example, how different major organ systems can be artificially maintained to facilitate the transplantation of organs. Suppose the brain, heart, and lungs have irreversibly failed and the donor is placed on extracorporeal membrane oxygenation (ECMO). There may still be significant integration of the remaining organ systems, but that does not mean that the person is still alive. Biological integration without the qualification of whether it constitutes a unity or whole may be sufficient for something to be alive, but it does not tell us what kind of thing is alive. We need to know whether there is enough integration for the being to count among the living "us." My claim is that this line-drawing is done in a social and cultural context and therefore is not simply a biological matter.

The President's Commission was keenly aware of how artificial substitutes, such as kidney dialysis and ventilators, can be used to restore the integrated functioning of the organism. However, they also contrasted such situations with the

[15] Ibidem: 37.

[16] President's Commission for the Study of Ethical Problems in Medicine and Biomedical and Behavioral Research (1981); President's Council on Bioethics (2008).

[17] President's Commission for the Study of Ethical Problems in Medicine and Biomedical and Behavioral Research (1981): 33.

hypothetical case of artificially sustaining a decapitated human body to prevent the outpouring of blood and to generate respiration. "Continuation of bodily functions in that case," the Commission wrote "would not have restored the requisites of human life."[18] Indeed, as I have argued in other work[19] and as Shewmon has admitted,[20] the same degree of organic integration may be present in an artificially sustained decapitated body and in a brain dead body. However, in contrast to Shewmon and Marquis, I agree with the Commission that such biological functioning is not sufficient for the continuation of a human life. Headless human bodies are not human beings as a whole and should not be counted among the living "us" Thus, if the artificially sustained, decapitated human body is not a living human being, neither is an artificially sustained brain dead body.

If simple decapitation is not enough to convince one to accept brain death as death, consider the following complexity. Suppose that at the same time that the decapitated body of a person was artificially sustained, the person's decapitated head was transplanted to another body, as Dr. White did in his horrible experimentation of transplanting the heads of monkeys.[21] Suppose further that the person regained consciousness, as also happened in White's experiments with the monkeys.[22] In this case, we should agree with Charles Culver, Bernard Gert, and K. Danner Clousser that a death has not occurred, because of the importance that consciousness plays in the life of human beings and perhaps other higher-order organisms.[23] The psychophysical integration of the human being would continue, despite the separation of the artificially sustained headless body. Suppose further that the original, artificially sustained, decapitated body was destroyed. Again, no one would have died. However, if no one dies in that event, then the continuation of the integrated biological functions of the brainless body or brain dead body cannot be sufficient for the continuation of a human life.

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[18] Ibidem: 36.

[19] Lizza (2011).

[20] Shewmon (2010): 7.

[21] White et al. (1971). Dr. White did not sustain the bodies of the monkeys whose heads he transplanted to the decapitated bodies of other monkeys. He was more interested in whether the monkeys would regain consciousness after the transplantation, rather than whether their decapitated bodies could be artificially sustained. Of course, he had to sustain the bodies of the decapitated monkeys that received the transplanted heads for a short time before the transplantation took place.

[22] It is unclear what type of consciousness the monkeys regained in White's experiment. However, White reports that they were aware, responsive, and able to track objects visually.

[23] Gert, Culver, Clousser (2006).

I grant that the integrative functions that remain in the artificially sustained decapitated or brain-dead body are sufficient for the life of some sort of biological being. I would prefer to call them "humanoid or human-like" organisms, rather than human organisms. However, Marquis misattributes to me the belief that those biological beings are dead. Instead, I am simply denying that those beings are living human beings or human persons. Thus, I can admit that the degree of organic integration in those bodies explains why research on those bodies, such as their hepatic function, would be relevant to understanding our hepatic function. However, this does not commit me to accepting that they are human beings or human persons.

Marquis claims that I conflate the concepts of human being and human person. I do not. He does. As Marquis notes, Mary Anne Warren pointed out many years ago that the term "human being" is not univocal. It has a genetic meaning, when it is used to refer to a member of the biological species *homo sapiens*, and a moral meaning, when it refers to "a full-fledged member of the human community."[24] Human being is thus used in biology and also in our moral and legal systems of thought. I equate "human person" with "human being" in the second sense of the term and hold that such beings are biological as well as social and cultural beings. I use the hybrid concept *human person* as the fundamental substantive concept by which individuals like us are individuated and identified. We are substantive beings that come to be and pass away. We cease to exist when we die.

