The Persistent Vegetative State: An Impetus for Redefining Death

Sheri Boyce
Messiah College, sboyce@messiah.edu

Follow this and additional works at: https://mosaic.messiah.edu/facscholar

Part of the Bioethics and Medical Ethics Commons, Biology Commons, and the Philosophy of Science Commons

Permanent URL: https://mosaic.messiah.edu/facscholar/2

Recommended Citation
Boyce, Sheri, "The Persistent Vegetative State: An Impetus for Redefining Death" (2011). Faculty Scholarship Papers. 2.
https://mosaic.messiah.edu/facscholar/2

Sharpening Intellect | Deepening Christian Faith | Inspiring Action

Messiah College is a Christian college of the liberal and applied arts and sciences. Our mission is to educate men and women toward maturity of intellect, character and Christian faith in preparation for lives of service, leadership and reconciliation in church and society.
Medical advances such as improved life support and better interventions in emergency medicine have saved countless lives. However, that same technology can at times prevent death while doing little or nothing to restore the fullness of a patient's life, which has in turn fueled the debate over the morality of euthanasia or "hastening" death. But an accurate discussion of death and dying requires a discussion of what it means to be alive – what is it that makes us human and when do we cease to be human? In other words, when does life end and death begin? In the past, this was a simple question to answer, but the increasing sophistication of medical treatment has blurred the distinction to the point where perhaps death should be redefined in terms of personhood rather than biological criteria.

I. The Persistent Vegetative State

One of the most vivid examples of "not dying but not living" is the persistent vegetative state (PVS), a condition highly publicized by Karen Quinlan, Nancy Cruzan and most recently Terri Schiavo. A patient in PVS is permanently unconscious due to severe damage to or destruction of both cerebral hemispheres of the brain. The damage may be induced by severe or prolonged lack of oxygen (anoxia) as happened to Terri Schiavo during cardiac arrest, or as a result of serious head trauma or an overdose of drugs and alcohol. Regardless of the cause, the end result is destruction of the portions of the brain where conscious awareness, cognition and "higher" mental functions occur. Deeper structures such as the thalamus and basal nuclei may or may not be damaged; lower portions of the brain such as the brainstem and the cerebellum are spared and can function normally. Since cardiac and respiratory control centers are housed in the brainstem, the patient has a normal heart beat and can breathe without the aid of a ventilator.
There are several consistent clinical signs associated with PVS. Patients exhibit cycles of sleeping and "wakefulness," although the wakefulness is without conscious awareness (sleep/wake cycles are governed by the intact brainstem, whereas conscious awareness requires function of the hemispheres). They may exhibit random eye movements, but they do not show sustained tracking of a moving object. They may grimace or move in response to a painful stimulus, but the movements are primitive and crude. Grunting and groaning may also occur, as well as chewing movements. Some PVS patients are capable of swallowing but most are dependent upon tubes to supply nutrition and hydration. An involuntary grasp reflex is often present, leading family members to believe that the patient is squeezing their hand. Indeed, many of the behaviors of a patient in PVS make it appear that he or she is able to intentionally respond to the surrounding environment.

However, despite the appearance of responsiveness, all of the above behaviors are reflexive in nature and governed solely by the intact brainstem. This is the predominant feature of PVS. The patient’s neural capacity for consciousness and cognitive function has been destroyed and there is no purposeful or meaningful interaction with the environment. There is no awareness of self or perception of pain, hunger, thirst or any other bodily sensation – this requires intact and functional cerebral hemispheres which PVS patients do not have.

It is important to state that PVS is not equivalent to coma. Patients in both states are unconscious, but PVS patients exhibit a sleep-wake cycle and can be aroused from "sleeping" to "wakefulness." Comatose patients are unarousable even to painful stimuli and do not exhibit the reflexive behaviors that PVS patients do. Loss of consciousness in each condition is caused by injury to different areas of the brain. PVS involves destruction of the cerebral hemispheres which produces permanent loss of consciousness. In a comatose patient the cerebral hemispheres may or may not be injured; often the unconsciousness is the result of injury to the upper portion of the brainstem which sends nerve signals to the cerebral hemispheres to produce consciousness. Comas typically persist for several weeks, after which
the patient either dies or progresses to a vegetative state or varying levels of consciousness.²
Some PVS patients also regain varying levels of consciousness (usually with severe physical
and cognitive impairment), but often the patient’s condition is considered permanent; if no
improvement is observed early on, the chance of recovery is estimated at less than 1 in 1000.³

