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Identity, the badness of death, and a life-processes basis

SUMMARY

Jeff McMahan's framework pairs an ontological thesis – the Embodied Mind Account (EMA), on which personal identity persists with the brain's capacity to generate consciousness, with an evaluative thesis – the Time-Relative Interest Account (TRIA), on which the badness of death varies with psychological continuity to one's future. This article argues that, despite their common presentation as complementary “two levels,” EMA and TRIA interact in ways that leave the ultimate ground of death's badness theoretically unstable, especially given EMA's original-brain restriction and its division between the death of the conscious subject and that of the human organism. I propose a life-processes biological basis: the irreversible cessation of organismic life-processes (circulation, respiration, metabolism, and integrative functioning) constitutes the deeper ground of death's prudential harm, while psychological continuity serves as an indicator of its degree when that basis remains intact. This preserves a unified ontology across developmental/pathological conditions and clarifies the relation between identity, survival, and the badness of death.

Keywords: personal identity, badness of death, prudential harm, life-processes, embodied mind account, time relative interest account.

INTRODUCTION

The philosophical debate about the badness of death typically centers on two questions. First, what are we – what sort of entities persist over time? Second, what makes death bad for an entity? Contemporary discussions often separate these questions: one may hold a view about personal identity while endorsing an independent theory of death's prudential harm. Jeff McMahan's work is exemplary in this regard. McMahan defends an ontological position – the Embodied Mind

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Account (EMA), and pairs it with an evaluative position – the Time-Relative Interest Account (TRIA). On EMA, an entity persists as long as the brain retains the capacity to generate consciousness (McMahan, 2002); on TRIA, the badness of death varies with the degree of psychological continuity to one's future (McMahan, 2002).

Recent work has broadened the discussion beyond McMahan's influential framework in at least two directions. First, contemporary debates on personal identity and ethics have emphasized the complex relation between what we are, what matters in survival, and how these issues bear on death, abortion, and advance directives (DeGarzia, 2005). Second, scientific and neuroethical work on consciousness and disorders of consciousness has increasingly stressed that consciousness depends on integrated cortical, thalamic, and subcortical processes rather than on the cerebrum alone (Whyte et al., 2024).

This article argues that, despite the appeal of McMahan's two-level architecture, the interaction between EMA and TRIA produces a deeper problem about grounding in explicating the badness of death. Psychological continuity may well function as an important *indicator* of the comparative badness of death; yet the deprivation making death bad cannot plausibly be explained by cerebral capacity alone, and it must be grounded in the biological life-processes that underwrite the capacity for consciousness. Moreover, EMA's tendency to divide the "death of the conscious being" from the "death of the human organism" renders several cases theoretically unstable. In EMA, early fetuses and persistent vegetative state (PVS) patients, now more commonly termed 'unresponsive wakefulness syndrome' (UWS) (Giacino et al., 2018), are 'mere organisms' whose death carries little to no moral weight (Giacino et al., 2018). I argue that reasoning about their existence in this manner is problematic. Meanwhile, replication cases invite the troubling result that the death of a replica with strong psychological continuity may be treated as more significant than the death of the original human organism in TRIA. I hold that this result is not trustworthy either.

I propose an alternative idea from McMahan's view. I argue that the ultimate ground of death's prudential significance lies in the irreversible loss of the organismic life-processes (i.e., circulation, respiration, metabolism, and integrative functioning) that make consciousness possible. Psychological continuity remains normatively relevant as a measure of the extent of future goods lost, *provided* that the life-processes basis remains in place. This framework preserves ontological unity across developmental stages and pathological conditions and clarifies the relation between identity, survival, and the badness of death.

MCMAHAN'S FRAMEWORK: EMA AND TRIA

On McMahan's EMA, we are essentially embodied minds: beings whose persistent conditions are tied to the continued capacity for consciousness. The crucial thesis is not that we must be continuously conscious, but that the brain (centrally, the cerebrum) must retain the capacity to generate consciousness. When the capacity is irreversibly lost, the conscious subject ceases to exist. In this sense, the death of the conscious subject is determined by the irreversible cessation of the brain's capacity for consciousness.