Warren argues that we commit a category mistake when we try to apply the exclusively genetic concept of a human being in our moral and legal systems of thought. Individuals do not have rights and moral standing in virtue of simply being genetically human or being a member of the human biological species. They have rights and moral standing, she holds, in virtue of having a set of other characteristics, including consciousness and sentience, beyond simply being a member of the human biological species. Warren is right that we need to examine which concept is relevant in our moral and legal systems of thought. If we thought that either the potential for developing characteristics, such as intellect and will, were irrelevant to a fetus's moral status, or if we considered a defective fetus that lacked the realistic potential to develop intellect and will, she gives good reasons for rejecting the idea that genetic or species membership is what garners a being moral status. In other words, a strictly biological concept of humanity does not fit well into our moral and legal system of thought. Human beings have moral status only if one has already assumed a conceptual framework invoking a moral sense of

[24] Warren (1973).

human being that requires more than genetic humanity. Ethical issues at the beginning of life are more complicated than those at the end of life, because of the asymmetrical significance of potentiality. Whereas individuals with total, irreversible brain failure or permanent vegetative state lack any realistic potential for such characteristics as consciousness, intellect, and will, and therefore fall outside the moral and legal framework for living human persons, it is commonly assumed that healthy human embryos have such a potentiality.[25] When Justice Stevens remarks in his Cruzan dissent that there is a serious question of whether individuals like Cruzan have "life" as that word is used in the Constitution and Declaration of Independence, he is using "human being" in its moral, not genetic sense.[26] In other words, it would be a mistake to assume that the genetic or strictly biological sense of human being is the appropriate sense of the term to invoke in a statutory definition of death. Marquis and others who propose to reject brain death as death in our legal framework are committing precisely this error. They are conflating a strictly biological meaning of human being with the moral meaning that is the appropriate sense of human being to use in our moral and legal systems of thought.

Perhaps Marquis considers my use of the hybrid concept "human person" as the fundamental sortal by which we are identified and individuated as conflating the species and moral concepts of "human being." However, in this case, I am not thoughtlessly conflating the two concepts, but I am deliberately proposing that both concepts contribute to our understanding of what it means to be one of us in a moral and social context. Again, I have given argument in support of this view in my book.[27] There, I follow David Wiggins's suggestion that *human person* is "similar" or "akin" to a natural kind concept, such as human being.[28] However, *person* is not a natural kind concept, because it contains a psychological component that is "supervenient" on the notion of physical nature associated with the natural kind, *human being*. This supervenient relationship between the person and the human being allows for the dependency of human persons on human animals (persons are not simply artifactual constructions), but persons are not reducible or identical to human animals.[29] Thus, the interdependence of the concepts *person*

[25] Whether this common assumption is actually true requires much more analysis of the metaphysics and ethics of potentiality. See Lizza (2007, 2014).

[26] Cruzan (1990).

[27] Lizza (2006): 56–62.

[28] Wiggins (1980): 170.

[29] Ibidem: 183, fn. 40.

and *human being*, i.e., that some things fall under both concepts, and an understanding that is "both psychologically and biologically replete of what it is for a man to have a life" do not require that the concept of person and human animal are sortally concordant. Instead, the psychological and biological factors of what it is for a man to be alive and persist and what it is for a person to be alive and persist may differ, and, therefore, the concepts of man and of person are not necessarily either sortally concordant or coextensive. Wiggins thus does not *identify* the person with the human being but construes persons as naturally *supervening* on human beings.[30] In my view, the hybrid concept "human person" and an understanding of the relation between the human organism and human person as one of constitution does the best job in holding in focus, in Wiggins's terms, our nature as "an object of science, a subject of experience, and a locus of value."[31]

Marquis states that my "obliterating" the distinction between human persons and human beings (organisms) "obscures what need to be kept distinct" and allows me "to make an argument that has all the virtues (as Bertrand Russell said in another context) of theft over honest toil."[32] However, Marquis never explains