It is also important to state that PVS is not equivalent to brain death. Brain death is
clinically defined as the absence of “whole brain” function, both in the cerebral hemispheres and
the brainstem. A brain dead patient is unconscious like the PVS patient but there is no reflexive
behavior and the patient requires a ventilator to breathe. Even with advanced life support,
cardiac function is difficult to maintain and death typically occurs within a few days in adults and
a week or so in children.⁴

Since the brainstem is still functional in PVS, these patients are not clinically considered
to be dead. If artificial nutrition and hydration is provided along with appropriate nursing care,
PVS patients can survive for a considerable length of time. The average life expectancy is two
to five years although one patient reportedly survived 41 years.⁵

II. Prolonging Life or Allowing to Die

However, the ability to sustain a patient in this condition does not address the question
of whether we should prolong the patient’s life. Some insist that even in PVS, a person’s life is
inherently valuable and must be sustained; to do otherwise is euthanasia. Others believe that
withdrawing artificial nutrition and hydration and allowing death to occur is in the best interests
of the patient. Both sides have support in the literature and a summary of various points and
counterpoints follows below.

Can we be certain?

One common argument against withdrawal of artificial nutrition and hydration is
articulated by ethicist Leon Kass who fears we can never be absolutely certain that there is no
awareness of surroundings or an inner life. Diagnosis of a vegetative state can prove challenging as most of the tests used to determine that a patient lacks conscious awareness are based on the absence of behavioral responses; it is often said that the absence of evidence is evidence for absence. Assessment of behavior is subjective to some degree, and can be compounded by motor impairment and ambiguous responses. Several studies have reported that as many as 40% of patients diagnosed as in a vegetative state were actually in a minimally conscious state, in which the patient is capable of inconsistent but purposeful responses and verbalizations. The consequences of misdiagnosis are obviously significant, especially when making end-of-life decisions.

However, difficulty in diagnosis does not infer impossibility. Medical practitioners agree that if behavioral assessment is performed by a group of skilled clinicians at multiple time points, an accurate diagnosis can be obtained. MRI and CT scans are also used to support the diagnosis and typically show injury to extensive areas of the cerebral cortex or to neuronal axons in the hemispheres. Over time, degeneration and atrophy of the cerebral cortex is often noted and is used to establish irreversibility of the patient’s condition.

In addition, at least one month must elapse before a diagnosis of vegetative state is declared, and it is not considered permanent or irreversible (PVS) until at least three months following anoxia and one year in cases of trauma. During those time periods, the patient is carefully monitored for signs of regaining consciousness. Over the course of a year, 52% of trauma cases regain some level of consciousness, although the majority of these patients are severely disabled. For PVS resulting from anoxia, the prognosis is much worse, with only 15% regaining even a minimal level of consciousness.

Occasional reports appear in the media regarding the supposed recovery of patients after an extended period of time in PVS. However, careful examination of these patients revealed that they were either misdiagnosed, or that the recovery occurred prior to the time period recommended for determining permanence, or that the recovery had actually occurred.
much earlier than when it was discovered. Medically documented recovery has occurred at 15, 17 and 24 months after diagnosis, but these cases are exceedingly rare and the improvement minimal. Despite their patient's improvement, the authors of one report note that "in practical terms, the vegetative state anticipates death." Based on this data, the American Medical Association (AMA) has declared that if careful standards are followed, physicians are justified in the certainty of a PVS diagnosis 12 months after injury. Physicians associated with the Schiavo case stated that 14 years was more than long enough to be certain that her vegetative state was permanent.

Physicians may soon have an additional tool to aid in an accurate diagnosis. With the use of functional MRI, Adrian Owen and colleagues have recently reported the presence of conscious awareness and cognition in a handful of patients who met the current criteria for PVS. These patients could willfully modulate activity in specific brain areas when told to imagine playing tennis or walking through the rooms of their house. One patient was able to use this paradigm to correctly answer five out of six yes-or-no questions. This technique is not yet refined to the point where it can be adopted as a routine clinical measure, but the hope is that it will reduce the odds of misdiagnosis and eventually offer a rudimentary means of communication with patients who are otherwise cut off from the world.

