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Personhood and the Persistent Vegetative State

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The question of whether artificially administered nutrition and hydration should always be provided for patients in a persistent vegetative state (PVS) has sparked an intense and often bitter controversy. An important underlying issue in the dispute and the focus of this work is the *kind* of life that is being sustained by the tube feeding. One approach to the question drives a wedge between person and body arguing that the PVS patient has died, but the remaining body still remains alive.¹ This view attaches little moral value to the vegetative body apart from the respect due to it because it once belonged to the former person. The ever-perceptive Daniel Callahan describes this position as clearly as anyone.

Callahan maintains that "the 'sanctity of life' has to be the sanctity of personhood, not merely the possession of a body." At the heart of one's quality of life lie certain crucial potentialities for personhood. These "must at least encompass the capacity to reason, to have emotions, and to enter into relationships A person who has lost all of these capacities cannot, in any meaningful way, be called a 'person' any longer."² In his discussion of tube feeding for the imminently dying, Callahan clearly states this dichotomy between personhood and body. The practice need not be continued because it does not provide "any genuine benefit to the patient; there is no meaningful life present. It is a mere body only, not an embodied person."³ What about those in a persistent vegetative state? Such patients have exhausted their potential for personhood because they have lost not only "neocortical brain functions" but also have lost "all capacities for personhood, though clinical death has not yet occurred".⁴

I have deep philosophical reservations about the dualism implied in the dichotomy between person and body. Consequently, this article will offer a philosophical perspective on the nature of PVS life. Such an inquiry must encompass the empirical as well as the philosophical. While the exact relationship of the human biological structure to personhood remains a mystery, bodily life is nevertheless highly relevant for establishing the

presence of personhood. Persons do not exist apart from their bodies. Thus, the empirical provides the medical facts on the persistent vegetative state while the philosophical probes the meaning of these facts for the personhood of PVS patients.

I have chosen St. Thomas Aquinas's philosophy as a framework for discussing the nature of PVS existence. Not only is his system as philosophically consistent as any other but its structure is well-suited for incorporating the empirical data. The fact that Aquinas's metaphysics and natural philosophy are rooted in the order that reason discovers in nature not only permits, but demands, that the relevant biological information be integrated into the philosophical probe of PVS existence.⁵ I will begin with a brief overview of Aquinas's understanding of person, continue with the biological data on the persistent vegetative state and conclude with my own position on the nature of PVS life. By way of background, a few general comments about the terminology involved in Aquinas's philosophy of person will be helpful for some readers.

Aquinas's Anthropology

Thomistic Terminology

In Aquinas's metaphysics, all created being is divided into the categories of substance and accidents. In ordinary language, the difference between the two is the difference between things and their modifications. A substance refers to something which is complete in itself and able to exist on its own, e.g., a coat or a house. However, an accident can exist only as part of a substance. Color, an accident, can exist only in some object e.g., a red coat or a white house.⁶ Moreover, every natural substance is also a composite, being made up of two internal principles: prime matter and substantial form.

Of the two principles, substantial form is the more important. In living things, this form is called the soul or the first principle of life. The form determines that a being will be this particular kind of thing rather than another, e.g., a dog rather than a cat. Prime matter is the reality that is shaped by substantial form. Because it is the single organizing principle of a living organism, the substantial form is the source of its internal unity and the root of its specific activity and growth. This is the basis for the celebrated *agere sequitur esse* axiom: a thing acts according to its nature. Thus, while we cannot directly know the nature of a thing, we can find out something about it by observing its activities and by reasoning from them to the powers which produced them and ultimately to the nature of the thing itself.⁷

An additional point can be added here. Aquinas insisted that there has to be some relation between matter and form, i.e., matter must be organized in a suitable way before it can be specified by a particular form. For example, he held that the rational soul is the substantial form of the human person, but he insisted that the soul was not infused at fertilization.

In the initial stages of gestation, the matter is not organized well enough to receive the soul. Instead, the fetus is immediately animated by a vegetative soul, followed in turn by an animal or sensitive soul. Finally, when the matter is ready, the rational soul is infused.⁸

Another distinction found in finite beings and important in Aquinas's thought is that between essence and existence, between *what* something is and the *act by which* it is. Some insight into this difficult doctrine can be derived from the ordinary use of language. If a child asks about the meaning of reindeer and dinosaur, an explanation of each can be given without adding that reindeer actually exist while dinosaurs do not. Meaning can be separated from existence. For Aquinas, essence refers to the meaning or definition of something and as such has no concrete existence.⁹ For example, human nature does not exist apart from some specific person. Existence is the act which changes human nature from being an abstract concept into being a part of this particular person. For Aquinas, existence alone is truly real and the act of existing is "the act of all acts, the perfection of all perfections."¹⁰ With this brief background, we can now focus on Aquinas's notion of personhood.