[30] As Nguyen correctly points out, in *Sameness and Substance Renewed* (2001) Wiggins moves to the animalist camp and treats human persons as human organisms. However, this is a move that I think Wiggins should never have made. Construing the relation between the human organism and human person as one of constitution provides an alternative. I agree with much of Wiggins's criticism of the Lockean-Parfit view in both *Sameness and Substance* and *Sameness and Substance Renewed* insofar as the Lockean-Parfit view treats psychological continuity with any cause as sufficient for what matters to us about our identity. However, I think that Wiggins's attempt to counter Sydney Shoemaker's intuitions about the case of Brownson fails. Brownson results from the transplantation of Brown's brain into Robinson's body. It is similar to the head transplant that I consider in "Where's Waldo: The Decapitation Argument and the Definition of Death." Shoemaker says that Brown continues to live in Robinson's body. I agree. In my view, Brown has not died, even though the former human body that sustained him minus his brain may be destroyed. What has persisted is Brown's psychophysical integration realized in his brain and new body. Wiggins, himself, along with other animalists, such as Eric Olson, admit that the non-splitting case of Brownson is difficult for the animalist to come to terms with. The problem is that the technology seems to introduce new ways in which the life-processes of a human person can continue in ways that were previously impossible. Brown's life-processes and psychophysical interaction would continue through a brain or head transplant. This seems to be the most sensible thing to say about Brownson, if we want to hold in focus our nature as a biological, psychological, and social being. For example, we would continue to relate in many ways to Brownson as Brown. Ultimately, Wiggins gives a moral argument about concern with altering nature in such ways that we will lose something important about our humanity to argue that Brownson is no longer Brown. I am sympathetic to those concerns, but they are not sufficient in my view to justify saying that Brown has died or that Brown no longer exists. Wiggins, of course, at this point is giving a moral rather than metaphysical argument for animalism. As such, it supports my general thesis that biological considerations are insufficient for resolving certain problems about when we cease to exist. The biology is relevant but insufficient to resolve the issue and to account for what it means to be a human person.

[31] Wiggins (2016): 71.

[32] Marquis (2018): 23.

why these concepts need to be kept distinct. More significantly, he never engages with the arguments that I have given for using the hybrid concept *human person* to capture our nature as biological, psychological, moral, and social beings. It strikes me that his criticism has all the virtues of theft over honest toil.

Marquis and Nguyen also take issue with my claim that the meaning of "irreversibility" in the definition and criteria for death is not value neutral. Nguyen challenges Shewmon's claim that Soren really dies after taking his last breath. If it is possible that Soren could be resuscitated, Soren has not died. If Soren were resuscitated, clearly we should say that Soren was not dead when he took his last breath. Marquis[33] makes a similar argument in support of his claim that "irreversibility" means "never could be reversed" and not "permanent," as James Bernat and others have claimed.

I have provided support of Bernat's view in earlier work,[34] which Marquis and Nguyen never mention, and have replied to Marquis's arguments at a panel session with him, Tom Tomlinson, and Robert Truog entitled *Donation Following Cardiac Death: Does It Matter Whether Donors Are Really, Most Sincerely Dead* at the 16th Annual Meeting of the American Society for Bioethics and Humanities on October 18, 2014. I have also developed my view in an article entitled "Why DCD Donors Are Dead," forthcoming in the *Journal of Medicine and Philosophy*. The following paragraphs summarize and state (in part verbatim) what I say in that article.

James Bernat and others have responded to critics of DCD protocols by arguing that the meaning of "irreversibility" in the legal criteria for determining death is not what Marquis refers to as the "plain meaning" of irreversibility, i.e., "never could be reversed."[35] Instead, Bernat and others argue that in the legal and medical context of determining death "irreversibility" is determined when the cessation of function is "permanent," i.e., "the function will not be restored because it will neither return spontaneously, nor will return as a result of medical intervention because resuscitation efforts will not be attempted."[36] "In this analysis,"

[33] Marquis (2010).

[34] Lizza (2005).

[35] Bernat (2006, 2007, 2010a, 2010b, 2010c); Bernat et al. (2010).

[36] Ibidem: 965. I suggest adding at the end of this formulation "or will not be continued," since it better captures the meaning of irreversibility in the context in which resuscitative measures are applied. When efforts at resuscitation commence and then cease, there is a deliberate decision to no longer continue artificially supported circulation and respiration. In many cases, the circulation and respiration could continue. Moreover, the probability of restoring autonomous functions has not reached zero. Additional means of maintaining circulation and respiration, such as extra corporeal membrane oxygenation (ECMO), could be applied, but they are not. So, even in those cases in

Bernat and others explain, "'permanent' is a contingent and empirical condition that admits possibility and relies on intent and action to be realized." [37]

Bernat and others point out that in ordinary practice physicians commonly declare death when the cessation of circulation and respiration is permanent without determining that the cessation of function could not be reversed. Moreover, they also do not exhaust all means of reversing the cessation of functions. If this determination of "irreversibility" is widely accepted in the vast majority of declarations of death, why should any more rigorous determination of irreversibility be required in the special case of donation in DCD protocols?