*All life is sacred*

Even if an accurate diagnosis of PVS has been established, there are many who argue that the life of a person in PVS must be sustained since to do otherwise would constitute euthanasia. Opponents of euthanasia believe that all life is sacred and to kill by any means (actively or passively) is inherently wrong. Life is a "basic human good" and even though a condition such as PVS is not something anyone would choose, it is still a manifestation of life, albeit an imperfect one. An incapacitated patient does not cease to be a person and therefore is protected from acts of intentional killing. Catholic theologian William May writes that "life is
inherently good, not merely instrumental to other goods" and despite the burdens that may occur in PVS, there is never a benefit in ending a life.\textsuperscript{20}

In contrast, a substantial number of ethicists and theologians argue that we are under no moral obligation to sustain life in all circumstances and it is therefore acceptable to withdraw artificial nutrition and hydration. Thomas Shannon writes that "[t]his zeal to protect life has turned biological life into an idol, a false god that is seen as a value and an end in itself..."\textsuperscript{21} He and James Walter argue that while life is certainly valuable and a great good, "only God is of ultimate value; all else, no matter how good or valuable, must take second place."\textsuperscript{22} Gilbert Meilaender echoes this in saying that life is a gift from God, not a god itself. Continued life is not the only or highest good and there are circumstances in which we ought not to oppose death.\textsuperscript{23} Likewise, Michael Paniccola asserts that life is an important good because it allows us to pursue spiritual goods (such as loving God and others) but that it is limited and subordinate to those spiritual goods.\textsuperscript{24} Thus, affirming life does not infer that biological life must be sustained at all cost and in every circumstance. Certainly as believers, we have no cause to fear death, and one might argue that to delay death is to selfishly deny the sovereignty of God's will.

\textit{Futility, benefits, and burdens}

If we are not obligated to sustain biological life for its own sake, on what other grounds do we determine if is appropriate to allow a person in PVS to die? The approaches to answering this question are many, and are summarized here briefly.

In the context of medicine, the concept of medical futility is often helpful in making end-of-life decisions. Horace DeLisser suggests physicians and family members should ask the following questions about a treatment: 1) Does it restore, maintain, or enhance biological life? 2) Does it restore, maintain or enhance cognitive life so that the patient can interact even modestly but purposefully with their environment? 3) Does it restore, maintain, or enhance a life that the patient feels is meaningful or significant? If the answer to any one of these questions is
no, then the treatment can be considered futile and there is no obligation to continue. In the case of PVS, artificial nutrition and hydration may sustain biological life but it will not restore cognitive function since the brain regions that support this capacity have been irreversibly damaged. Therefore, the concept of medical futility allows us to conclude that it is morally acceptable to discontinue artificial nutrition and hydration.

The decision can also be examined in light of what is often termed "quality of life" issues. This term is often misconstrued as judging that a person's life or their worth as a human being no longer has any value. Shannon and Walter, however, state that a person's biological life is not the same entity as his or her personal life or personhood; the value of a personal life is not equivalent to that individual's biological life. Instead, they define quality of life as the "quality of the relationship which exists between the medical condition of the patient...and the patient's ability to pursue life's goals and purposes, understood as the values that transcend physical life..." In other words, one person's life is not more valuable than another's, but there is inequality between individual ability to pursue life's purposes. Thus, many people have a high quality of life, but others may achieve less than optimal quality due to hereditary factors and lifestyle choices. Since PVS precludes the pursuit of life's purposes, there is no interaction between overall condition and pursuit; therefore, the quality of life is nonexistent and there is no duty to continue artificial nutrition and hydration.

John J. Paris and Richard McCormick hold similar views and describe quality of life as encompassing the capacity to participate in human relationships; Panicola defines it as the ability to pursue the spiritual goods of life. For the PVS patient these potentials are permanently and completely lost, and therefore "the best treatment is no treatment."