EMA is often contrasted with the psychological views that preceded McMahan's account, which define persistence in virtue of the continuity of a higher mental state or personhood (Bartlett & Youngner, 1988). McMahan rejects the idea that a higher mental state or personhood is essential to human persistence, since we can persist without such psychological functions. McMahan argues that we cease to persist and do not exist as the same individual when we irreversibly lose the capacity of consciousness. Human identity requires the physical and original neural substrate in the cerebrum that generates consciousness in McMahan's embodied mind view (McMahan, 2002).

Replication cases sharpen EMA's commitment to the original neural substrate. Suppose brain tissue is replicated so that the replica generates consciousness and memories qualitatively similar to the original tissue. EMA insists that such 'pseudo-consciousness' and 'pseudo-memory' do not secure numerical identity: the replica is not the same individual (McMahan, 2002). Egoistic concern (i.e., prudential concern for one's own future) does not rationally extend to the life of a mere replica, even if it exhibits psychological similarities. Thus, McMahan's embodied mind view incorporates an original-brain restriction: only consciousness generated by one's original brain tissue sustains one's identity.

TRIA operates with a different criterion from EMA. It indicates not what we are, but how bad death is for the one who dies. McMahan argues that death is bad while it deprives the individual of a future that she has an interest in, and that the strength of this interest depends on the degree of psychological continuity to that future. People with robust psychological unity (i.e., memories, plans, character, and other continuities) have stronger time-relative interests than newborns or individuals with advanced dementia, whose psychological connections to their future are weaker (McMahan, 2002). Thus, the badness of death can vary with the degree of psychological continuity in McMahan's time-relative interest view.

McMahan's philosophical framework is often presented as a two-level theory. At the ontological level with EMA, identity is grounded in the cerebral basis of consciousness.

At the evaluative level with TRIA, the badness of death is determined by the extent of lost future psychological continuity, not by strict identity. Hence, the metaphysics of who we are can be separated from the ethics of how bad death is. This distinction is initially attractive because it promises to accommodate the intuition that the death of a healthy adult is typically worse than the death of a fetus or a PVS patient. Furthermore, EMA avoids a crude personhood view that would count conscious-but-cognitively-limited individuals as dead. Nevertheless, the interaction between EMA and TRIA generates a problem about what ultimately grounds the badness of death.

THEORETICAL TENSION: FROM TWO LEVELS TO A GROUNDING PROBLEM

The central difficulty is that when combined, EMA and TRIA yield an unstable account of *why* death is prudentially bad and *which* death is morally weighty. TRIA treats psychological continuity as decisive for comparative badness. Yet the very possibility of psychological continuity depends on a biological platform that includes brainstem-supported arousal, thalamocortical dynamics, bodily homeostasis, circulation and respiration, and other integrative processes. If this is right, psychological continuity appears to be a *measure* of prudential loss rather than its metaphysical *ground*. However, McMahan's embodied mind view portrays the loss of cerebral capacity as the death of the conscious subject, potentially distinct from the death of the organism (McMahan, 2002). EMA's focus on the death of the conscious subject makes it difficult to assign the fundamental significance to the organismic conditions that sustain the capacity for consciousness. As a result, McMahan's view cannot adequately account for the significance of the ongoing life-processes of the human organism that make consciousness possible, nor can it fully explain what fundamentally grounds the badness of death.

I will develop two critiques: (i) EMA's ontological split is implausible and explanatorily costly; and (ii) EMA's cerebral-only grounding overstates the role of the cerebrum and underestimates the organismic conditions underlying consciousness. I argue that these critiques support the view that the life-processes basis is the deeper ground of death's badness.