In fact, the 1981 President's Commission notes:

> Irreversibility is recognized by persistent cessation of functions during an appropriate period of observation and/or trial of therapy. In clinical situations where death is expected, where the course has been gradual, and where irregular agonal respiration or heartbeat finally ceases, the period of observation following the cessation may be only the few minutes required to complete the examination. Similarly, if resuscitation is not undertaken and ventricular fibrillation and standstill develop in a patient, the required period of observation thereafter may be as short as a few minutes. When a possible death is observed, unexpected, or sudden, the examination may need to be more detailed and repeated over a longer period, while appropriate resuscitative effort is maintained as a test of cardiovascular responsiveness. Diagnosis in individuals who are first observed with rigor mortis or putrefaction may require only the observation period necessary to establish that fact.[38]

As a practical matter, the Commission recognizes that "irreversibility" varies with the medical context and is fixed by "accepted medical standards." If the Commission intended "irreversibility" to mean "could never be reversed" or "cannot be reversed by any known means," presumably the guidelines would have required

which resuscitation is attempted and discontinued, individuals are declared dead because the loss of circulation and respiration is permanent but not necessarily irreversible in the sense that the cessation of functions could never be reversed. This shows that the "accepted medical practice" of declaring death that gives meaning to the term "irreversibility" in the determination of death is reflected not only in ordinary cases in which death is declared and resuscitation is not attempted, but also in those cases in which resuscitation is attempted. In short, as Bernat and others maintain, the criteria used for determining irreversibility in the vast majority of declarations of death is the practical one of permanent cessation of function.

[37] Bernat et al. (2010): 965.

[38] President's Commission for the Study of Ethical Problems in Medicine and Biomedical and Behavioral Research (1981): 162.

much more in the way of determining that the cessation of functions could not be reversed. The "few minutes" of observation required after the cessation of respiration and heartbeat refers to the short time needed to rule out autoresuscitation. By recognizing how irreversibility can be determined when resuscitation efforts will not take place, the guidelines acknowledge that a patient could be determined to satisfy the criteria for an irreversible cessation of circulation and respiration, even though it would be possible to reverse the cessation of functions. It is implausible to think that the consultants and the Commission did not understand this implication of what they said. Thus, even if in some hypothetical cases individuals were not in an "irreversible" state in the plain meaning of the term, that would not be dispositive against the use of "permanent cessation of circulation and respiration" or "permanent cessation of all brain function" as criteria for determining death. More is involved with the decision of what criteria to use than whether the criteria eliminate all possible cases in which the criteria are satisfied but the cessation of functions could be reversed. Diagnoses in medicine are always made within the realm of probability and may be affected by the availability and stewardship of resources, as well as consideration of the possible harm that might result if the diagnosis is mistaken.

It would be impractical to require physicians to determine that the cessation of functions "never could be reversed." As David Cole has pointed out, "never could be reversed" would include consideration of possible future advancements in medical knowledge and techniques which would make it impossible to ever declare death.[39] Qualifying "irreversibility" to mean "could not be reversed with currently available technology" would not be much of an improvement, since this would require physicians to exhaust all currently available means for reversing the functions, which would be practically impossible and ethically inappropriate. For example, extracorporeal membrane oxygenation (ECMO) could extend circulation and respiration indefinitely or much longer than would be practically or ethically acceptable. Decisions to not resuscitate thus in part fix the meaning of when the cessation of functions is deemed to be irreversible. Indeed, insisting that the loss of function could never be reversed would conflict with a policy of respect for decisions not to resuscitate embodied in the current law and that have allowed organ donation for DCD donors to proceed.

The underlying problem with Marquis's view is that he treats "irreversibility" as an intrinsic, dispositional property that does not depend on anything external to whatever has the disposition, including ethical considerations about

[39] Cole (1992).

whether the cessation of functions should be reversed. He claims that if two people are in the same physical state, e.g., someone in the emergency room and a prospective donor in a DCD protocol, they must have the same dispositional property with respect to whether their condition is irreversible. If the cessation of circulatory and respiratory functions after two minutes of asystole is insufficient to conclude that those functions are irreversible in the emergency room, the fact that someone may be in a donor protocol does not alter the fact that that person has the potential for the cessation of functions to be reversed and that the person is therefore not dead. Marquis holds that since "death is a state of the body," it is impossible for one of two people in the same physical state to be alive whereas the other is dead.