Another means to determine if artificial nutrition and hydration should be withdrawn in PVS is found in both Christian and secular bioethics literature. Although the terminology varies, it is usually described as the analysis of benefit vs. burden. A treatment is morally acceptable and even obligatory if it offers a hope of benefit without excessive burden. Briefly, a treatment is
beneficial if it can improve or restore a patient's health, relieve pain, maximize comfort, or improve the patient's ability to pursue the goods of life. Burdens can be defined as that which causes suffering or pain, incurs excessive expense, requires excessive medical technology or intervention, or is otherwise deemed morally repugnant by the patient (for example, amputation).

Controversy for PVS patients centers on how the benefits and burdens of artificial nutrition and hydration are defined. Those who believe that the right to life is absolute will naturally see prolonged physical life as a benefit; Germain Grisez also argues for the benefit of maintaining "human solidarity" when family members care for the patient. (However, it is difficult to see how a person in PVS benefits when there is no awareness of being alive or of the care received.) These same ethicists and theologians also believe there is little burden in terms of pain, expense or repugnance to the patient, and therefore, the benefits obviously outweigh the burdens.

On the other hand, many others argue that prolonging life is not always beneficial – biological life is not an ultimate good and if medical intervention cannot improve the patient's condition and restore the ability to pursue life's purposes, there is no benefit to the patient. In addition, there are burdens inherent to artificial nutrition and hydration and they cannot be overlooked. As with any medical treatment, there are risks and side effects, ranging from diarrhea to aspiration pneumonia to infection; although the incidence of these events is low, it cannot be discounted entirely. Costs should also be a consideration – while artificial nutrition and hydration itself is not terribly expensive, the total cost of associated nursing care often is. If viewed in this way, it is reasonable to conclude that for PVS, the burdens of artificial nutrition and hydration outweigh any perceived benefits and there is no moral obligation to continue it.

As the preceding paragraphs show, there are several arguments that can be made in favor of withdrawing artificial nutrition and hydration and allowing the PVS patient to die. However, some may still argue that withdrawal is still euthanasia because the final outcome for
the patient is death. It is important to note that many bioethicists distinguish between active and passive euthanasia by focusing on intent. Active euthanasia is any act performed with the specific and sole intention of ending a person's life, which most people would agree is morally unacceptable. An act that has another aim, such as terminating a futile treatment or reducing suffering or excessive burden, constitutes passive euthanasia and is acceptable under certain circumstances even though it may result in the death of another. For example, it is not permissible to inject a large dose of potassium chloride with the intent of causing cardiac arrest, but it is acceptable to administer a large dose of medication to relieve pain even if that dose is known to severely depress respiration, perhaps to the point of death. However, Paul Simmons comments that upon further examination, this direct-indirect distinction is blurred; if a person performs an act to achieve an aim other than death but knows that it will indirectly result in death, he has still chosen to perform that act—thus, it can be considered euthanasia.

For some, withdrawal of artificial nutrition and hydration will always be equivalent to killing, even though there may be no benefit in prolonging life. For others, withdrawal is not intentional killing since it simply recognizes the event that caused PVS and allows the processes set in motion to continue unto death. There is no simple resolution to this debate as it is currently framed, and it therefore may be more helpful to shift our attention to how we view PVS in the context of life versus death. In clinical terms, a person in PVS does not meet the criteria for brain death because of continuing brainstem function. Physiological function is still present as well: the heart beats, body temperature is maintained, digestion occurs. But is this minimal biological existence really the same as living or what we think of as "being alive?" Many people intuitively would answer no, and yet are uncomfortable with the idea of actively or passively ending it. Perhaps the debate is better served by examining the boundary between life and death—is PVS the lowest functional level of life or the highest functional level of death?
III. Changing How We Define Death

Before the advent of modern medicine, the boundary between being alive and being dead was sharp and easy to observe – circulation, respiration and brain function (consciousness) are interdependent and if one failed, the others would rapidly follow suit. However, improved medical care now enables us to sustain cardiovascular and respiratory function in the absence of brain function, which has resulted in shifting the definition of death from cessation of cardiopulmonary function to irreversible loss of whole-brain function. The whole-brain definition of death is not without its difficulties; moreover, medical advances have continued and we are now faced with thousands of patients in PVS – patients that aren't quite "dead" but don't seem to be living to the fullest either. This has led neurologist D. Alan Shewmon to suggest that the single word “death" is no longer adequate to describe the many conditions that can now occur via modern medicine. He compares this to a language in western Greenland in which there are 49 different words for snow – snow on the ground is completely different from falling snow, which is not the same as snow on tree branches. It is not illogical to suggest that perhaps we need to take a similar approach to how we define death.

