

# Clarifying Cardiac Death in DCD through Aristotle and Aquinas: Active and Passive Potentiality

The definition of death has recently come into question, which has caused some authors to propose changes to the definition of death. Some of these concerns stem from questions about the compatibility of current practice in organ donation after cardiac death (DCD) and the definition of death in the Uniform Declaration of Death Act (UDDA). The lack of agreement on what changes should be made, or whether changes should be made at all, led to the recent abandonment of efforts to change the definition.<sup>i</sup>

A key distinction in the theory of causality found in Aristotle and Aquinas has so far been absent from this debate. The concepts of active and passive potentiality can avoid some of the concerns raised by those advocating for changes to the UDDA without resorting to a new definition. Instead, a re-understanding of the words in question can hopefully serve as a starting point for agreement. While the disagreement about the definition of death is multifaceted, this discussion is limited to cardiopulmonary death and does not include brain death.

## A QUESTION OF DEFINITION

The UDDA defines death as “either (1) irreversible cessation of circulatory and

respiratory functions, or (2) irreversible cessation of all functions of the entire brain, including the brain stem.”<sup>ii</sup> Some authors propose changing the word “irreversible” to “permanent” in the first part of the definition related to circulatory and respiratory functions.<sup>iii</sup> While there is no universally accepted definition of “permanent,” one suggested definition is “loss of function that cannot resume spontaneously and will not be restored through intervention.”<sup>iv</sup> This definition contrasts with the that of irreversible, which proponents of this change define as “loss of function or a condition that cannot be restored by anyone under any circumstances at a time now or in the future.”<sup>v</sup> This suggests a categorical impossibility in which circulatory and respiratory function cannot resume even if resuscitation is attempted.

Proponents of this change typically provide at least three reasons for it. First, they argue that “irreversible” makes the determination of death in the context of DCD dependent upon the decision not to attempt resuscitation.<sup>vi</sup> Circulatory and respiratory function are irreversible not because it is impossible to do so, but because the medical team treating the patient chooses not to do so. If the care team attempted resuscitation after asystole, it might be possible to achieve circulation again in some

DCD donors. This does not mean they would recover from their illness, only that circulation might resume for a short period of time before stopping again. If death is truly a description of metaphysical status, then a decision of action or inaction should not affect it. This means some DCD donors might still be alive since circulatory and respiratory function could be reversed if attempted. Thus, “permanent” would help avoid this conflict.

Second, proponents of “permanent” believe it will align more with current practice.<sup>vii</sup> Since DCD requires the patient or surrogate to agree that resuscitation will not be attempted after asystole, then the loss of circulatory and respiratory function is truly permanent rather than irreversible, according to their definitions. Moreover, it is standard practice in DCD to wait for a set period of time after asystole before actually beginning organ procurement. While the amount of time varies (usually two to five minutes), the purpose is the same: to ensure that cardiac activity will not spontaneously restart. This autoresuscitation would result in the resumption of circulatory function, meaning the patient would no longer be dead. Since there has never been a recorded case of autoresuscitation in DCD after more than five minutes of asystole, it is thus assumed the patient will not return to life on their own, even though circulatory function might be able to be restored in some cases if attempted. According to the above definition of irreversible, some patients are not yet dead because circulatory function could be restored if attempted.

Third, the care team cannot definitively determine death if it is defined as “irreversible” because they cannot know if resuscitation attempts will be successful until they are

attempted and have failed. The current practice of waiting two to five minutes is not long enough after asystole to ensure resuscitation cannot be successful. Thus, proponents argue that replacing “irreversible” with “permanent” is better than changing current practice to align with the UDDA definition.<sup>viii</sup>

## CLARIFYING IRREVERSIBILITY

One option not considered by either side so far is to clarify what is meant by “irreversible” rather than to throw it out. While this may be seen as a reinterpretation or new understanding of “irreversible”, it is how I have always understood it, so it seems more accurate to call this a clarification. The proposed clarification is as follows.

When we call something “irreversible” in any context we mean to say that it cannot be reversed. More to the point, it lacks the potential to return to its former state. For example, a car that is irreversibly damaged means that no one or nothing can repair it. Even the best mechanic with new parts could not fix the problem. No matter what interventions occur, the car remains damaged.

In the context of death, this is the sense of “irreversible” that proponents of “permanent” seem to use: circulatory and respiratory function cannot be restored no matter what interventions occur. Regardless of how proficient the attempts at resuscitation are, the loss of function cannot be reversed. However, this understanding neglects another possible interpretation of “irreversible” that hinges on the concept of potentiality.

## POTENTIALITY IN ARISTOTLE AND AQUINAS

As far back as Aristotle, and continuing with Aquinas, there has been a distinction between two types of potentiality: active potentiality and passive potentiality.<sup>ix</sup> A passive potentiality is the capacity to be changed, while an active potentiality is the capacity to induce a change. For example, a tree has a passive potentiality to become a table, and a carpenter has an active potentiality to build a table. An active and passive potentiality for the same change can sometimes exist in different entities, as with the tree and carpenter, and they can also exist in the same entity. For example, an acorn has an active potentiality to become a tree.