However, not all dispositional properties are intrinsic. The reversibility of the cessation of circulatory and respiratory functions is one such property. Tom Tomlinson has pointed out how advances in medical technology and resuscitative techniques have introduced a new meaning of "irreversibility," i.e., "medical irreversibility."[40] Whereas "physiological irreversibility," i.e., an organism's inability to revive itself on its own, may be an intrinsic dispositional property, "medical irreversibility" is affected by factors external to the organism, e.g., decisions to artificially resuscitate. It is therefore an extrinsic dispositional property.[41] Modern resuscitative techniques, for example, make it possible to reverse the cessation of functions that were previously irreversible. So, indeed, two people at different times could be in the same physical state, but one may have a reversible condition and the other an irreversible condition. When death is taken as a medically irreversible condition, it is not simply an intrinsic state of the body but something that depends in part on factors extrinsic to the body.

In earlier work, I have pointed out how other factors external to the individual may affect the reversibility of functions.[42] For example, there has to be a realistic possibility of applying the knowledge and techniques to reverse the cessation of function. The cessation of cardiac functions of a lone climber on the side of Mt. Everest, who has sustained cardiac arrest, is past the point of

[40] Tomlinson (2014).

[41] President's Commission for the Study of Ethical Problems in Medicine and Biomedical and Behavioral Research (1981) also noted, "Many patients declared dead fifty years ago because of heart failure would not have experienced an '*irreversible* cessation of circulatory and respiratory functions' in the hands of a modern hospital." Bernat and others, including Alexander Capron, the Executive Director of the 1981 President's Commission (Bernat et al. 2010), argue that this shows that "irreversibility" in the determination of death does not have the plain meaning of "never could be reversed," as such a meaning would not take into account how irreversibility changes over time.

[42] Lizza (2005).

autoresuscitation, and is inaccessible to medical treatment, is different than if the climber were in a modern hospital.[43] Even if it were physically possible to reach the climber and reverse the cessation of function, ethical decisions about the danger of attempting to rescue the climber may bear on any realistic possibility of doing so. Thus, two people in different places at the same time may be in the same internal physical state, but one may have a reversible condition and the other an irreversible condition. In short, if medical irreversibility is what we mean by "irreversibility" in the definition and criteria for determining death, it is possible for one of two people in the same physical state to be alive and the other to be dead. If we ignore actual conditions that restrict possibilities, including ethical decisions that restrict those possibilities, "irreversibility" would be meaningless in any practical sense, which is the sense that is relevant to how we determine death at any particular time. As David Lamb has pointed out, "In the real world, logical possibility without the check of plausibility is a worthless guide to action."[44] To insist, as Marquis does, on the "plain meaning" of irreversibility in the legal definition of death is to ignore the legal and ethical considerations that affect the meaning of irreversibility in different contexts. Since there is no good reason for ignoring the DCD donor's DNR, which puts realistic restrictions on the possibility of reversing the cessation of the donor's functions, there is no good reason for claiming that permanent cessation of function is not the relevant sense of "irreversibility" in this context.

According to Tomlinson, there is no univocal meaning of "irreversibility" in the definition of death. "Physiological irreversibility" may be the appropriate meaning and criterion to use in DCD protocols, whereas it would not be in an emergency context, when it is presumed that the patient wants to live and be resuscitated. Thus, ethical considerations in conjunction with the consideration of the physical state of the individual, rather than simply the individual's physical state, determine the meaning of "irreversibility" for purposes of defining death.

As noted in my paper, Shewmon claims that it may be a linguistic illusion to think that "death" has a univocal, biological meaning, since advances in modern medicine reveal that there are multiple points along a continuum of biological states from sickness to decomposition that could be chosen as the point of "death."[45] We may incorrectly assume that "death" refers to a single state of all organisms, and that all diagnostic criteria must derive from that state. Instead,

[43] Ibidem.

[44] Lamb (1992).

[45] Shewmon (2004, 2010).

contextual factors may influence our choice of which criteria for determining death we accept. We may choose certain criteria and states as "death," given certain interests, values, and (presumably) ontological considerations about our nature.