Could the controversy surrounding PVS could be resolved by changing the definition of death to include or focus on the permanent loss of consciousness? Daniel Wikler has proposed moving from a biological perspective of death to one with a psychological emphasis; death occurs when the brain regions that support consciousness have permanently ceased to function, even if the rest of the body is still alive. In doing so, the whole issue of withdrawal and euthanasia is rendered moot – if the patient has been declared dead, withdrawal of nutrition and hydration cannot be the cause of death. (One could extend this argument to say that administration of a substance to induce cardiac arrest would not be forbidden either.) Wikler admits that this idea will require an enormous shift in how we think of death – we are so conditioned to see death in terms of biology that we instinctively recoil at the thought of
placing a body which is still breathing in a casket. However, he offers a philosophical thought experiment to emphasize that his proposal follows common sense:

...[Suppose] a man is decapitated, and physicians are able to keep both the head and the body functioning more or less as normal. They cannot, however, reconnect them. Which is the patient?...Nearly everyone able to choose one or the other will, I believe, choose the head. After decapitation, the head is the patient, and the conditions of its health and death are those of the patient as a whole. Losing a body through decapitation is considerably more distressing, in this story, than losing a limb, but it is not more threatening to one's identity. The body, meanwhile, continues to live. It is not the patient, and may survive the patient if the latter cannot be kept alive. This is, very roughly, what happens in persistent vegetative state.36

Expanding the definition of death may seem like a capricious decision or whim to simplify or eliminate the moral dilemmas that currently surround the treatment of PVS patients. That may be true if we assume that medicine or biology can provide the answer as to when death occurs. However, Stuart Youngner correctly argues that “death is a social construct...culture and context will always be the final arbiter.”37 It is also difficult to define when death occurs without concurrently discussing what it is that death brings to an end. We cease to be a person at death – but what is personhood and how do we determine when it is no longer in existence?

It is the difficulty associated with addressing these questions that have led several authors to decide that an expanded definition of death, while theoretically attractive, is not practicable. David Lamb favors a biologically-based approach rather than the psychological “personal identity” theories of death because he feels it is too controversial to define personhood.38 The report of the President's Commission on defining death also veered away from an expanded definition for several reasons. It was deemed too abstract for use in public policy; biological criteria were much more concrete and more easily assessed. There was also concern that the senile or mentally disabled would fail to meet the standards for personhood39 as Peter Singer proposes, much to the distaste of many. Youngner foresees vociferous protests from religious conservatives and disability rights activists.40 However, Wikler counters
that PVS is strictly defined and limiting the expanded definition to permanent loss of consciousness would clearly exclude patients with mental capabilities that are greatly diminished but still present.\textsuperscript{41}

IV. Personhood: Is It Lost in PVS?

The concept of personhood may be abstract but is it too vague to be defined? Do PVS patients still possess that which makes us human, or should we view them as "dead?" What is a Biblical view of human nature? A complete discussion of every view of personhood is beyond the scope of this paper, but a review of some selected concepts of personhood may be instructive in how to approach end-of-life decisions for PVS patients.