CRITIQUE 1: THE ONTOLOGICAL SPLIT AND THE LOSS OF ENTITY-UNITY

McMahan's embodied mind view distinguishes the death of the conscious being because of the irreversible loss of the capacity for consciousness from the death of

the human organism due to the irreversible cessation of circulatory and respiratory function. In this picture, the conscious subject and the organism are different entities. The subject may die while the organism remains biologically alive (as in cases of brain death maintained on life support), or the organism may die later while the subject has already ceased to exist. This distinction drives McMahan's 'priority claim' for the badness of death. Morally weighty is the death of the conscious being, while the death of the mere organism has little or no moral weight when the capacity for consciousness is absent. The view is meant to align with the intuition that adult death is typically worse than fetal death or the death of an irreversibly unconscious patient.

However, EMA's entity-splitting becomes problematic in cases where the capacity for consciousness is absent or lost. On EMA, an early fetus has no capacity for consciousness and is therefore merely a human organism, not yet a conscious subject. Similarly, a PVS patient who has irreversibly lost the capacity for consciousness is, strictly speaking, no longer the conscious subject; what remains is a living human organism. The implication is that death occurring at these stages is not the death of the entity that matters most (i.e., the conscious being) and thus may be treated as ethically insignificant (McMahan, 2002).

Yet there is a powerful ontological counterintuition. Since early fetuses, PVS patients, and conscious people are all human organisms that persist with biological life-processes across time, it is not appropriate to consider them to be a different type of entity regardless of whether they have consciousness (Olson, 1997). Absence or loss of consciousness does not obviously transform the type of entity that exists. Furthermore, it also does not allow us to treat the entity with no consciousness as ethically insignificant. Although the death of the entity having no consciousness may be less crucial than the death of the entity with consciousness, it is appropriate to treat her as significant since she is a human being. Contrary to McMahan's embodied mind view, the entity-unity view I propose, according to which we remain the same type of human organism throughout development and pathology, offers a more consistent ontology. EMA's divide in ontology is not persuasive when it forces us to understand that we "come into existence" as a new entity-type upon acquiring consciousness-capacity, and "cease to exist" while the organism continues, merely because consciousness-capacity is lost.

CRITIQUE 2: BEYOND CEREBRAL-ONLY GROUNDING

EMA assigns decisive ontological weight to the brain's capacity to generate consciousness, often with the cerebrum in the foreground. However, contemporary understanding of consciousness suggests that the creation of consciousness results

from the integrated functioning of multiple systems, including cortical and thalamic networks (Whyte et al., 2024), brainstem arousal mechanisms, and bodily regulation that sustains stable physiological conditions (Schlicht, 2011). The brain and body jointly enable conscious states. If the creation of consciousness stems from organism-wide integrative processes, cerebral-only grounding overstates the role of the cerebrum as a generator of consciousness. Even if the cerebrum is necessary for human consciousness, it is not sufficient to create it in isolation. The capacity for consciousness is embedded in a broader life-processes platform, and we, as human organisms that persist through life-processes, possess it.

This matters for both ontology and ethics. Ontologically, if the capacity for consciousness is an organism-level capacity realized through integrated life-processes, then grounding identity in “one’s own cerebral substrate” risks mislocating the basis of human persistence. Ethically, if what makes death bad is deprivation of the goods of a future life, the ultimate deprivation occurs when the life-processes platform irreversibly ceases. The deprivation is deeper than the mere loss of a cerebral function because it is the cessation of organismic life-processes that renders any consciousness (and hence any psychological continuity) impossible.