When an active and passive potentiality for the same change exist in different entities, the intervention of an external agent is required for the change to occur. A tree cannot become a table without the carpenter's work. Yet, when an active and passive potentiality exist in the same entity, that entity can achieve the change on its own without an external agent. In the right circumstances (soil, light, and water), an acorn will become a tree without any assistance from an external agent. While it might help if a gardener plants the acorn and tends to its needs, it is not required for the acorn to change into a tree. This self-reliance is a key distinction for the example of DCD.

When applying this distinction to "irreversible" the active potentiality to return to a previous state can also reside in the entity that lost the function or in an external agent. A car has only a passive potential to be fixed when damaged but it has no active potentiality to repair itself. It always requires a mechanic who has

the active potentiality to fix it in order to be repaired. In fact, a car even requires an external agent with active potentiality to function at all, namely a driver. Even a self-driving car requires someone to give it a destination.

A living organism, however, is different. In some cases, an organism has the ability to heal and repair itself, meaning the active and passive potentiality for healing exist in the same entity. In other cases, healing requires the intervention of someone else, meaning the passive potentiality for healing exists in the organism and an external agent like a nurse or veterinarian has the active potentiality to heal. Of note, Aristotle and Aquinas considered the soul to be the first actuality in a body potentially having life.<sup>x</sup>

Regarding death, a living body has both an active and passive potentiality to perform circulatory and respiratory functions. On its own, without assistance from others, it can perform both of these functions. A dead body has lost that active potentiality; its potential for these functions is now passive. After death, it might be possible to regain these functions through resuscitation, or miraculous divine intervention in the case of Lazarus, but this requires an external agent to intervene either medical or divine. At some point after death, even the passive potentiality is lost. If death is the separation of body and soul, it seems reasonable to say that, at least in the Aristotelian-Thomistic view, death has long been viewed as the loss of the active potentiality of circulatory and respiratory function.

## ACTIVE POTENTIALITY IN DCD

Returning to DCD, the distinction between

active and passive potentiality sheds new light on the proposal for changing the UDDA to replace "irreversible" with "permanent". The capacity for autoresuscitation is an active potentiality. Once that active potentiality is lost, at least according to Aristotelian-Thomistic theory of causality, the person is dead. The person is still dead even if a passive potentiality for circulatory and respiratory function remains. In other words, simply because someone might be able to restart these functions does not mean the person is alive. By understanding "irreversible" to refer only to an active potentiality to return to the prior state, it means the capacity for autoresuscitation is the hallmark of life and its loss the sign of death.

On the other hand, proponents of this change seem to define "irreversible" as the passive potentiality for cardiac and respiratory function. They seem to think this is the only way to interpret the word irreversible in this context. However, if "irreversible" is understood as an active potentiality only, and not a passive potentiality, it seems to resolve the three concerns discussed above: 1) it describes the metaphysical reality for itself as the state of death is not dependent upon a decision of action or inaction; 2) it aligns with the current practice of waiting for the possibility of autoresuscitation to dissipate; and 3) the care team can accurately determine death once cardiac and respiratory function stop rather than requiring resuscitation to be attempted and fail.

## A PATH FORWARD

Understanding the potential for the circulatory and respiratory to restart as an active potentiality and not a passive potentiality

addresses the above arguments of proponents for changing the language of the UDDA from "irreversible" to "permanent." Proponents may raise other arguments for "permanent", especially as it relates to neurological criteria for death, but seeing "irreversible" as the loss of an active potentiality for circulatory criteria can address their concerns. This understanding is not new but perhaps has not been clear up to this point. It is also consistent with the current UDDA language, current DCD practice, and many understandings of death that have existed for centuries. While this clarification may not resolve all disagreement about the UDDA's definition of death, it can hopefully serve as a foundation for more discussion and possible agreement. ✚

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## ENDNOTES

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- iii. DeCamp, Matthew, Kenneth Prager, and American College of Physicians Ethics, Professionalism and Human Rights Committee. "Standards and ethics issues in the determination of death: a position paper from the American College of Physicians." *Annals of Internal Medicine* 176, no. 9 (2023): 1245-1250.
- iv. Shemie, Sam D., et al. *Intensive Care Medicine* 40, no. 6 (2014): 791.
- v. *Ibid.*
- vi. Truog, Robert D., and Franklin G. Miller. "Counterpoint: are donors after circulatory death really dead, and does it matter? No and not really." *CHEST* 138, no. 1 (2010): 16.

- vii. Bernat, James L. "Conceptual issues in DCDD donor death determination." *Hastings Center Report* 48, no. S4 (2018): S26-S28.
- viii. Truog and Miller, 2010.
- ix. Aristotle, *Metaphysics*, 9, 1046a,4-35. Aquinas, *Summa Theologiae*, I, q. 2, a. 3; I, q. 80, a. 1; II, q. 6, a. 1. Aquinas, *Commentary on Aristotle's Metaphysics*, Book IX, Lesson 1.
- x. Aristotle. *De anima*, book 2, ch 1, 412a27. Aquinas, *Summa Theologiae*, I, q. 75, a. 1.