Reducive materialism

This viewpoint has its roots in both philosophy and neuroscience. Also known as reductive physicalism, it is an extreme form of monism, in which a person is defined as a singular, unified entity — there is no separation between the physical body and what constitutes a human being. Who we are is dependent upon, and a product solely of, neuronal activity; our thoughts and behavior, what makes us human, can be explained by or "reduced" to the actions of molecules and atoms. Francis Crick has famously commented that "you, your joys and sorrows, your memories and your ambitions, your sense of identity and free will, are in fact no more than the behavior of a vast assembly of nerve cells and their associated molecules."\textsuperscript{42} Recent advances in neuroscience also point to a tight link between essential aspects of human nature (cognition, emotions and behavior) and the physical function of the brain. Many cases of depression are due to imbalances of neurotransmitters; damage to the prefrontal lobes can cause drastic changes in personality, the most famous being the railroad worker Phineas Gage. Neuronal degeneration in Alzheimer's disease first destroys memories, then personality and eventually the patient's ability to interact at any level. The list of examples is seemingly endless,
and it may seem inevitable to conclude that a great deal, if not all, of who we are is biologically based. If those areas of the brain that support consciousness are destroyed, it logically follows that a reductive view of personhood would be supportive of expanding death to include PVS.

However, materialism is not without its difficulties. It seems logical and consistent with scientific evidence to describe "bottom-up" causality – the activity of biological components produces the activity of the mind. But materialism fails to explain "top-down" influence – how the mind can alter biological activity, as observed by the very real effects of placebos or the alteration of brain structure by learning Braille or other prolonged training. Materialism also suggests that all behavior – our thoughts, our emotions – is determined by biology and leaves no place for free will or self-determinism.

_Dualism_

The seeming lack of free will is particularly troublesome to many Christians, as is the lack of a "soul" that provides continued existence after death. Materialism is directly at odds with traditional dualism, in which the physical body is believed to be entirely separate from a non-physical or immaterial substance, often referred to as "soul" or "mind." The notion of an immaterial soul housed in a physical body is pervasive, although often subtle, throughout Judeo-Christian tradition; it allows for free will and supports the concept of immortality and eternal life, as the "soul" survives the death of the physical body in anticipation of future resurrection.

However, the concept of an immaterial soul that is separate and entirely distinct from a physical body has been battered by the recent findings of modern neuroscience. Some scholars such as C. Stephen Evans and William Hasker have proposed variations of dualism in light of scientific evidence. Their views (significant minimal dualism and emergent dualism, respectively) accept the dependence of the mind or soul on the functioning of a physical brain; Evans writes that "[w]e did not need a neurophysiologist to come to know that a person whose
head is bashed in with a club quickly loses his or her ability to think or have any conscious processes.\(^{45}\) Hasker recognizes that there is no requirement that the "conscious mind should be able to operate on its own and independently of what goes on in the body and the brain."\(^ {46}\) However, both also insist that there is no scientific evidence that precludes the separation of the soul from the body at death. While the soul and the brain are intimately united or interdependent in life, it is logically possible that the soul can survive after the death of the body by a miraculous act of God.\(^ {47}\)

With respect to the status of personhood in PVS, dualism usually leads to an affirmation of whole-brain death instead of an expanded definition to include loss of consciousness. Traditional dualists hold that the soul or personhood is not affected or impacted by the condition of the physical brain and is still present as long as the body is alive. Indeed, there are those who charge that dualism is overprotective to a fault and "irrational" when considering cases in which there is no hope.\(^ {48}\) Emergent and significant minimal dualists may be less likely to agree with traditional dualists, since they see the soul or mind as integrated with or dependent on the functioning of the brain. PVS destroys this integration, although the soul could exist based on God’s intervention.

**Non-reductive physicalism**

In contrast to Evans and Hasker, other philosophers and theologians including Malcolm Jeeves and Warren Brown have studied the recent findings of neuroscience and have rejected the notion of an immaterial soul entirely:

"We believe it is no longer helpful or reasonable to consider mind a non-material entity that can be decoupled from the body. The mind is an active process by which we constantly modulate our action in the world (including the world of human culture and society). Out of continual experience of action and feedback, the mind becomes formed as a functional property of our brain and body."\(^ {49}\)
Jeeves and Brown are among a group of philosophers and theologians who have embraced non-reductive physicalism, which avoids the determinism of reductive materialism but denies the possibility of a disembodied soul or mind in light of scientific evidence. Briefly, non-reductive physicalism states that mental activity is produced by, but cannot be solely explained by or reduced to, biological elements of the brain. As networks of neurons interact in increasingly complex ways, "emergent properties" are formed that can then alter biological elements in a top-down fashion. Consciousness (or human nature) is thus described as "emergent;" the whole is more than the sum of the parts. This is very similar in many ways to Hasker's emergent dualism, except that non-reductive physicalists do not see the need for some non-material entity to survive the body after death. Eternal life is guaranteed through resurrection; there is no requirement for a soul to persist between periods of embodiment. Since the brain is the source of our emergent consciousness, it follows that consciousness or the "mind" no longer exists in PVS; non-reductive physicalism therefore does not conflict with redefining death to include PVS.