Tomlinson is making a similar point about "irreversibility." Technology has made it possible to reverse the cessation of functions that was previously irreversible. We have created new phenomena and therefore have introduced a new sense of "irreversibility." Just because we have the one word "irreversibility," this does not mean that there is a single physical state of irreversibility and that all diagnostic criteria must derive from that state. Because there is a range of physical phenomena that are equally good candidates for being "irreversible," contextual factors are relevant to determining which criteria we accept for determining irreversibility. While there are facts of the matter about the different physical states, there is no fact of the matter about which criteria of irreversibility we should adopt. We may choose certain criteria and states as irreversible, given certain interests and values.

Michael Nair-Collins and Laura Specker Sullivan accept my main claim that defining death in the social and legal context is not a strictly biological matter but involves metaphysical, moral, social, and cultural considerations. Thus, even if there is a true, strictly biological account of death for organisms, as Nair-Collins proposes, we still need to assess its relevance in light of other considerations about our nature in formulating a statutory definition of death. However, they both express concern about whether my own definition of death for human persons as the cessation of psychophysical integration does justice to the diversity of moral, religious, philosophical, and cultural views about the nature of human persons. Both argue for a pluralistic approach. However, before addressing this common thread in both of their commentaries, I shall first comment on what Nair-Collins proposes as a biological definition of death: "the irreversible cessation of the organismic capacity to maintain homeostasis of the extracellular fluid and thereby resist entropy."[46]

Ostensibly, this definition avoids explicit reliance on the problematic concept of an "organism as a whole." However, it does refer to the capacity of an "organism" to maintain homeostasis and thus it must rely on some concept of organism and a way to distinguish between different kinds of organisms. I assume the homeostasis in an organic body is a holistic property. According to Shewmon, if

[46] Nair-Collins (2018): 33.

there is one holistic property in an organic body, it is an organism of some sort.[47] So, here is the difficulty: if, as Condic claims,[48] we can generate holistic properties in organic parts of bodies, e.g., a dismembered body part is maintained so that it resists entropy and manifests other holistic properties (Veatch suggests wound healing in a sustained arm[49]), then those organisms or organic substances are alive, not dead. However, clearly we would not identify an artificially sustained, homeostatic arm as a human organism or human being.

Consider another example. I assume that Nair-Collins would say that an artificially sustained, decapitated human body is just as alive as an artificially sustained brain-dead body, assuming that the myriad somatic functions that Shewmon identifies in the brain-dead body, including homeostasis, can be maintained in the decapitated body. Suppose that we now remove the heart and lungs and maintain the body on extracorporeal membrane oxygenation. Now let us remove the kidneys and put that body on dialysis. Is it still a living human organism, as long as circulation occurs and it resists entropy? Nair-Collins states with emphasis: "*All cells both require and contribute to maintaining homeostasis of the extracellular fluid.*"[50] That may be true, but all cells are not necessary to maintain homeostasis. As cells and organs are removed and their functions are replaced by other cells and organs or by artificial substitutes, the nature of the organism that is maintained homeostatically may change. Surely, not every cellular loss results in a change in the kind of organism that something is, but that is because the organism is identified by certain functions that are deemed essential to it and those functions continue. However, at this point Condic argues that the artificially sustained brain-dead body is not a human organism as a whole. So, Nair-Collins needs some notion of a human organism as a whole to distinguish it from other kinds of organic beings and to distinguish human organisms from other kinds of organisms.

Nair-Collins also fails to directly address Condic's claim that one of the things that differentiates genuine human organismal integration from the integration that occurs at the level of cells and tissue is that the integration of the vital functions must be autonomous or mentation must occur. Presumably, in the case of decapitation where the severed head and the decapitated body are artificially sustained, Condic would identify the continuation of a human life in the artificial-

[47] Shewmon (2012): 469.

[48] Condic (2016).

[49] Veatch (2015).

[50] Nair-Collins (2018): 31.

ly sustained head rather than in the decapitated body, since human mentation presumably would continue in the head. Condic thus has a basis for addressing the thought experiment. It is entirely unclear how Nair-Collins would address the thought experiment or the actual experiment conducted by Dr. White on monkeys. Has the monkey died if its transplanted head maintains enough psychophysical homeostasis to support consciousness? If so, what explains its integration?