A LIFE-PROCESSES BIOLOGICAL BASIS

I propose a life-processes biological basis for understanding the grounded reason for the badness of death. The degree of psychological continuity to one’s future remains an indicator of the *degree* to which death is bad for the individual. When psychological unity is robust, more future projects, relationships, and self-conceptions are lost because of death. When it is weak, fewer such goods are lost due to death. However, the *grounded reason* that death is bad is not fundamentally the deprivation of cerebral capacity. It is the irreversible loss of organismic life-processes (i.e., circulation, respiration, metabolism, and integrative functioning) upon which any capacity for consciousness relies. As a result, psychological continuity is normatively significant, but it is not the ultimate metaphysical basis of prudential harm. The determinant of death’s badness is the cessation of the biological platform that makes prudential subjects possible.

This proposal yields three benefits. First, it restores ontological unity: early fetuses, PVS patients, and conscious people are the same type of entity (i.e., living human organisms) differing in psychological capacities without thereby becoming different entity-types. Second, it stabilizes the relation between ontology and ethics. McMahan’s time-relative interest view can still explain morally comparative judgments (conscious people’s death often worse than fetal death) while the ground

of prudential harm remains anchored in the cessation of life-processes. In other words, we value psychological continuity while life-processes underwrite it. Third, it clarifies policy implications. If the cessation of organismic life-processes is the ultimate determinant of death's prudential significance, legal and clinical criteria for death should not treat "the death of the conscious subject" as categorically distinct from "the death of the organism" in a way that fragments moral status across stages and conditions. This attitude toward death reflects our common sense, since we allow physicians to determine death as a result of the cessation of life-processes, not that of psychological function, in a medical setting (The President's Commission, 1981)

Consider an individual who dies as an early fetus, or as a very old adult with severe dementia and minimal psychological continuity. On a strict TRIA reading, the death may be only weakly bad for the individual because time-relative interests are minimal. EMA may further imply that such death is not morally significant if what dies is merely an organism rather than a conscious subject. The McMahan's framework, based on EMA and TRIA, is problematic in handling the entity with no/minimal psychological continuity as morally insignificant. On the life-processes view, I argue we can consistently show identity, survival, and the badness of death, while retaining the advantage of McMahan's time-relative interest view. Death may be less bad for the individual in terms of lost psychologically structured goods, while rejecting the categorical demotion of the entity's death. I hold that death is the death of the same type of entity across stages: a living organism. The measure of prudential harm varies by psychological continuity, but the ontological status does not shift, and the death remains the death of that entity.

Replication cases are more troubling for the McMahan framework. EMA's original-brain restriction denies identity to the replica. Yet TRIA's emphasis on psychological continuity can make it appear that the replica's death is more significant than that of the organism lacking psychological continuity. This suggests a potential fallacy in valuing an entity, a replica, the badness of death due to misallocation: the evaluative focus may drift toward whichever bearer instantiates psychological continuity, even if McMahan's embodied mind view denies that the bearer is the same individual (Lacewing, 2002). The life-processes basis helps here by restricting the ground of prudential harm to the irreversible loss of the life-processes platform of the organism whose life is in question.

Psychological continuity can inform degrees of badness within that life, but it cannot 'transfer' the ground of harm to a separate replica merely by copying psychological features. Even if the replica has strong psychological continuity to the original human in a qualitative sense, the prudential harm of the original's human death is grounded in the cessation of the original's life-processes, not the cessation of the

replica's psychological continuity. This avoids the impression that copied psychology can generate a stronger claim for its death than the death of the original organism for the sake of the badness of death. The life-processes basis distinguishes *ground* from *degree* for the badness of death. The death indicates the death of the same type of entity across cases (ground), but the measure of prudential harm (degree) can vary depending on psychological continuity.

McMahan's pairing of EMA and TRIA is powerful, yet their interaction generates a grounding problem. EMA's sharp ontological split and cerebral-only grounding sit uneasily with TRIA's reliance on psychological continuity as the measure of death's badness, and this unease is amplified in cases involving early fetuses, PVS, severe dementia, and replication. A life-processes biological basis offers a more stable framework: the irreversible loss of organismic life-processes is the deeper ground of death's prudential significance, while psychological continuity remains an indicator of the degree of that badness when the biological platform is intact. This approach preserves ontological unity, clarifies the structure of prudential harm, and offers a more coherent bridge between metaphysical and policy-relevant accounts of death.