A Biblical view of personhood

Jeeves and his colleagues recognize that dispensing with the concept of a soul is counterintuitive and perhaps disturbing to most believers. Cartesian dualism is so deeply embedded in Christian theology that its absence seems to shake traditions to their very foundations. However, many scholars are convinced that a careful reading of Scripture in its historical context does not support dualism; it is a modern concept that has been applied to Scripture, rather than flowing from it. Both the Old and New Testaments present a holistic picture of personhood — humans are embodied beings and are always defined within the context of relationship.

The Old and New Testaments both clearly speak of the unity of the person despite the use of words like "soul" and "body." It is important to realize that Scripture does not contain
specific words to denote what we think of as body and soul; the Hebrew and Greek words in question are used and translated in multiple ways with various meanings. The Hebrew word nephēs is often translated as "soul" but really refers to a "life principle," something that is a living, embodied creature (including animals) and does not exist apart from the physical body or without relation to God. For example, in Genesis 2:7 when God breathes the breath of life into Adam and Adam becomes a "living soul," the grammatical structure indicates that Adam is a soul, not that he has a soul or has received one. This passage, like many others in the Old Testament, focuses on "physicality as the vital center of human personhood [and] suggests that we may not separate the physical from the 'spiritual.'" Likewise, the Greek word psyche refers to "life" or "inner self;" it should not be translated as "soul" since it refers to what makes an organism alive (even plants) and is not an immaterial substance.

Paul seems to espouse a separation of body and soul when he speaks of being "away from the body and at home with the Lord" and being judged for "the things done while in the body" (2 Cor. 5:1-10), as well as contrasting the natural or perishable body with a spiritual, imperishable body (1 Cor. 15:35-53). However, many Biblical scholars have determined that Paul takes a unified view of human nature, and his writings do not necessarily imply that there is a soul separate from our physical body. Paul focused on the continuity of embodied existence without requiring an immortal soul, and he speaks of dualism in an eschatological but not anthropological sense.

Green argues that the misconception of Paul's writing is likely due to reading the New Testament with our Cartesian lenses. Presumed dualism by New Testament writers is often attributed to the heavy influence of Greek philosophy, although careful scholarship has suggested that the prevailing ideas of both Hellenism and Judaism at the time were diverse and cannot be reduced to a single belief. Some believed the soul existed but was a physical entity; others thought the soul was generated by the body and did not exist before or after the
body. In actuality, the Gospel writers speak of a unified view of the person, where physical, spiritual and social needs are viewed as human needs.

In addition to psychosomatic unity, the other essential component of Biblical personhood is a relational aspect. Human beings as created by God are always viewed in relationship with God, with other individuals, and with their surrounding environment; in fact, Green argues that the dominant feature of personhood is relational and that a true understanding of human nature cannot be gained by seeing humans as individuals. Humans are "...genuinely human and alive only within the family of humans brought into being by Yahweh..." Michael Boivin's Hebraic model of personhood states that we are more than simple physical entities not because of some "ethereal aspect" but because of our sophisticated social nature, and a capacity to know and have social interaction with God. Lawrence Stone echoes this when he describes personhood as "socially emergent." God decreed that it was not good for man to be alone; our personhood fully emerges as God intended only within a community, "not out of some inner possession or part of human nature."

Thus, the Hebrew or Biblical concept of personhood is dependent upon 1) the existence of an animated, physical body, and 2) the capacity for interactive relationships with God and the surrounding physical and social environment. Defining what it means to be a living person then enables us to discuss what is lost at death, and at what point death has taken place. More specifically, is a Biblical view of personhood consistent with expanding death to include PVS?