Nair-Collins argues, "The brain dead patient is no more and not less 'artificially maintained' than any other patient on a ventilator."[51] However, Condic could reply that, excluding the brain-dead and individuals in permanent vegetative state, the other ventilator-dependent patients are conscious or retain the potential for consciousness and for this reason are integrated human organisms. She can also maintain that, if the individual in permanent vegetative state required a ventilator, then such an individual would be dead, since it would then lack both autonomous integration and mentation.

Nair-Collins claims, "When an organism no longer has the ability to restore homeostasis, the organism has died."[52] In other words, when the organism's overall physiologic reserve or capacity to maintain homeostasis is irreversibly lost, the organism has died. However, it is unclear whether Nair-Collins thinks that this capacity must be autonomous or whether it could be supported by technological means. If it could be supported by technological means, then, as I have pointed out earlier in my response to Marquis, factors extrinsic to the organism, including decisional factors about intervention, may be relevant in certain contexts to determining whether the condition is "irreversible." Thus, the meaning of "irreversibility" and what it means for a biological organism to die may not be value neutral.

As mentioned above, Specker Sullivan and Nair-Collins accept my claim that metaphysical, moral, social, and cultural considerations need to be considered in formulating a legal definition and criteria for death and that these matters are not settled exclusively by biological considerations. Nair-Collins writes that "a respect for multiculturalism and a pluralism of foundational values systems and worldviews is of critical importance."[53] He then questions whether my own view that defines death in terms of the loss of psychophysical integration is biased in favor of a particularly Western view of the nature of the human person that is "hyper-individualist, non-relational, and hyper-rational" and one that ignores the social and relational nature of persons, emphasized more in feminist philosophy

[51] Ibidem: 36.

[52] Ibidem: 32.

[53] Ibidem: 40.

and the non-Western tradition.[54] Specker Sullivan is even more forceful about this concern. She asserts that although I repeatedly emphasize the need to consider practical, moral, religious, philosophical, and cultural factors in formulating a legal definition and criteria for death, I do not provide evidence that my own proposal accomplishes this task. She thinks that my own proposal relies on my own and others' "intuition" and "on a number of court cases about death, rather than on a survey of the practical, moral, religious, philosophical, and cultural approaches to defining death."[55] "Evidence is needed," she writes, "to validate the equation of 'an understanding of what it means for someone to no longer count as a living member of the community' with 'destruction of the individual's psychophysical integration.'"[56] Specker Sullivan later goes on to suggest that my aim is to provide a definition of death that captures the one "right" metaphysical state of death and that it overlooks the issue of which definition of death is a *good* one. Since she thinks that formulating a legal definition of death is in part an ethical task, she writes, "Any attempt to define and determine death irrespective of the interpretation, use, and consequences of this definition is not engaging with the ethical features of human life and death."[57]

I am quite sensitive to these concerns and have addressed them in other work. Again, my article for this journal has a more limited focus. In Chapter 8 of my book, *Persons, Humanity, and the Definition of Death*, I agree with Robert Veatch that the choice of a legal definition of death is a "religious/philosophical/ policy choice rather than a question of medical science."[58] I therefore endorse his proposal that on grounds of religious and democratic pluralism a conscience clause should be included in the statutory definition of death that would allow individuals or their next of kin to choose within reason alternatives to the default definition. Essentially, this would allow individuals to choose among the three main criteria for determining death (circulatory and respiratory, whole-brain, and higher-brain), consistent with their personal, moral, religious, philosophical, or cultural beliefs. The whole-brain criterion would be used as a default criterion in cases in which one did not exercise choice. More work on the higher-brain criterion in terms of the specific tests used to satisfy the criterion of irreversible amentia would need to be developed. Also, instead of the conceptual basis or biological

[54] Ibidem.

[55] Specker Sullivan (2018): 64.

[56] Ibidem.

[57] Ibidem: 66–67.

[58] Veatch (1999): 156.

definition of death as "the irreversible loss of the integration of the organism as a whole," I would propose "the irreversible loss of the psychophysical integration of the human person."

I would also refer Nair-Collins and Specker Sullivan to earlier chapters in my book, where I propose that "human person" is a hybrid concept that is informed by biological, psychological, metaphysical, moral, social, and cultural considerations. I argue that human persons are constituted by human organisms and that this constitutive view of the human person has the conceptual space to allow for the various considerations to play a role in fixing the reference of human persons. For example, in contrast to animalist and psychological continuity theories of personal identity that understand personal identity as some internal relation between either biological or psychological states, I argue that the constitutive view allows human persons to be in part defined by their relations to others. Moreover, who counts as a human person is determined in part by ethical and cultural considerations. Because I treat human person as a hybrid concept, the best account of a human person is not determined by metaphysical considerations alone. The best account of a human person will be one that captures our nature as a locus of value in a context of relations to others. Moral considerations are thus necessary to fixing the bounds of the extension of "human person."