REFERENCES

- Bartlett, E., & Youngner, S. (1988). Human Death and the Destruction of the Neocortex. In: R. M. Zaner (Ed.), *Death: Beyond Whole-Brain Criteria* (pp. 199-215). Dordrecht: Kluwer Academic Publishers.
- DeGrazia, D. (2005). *Human Identity and Bioethics*. Cambridge University Press.
- Giacino, J., Katz, D., Schiff, N., Whyte, J., Ashman, E., Ashwal, S., Barbano, R., Hammond, F., Laureys, S., Ling, G., Nakase-Richardson, R., Seel, R., Yablon, S., Getchius, T., Gronseth, G., & Armstrong, M. (2018). Practice Guideline Update Recommendations Summary: Disorders of Consciousness. *Neurology*, *91*(10), 450–460. <https://doi.org/10.1212/WNL.0000000000005926>
- Lacewing, M. (2002, November 1). Review of The ethics of killing: Problems at the margins of life, by J. McMahan. Notre Dame Philosophical Reviews. <https://ndpr.nd.edu/reviews/the-ethics-of-killing-problems-at-the-margins-of-life/>
- McMahan, J. (2002). *Ethics of Killing: Problems at the Margins of Life*. Oxford University Press.
- Olson, E. (1997). *The Human Animal: Personal Identity Without Psychology*. Oxford University Press.
- Schlicht, T. (2011). Non-Conceptual Content and the Subjectivity of Consciousness. *International Journal of Philosophical Studies*, *19*(3), 491-520.
- The President's Commission for the Study of Ethical Problems in Medicine and Biomedical and Behavioral Research. (1981). *Defining Death: Medical, Legal, and Ethical Issues in the Determinations of Death*. U.S. Government Printing Office, Washington D.C.
- Whyte, C., Redinbaugh, M., Shine, J., & Saalman, Y. (2024). Thalamic Contributions to the State and Contents of Consciousness, *Neuron*, *112*(10), 1611–1625. <https://doi.org/10.1016/j.neuron.2024.04.019>

Identitet, štetnost smrti i osnova za životne procese

SAŽETAK

Okvir Jeffa McMahana uparuje onotološku tezu – Teorija utjelovljenoga uma (EMA), na temelju koje osobni identitet ustraje s kapacitetom mozga za generiranje svijesti, s evaluativnom tezom – Teorija interesa u odnosu na vrijeme (TRIA), na temelju koje štetnost smrti varira s obzirom na psihološku povezanost pojedinca s vlastitom budućnošću. U ovome se članku tvrdi da, unatoč njihovu uobičajenom prikazu kao „dviju komplementarnih razina”, EMA i TRIA ulaze u interakciju na način koji dovodi do teorijske nestabilnosti osnove štetnosti smrti, pogotovo s obzirom na ograničenje izvornoga uma te opreku između smrti svjesnoga subjekta i smrti ljudskoga organizma u okviru teorije EMA. Predlažem biološku osnovu koja se temelji na životnim procesima: ireverzibilan prestanak organizamskih životnih procesa (cirkulacija, disanje, metabolizam i integrativno funkcioniranje) čini dublju podlogu za štetu koju smrt nanosi vlastitoj dobrobiti osobe, dok psihološki kontinuitet služi kao pokazatelj njezina stupnja kada je osnova očuvana. Time se zadržava objedinjena ontologija razvojnih/patoloških stanja te se razjašnjava odnos između identiteta, preživljavanja i štetnosti smrti.

Ključne riječi: osobni identitet, štetnost smrti, šteta koju smrt nanosi vlastitoj dobrobiti osobe, životni procesi, teorija utjelovljenoga uma, teorija interesa u odnosu na vrijeme.