Obviously a physical body still exists for PVS patients, and much of it functions well—the heart beats, respiratory function continues, the kidneys filter waste products. The only major component that has been destroyed is the physical portion of the brain that supports consciousness. (Post-mortem examination of the cerebral cortex of one PVS patient showed it had degenerated to only "thin-walled yellow-brown bags" of tissue. Terri Schiavo's brain weighed less than half of what is normally expected for someone her age.) Stone concludes that since Scripture emphasizes that physical existence is essential to human persons, it is
absolutely wrong to speak of PVS patients as dead. Grisez agrees, saying that the living body is an intrinsic part of our personal reality—we don’t just use our bodies, they are our person [emphasis added].

While these authors are correct on many points, they place added emphasis on the physical body that is not present in a Scriptural view of personhood. While a physical body is necessary for personhood, it is not sufficient. The capacity for relationship is required as well if life or personhood is to be retained; Green writes that “[death] is the cessation of life in all of its aspects, and especially the severance of all relationships—relationships with God and with every person and with everything in the cosmos.” A PVS patient no longer has conscious awareness of anything or anyone, and they can no longer interact with God, with other people or their environment. Assuming that the diagnosis is accurate, they will never regain that capacity, and cannot actively participate as part of the community in which God has created them. Grisez argues that they are still part of the community since their caregivers sustain a relationship with them. However, a personal relationship implies interaction between two people in which each contributes and is changed by those interactions. Reciprocal relationships are “foundational to any concept of personhood, since with them comes the commitment of one person to recognize and respond to the personhood of another.” Obviously, a person in PVS cannot actively contribute to a relationship. Lois Shepherd puts this succinctly when she says, “I don’t question whether Mary Schindler ought to have held Terri’s hand; I only question whether Terri should have been kept alive once it became clear that Mary was the only who could enjoy the benefits of it.”

Since patients in PVS have lost the capacity for relationship, it is logical to say that personhood as defined in the Bible has been destroyed. Thus, a Biblical view of personhood is also supportive of changing how we define death. Indeed, one interpretation of an Old Testament passage (Eccl.9:5-10) describing death reads: “they cannot know what is happening,
cannot act, cannot will or eat or drink. They can neither hate nor love—they are 'asleep'. Theirs is clearly no human existence..."71 This description clearly applies to PVS patients as well.

**Conclusion**

The medical condition known as PVS is the subject of repeated and polarized debate regarding the sanctity of life, euthanasia, and the right to die. Unfortunately, the arguing over these topics pushes aside a question for which an answer may better serve our ability to make end-of-life decisions – when does life end and death occur? Our current definitions are not very helpful, and for Christians, may not be in agreement with Scripture. Although revising our definition of death to include the permanent loss of consciousness that occurs in PVS may sound arbitrary at first, when we examine what living as a human being means, we see that perhaps it is a more appropriate definition than the whole-brain criteria currently in use. While the whole-brain definition is easy to implement in a clinical setting, it assumes that preservation of biological life is the ultimate goal. However, as in the case of PVS, biological existence can be sustained while losing the essential aspects of what we are as humans. As Warren Brown concludes, "It is the higher brain capacities that subserve the richness of interpersonal relationships that emerge as cognitively most distinct in humans. Loss of those neurocognitive capacities that are most necessary for personal relatedness results in the most significant impact on qualities of personhood."72 Based on a Scriptural definition, loss of neurocognitive capability has more than a significant impact on personhood – it destroys personhood. As Christians our focus is to be on God’s purpose for our earthly presence, not its length – a focus that will become increasingly challenging to maintain as medical advances continue.

**Notes**

12 The Multi-Society Task Force on PVS, Part 2, 1573.
15 Rosenberg, et al., 167.


26 Shannon and Walter, 155.


28 Paniccia, 43.


35 Wikler, 45.

36 Ibid.

37 Youngner, 298.


40 Youngner, 301.

41 Wilder, 47.


53 Ibid, 60.
55 see Joel B. Green, Body, Soul and Human Life, 3-16 for a summary of various scholars’ views on Pauline anthropology.
58 Green, Body, Soul and Human Life, 52.
60 Green, Body, Soul and Human Life, 65.
61 Boivin, 163.
62 Stone, 60.
65 Stone, 60.
67 Green, Body, Soul and Human Life, 147.
68 Grisez, 180.
72 Brown, 225.