However, I do hold that some potential for consciousness is a minimal necessary condition for being a human person and that such potential is necessary for personal relationships. The idea that the potential for consciousness is a minimal necessary condition for being a human person is one that I think is widely accepted in the Western philosophical tradition. While philosophers have disagreed over the sufficient conditions for being a human person, it is hard to identify those who do not consider it to be a necessary condition. Moreover, it seems to be presupposed by most moral theories, including some feminist moral theories.[59] Even some environmentalists who extend moral consideration to all forms of life draw moral distinctions among different forms of life, where consciousness provides some additional grounds for moral consideration.[60] As technology creates new phenomena, such as artificially sustained braindead bodies or transplanted heads,

[59] In support of her own view, Marya Schechtman (2014): 74 points out how Hilde Lindemann, a feminist philosopher who has emphasized the relational nature of persons, "sees personhood as the 'bodily expression of the feelings, thoughts, desires and intentions that constitute a human personality as recognized by others, who then respond in certain ways to what they see.' For this reason, a human in a persistent vegetative state (PVS) or an anencephalic human infant cannot be constituted as a person on her view, no matter what our attitudes towards them." The line between person and non-person is drawn at the point of amentia as opposed to dementia.

[60] Taylor (1981).

we need to come to terms with them. There is an interpretative task in which we need to use our existing conceptual resources to make sense of them and determine our conduct with regard to them. Of course, just because a large number of philosophers consider the potential for consciousness to be a minimal necessary condition for the existence of a human person or for something to have a certain degree of moral standing does not mean that that view is correct. I have no doubt that interpretations will differ. However, any responsible interpretation will need to come to terms with what I think is this common assumption about our nature in our psychological, metaphysical, moral, social, and cultural systems of thought.

Specker Sullivan suggests that instead of settling on one "right" definition of death, we should consider what different definitions of death do, their ethical implications, whom they benefit, and in what context they may apply. Very early in the debate over the definition of death, Roger Dworkin similarly suggested that instead of asking "What is death?" we should ask, "What difference does it make whether somebody is dead?"[61] Dworkin maintained that the latter question has many different answers, depending on the context, and that we should legally recognize different definitions of death for different purposes. This proposal was later endorsed and developed by Susan Brennan and Richard Delgado.[62] Norman Fost suggested that we should never have changed the legal definition of death to include brain death but should have simply changed the "dead-donor" rule to allow for organ donation from some individuals who are not dead.[63] More recently, Franklin Miller and Robert Truog have argued that we should make exceptions to the dead-donor rule to allow donation from some moribund but not dead patients.[64]

In my earlier work, I have considered but rejected this approach.[65] Briefly, the approach underestimates the importance of ontological considerations in our moral thinking. For example, I do not think that Roman Catholics who oppose the intentional termination of life would be receptive to changing the law and making exceptions to the dead donor rule. Appeals to utilitarian arguments, personal autonomy or the donor's lack of interest in continued life would conflict with their understanding of their nature and relationship to God. They accept vital organ donation from dead donors, because they believe that the soul has departed from

[61] Dworkin (1973).

[62] Brennan, Delgado (1981).

[63] Fost (1999).

[64] Miller, Truog (2008).

[65] Lizza (2006): 151–180.

their body and therefore using the body in this way would not be a transgression of God's will. It is a mistake to think that we can parcel out moral issues having to do with the beginning and end of our lives from the metaphysical, conceptual framework in which they appear. Also, it is unrealistic to think that we could arrive at a social consensus about these issues, since they are tied to different metaphysical beliefs, as evinced by the controversy over abortion. A better approach would be Veatch's, i.e., to allow for a conscience clause in the legal definition of death. Such an approach would better respect personal autonomy and come clean on the fact that defining death in the legal context is not simply a biological matter. It also provides a very practical way to follow Margaret Lock's advice that "in this transnational world of increasingly pluralistic societies, we must begin to recognize a multiplicity of ways of comprehending and legalizing the process of dying and management of death."[66]

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[66] Lock (2002): 253.

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