Concept of Person

Aquinas places person at the very summit of material creation, a being which is the "most perfect in all of nature, that is, a subsistent individual of a rational nature".¹¹ St. Thomas's view of rational nature explains his exalted notion of person. As a substance, a person is a combination of matter and form, more commonly referred to as a unity of body and soul. While every living organism has a soul, persons are set apart from the rest of the animate world because their souls are endowed with the spiritual faculties of intellect and will. Since the soul has these spiritual faculties which can operate independently of matter, the soul itself must also be spiritual and independent of the body, i.e., it can exist on its own. Thus, Aquinas concludes that God creates each soul with its own act of existence at the time of infusion into the body.¹²

However, Aquinas balances his emphasis on the spirituality and independence of the soul with his experience that a person exists and acts as a unity. The person who thinks and chooses is the same person who sleeps and eats. Aquinas could account for this integrated activity only if the human soul is the sole organizing principle of the body, i.e., is its substantial form. Since it has its own act of existence, the soul not only confers humanness on the body but also communicates its own existence to the bodily material, fashioning a person unified by sharing a common act of existence. The functional unity that is so evident in a person has its source in this underlying oneness.¹³ There can be no dichotomy between person and body in this anthropology.

Persistent Vegetative State

Medical Facts

Since the persistent vegetative state involves permanent loss of brain

function, it will be useful to begin by comparing this state with that of total brain death. Basically, the difference between the two conditions is the difference between a severely impaired brain function and the complete absence of it. In its operations, different areas of the brain specialize in different activities. The higher human functions such as consciousness, choice, etc., come mainly from the cerebral cortex. The more vegetative activities such as spontaneous respiration, natural reflexes and the arousal system for the whole brain are rooted in the brain stem. The area of injury and the degree of damage distinguish the PVS condition from that of complete brain death. With the demise of the entire brain, all brain function, including that of the brain stem, disappears permanently. With the PVS condition, the irreversible loss of brain activity is confined primarily to the cerebral hemispheres, while the brain stem remains relatively unscathed and unable to carry out its vegetative functions.¹⁴

The persistent vegetative state usually stems from a cardiac arrest or a respiratory attack which completely shuts down the blood flow (ischemia) or oxygen supply (hypoxia) to the brain, although the condition may also be caused by other factors, including head trauma. The cerebral cortex is much more sensitive to the lack of oxygen and blood and sustains permanent damage much more quickly than the brain stem does. If the blood flow or oxygen is cut off completely for more than six minutes, the cerebral cortex can suffer total and irreversible destruction. Unlike complete brain death, PVS patients do not develop the massive intracranial swelling which prevents circulation to the rest of the brain. Thus, their brain stems will not sustain permanent injury from a temporary hypoxia or ischemia. If the cerebral cortex is permanently destroyed, but the brain stem continues its functions, the patient will remain alive but in a persistent vegetative state.¹⁵

After the cardiac or respiratory attack leading to the PVS condition, the victims generally have a temporary impairment of brain stem activity. They will often be comatose for a period of time, ranging from a few days to a few weeks. During this initial phase, they may require respiratory support. However the typical PVS patient soon comes out of the coma and stabilizes in the persistent vegetative state, characterized by open-eyed unconsciousness.¹⁶ As described by Jennet and Plum, "it is the discrepancy between prolonged periods of wakefulness and the absence of any behavioral or physiological evidence of critical function or mental activity which characterizes the vegetative state".¹⁷

Clinical tests on PVS patients reveal a range of activities which confirm the presence of an active brain stem. Though they may need respiratory assistance at first, most victims are able to breathe on their own within a few days of the attack. They open their eyes at times and even go through sleep/awake cycles. Their pupils also react normally to light. Most PVS patients have normal cough and gag reflexes which add to their life span by enabling them to stave off potentially fatal respiratory infections. Some even retain their involuntary swallowing reflexes making it possible, at

least theoretically, to feed them by hand. However, given the enormous amount of time and effort involved in hand feeding, most PVS patients received fluids and nourishment by tube.¹⁸

While neurological examinations confirm the presence of an active brain stem in the persistent vegetative state, the same tests clearly indicate the absence of any neocortical activity. PVS patients may follow particular people or objects with their eyes, but they make no attempt to convey messages through eye contact or head movement. Although apparently wide awake, they are not conscious of themselves or of their surroundings.¹⁹ In Jennet and Plum's words, "what is common to patients in this vegetative, mindless state is that, as best can be judged behaviorally, the cerebral cortex is not functioning . . ."²⁰

Diagnosis and Prognosis

The degree of neocortical impairment following brain injury can run the gamut from mild to massive. The actual damage in any given victim can only be established by a battery of tests conducted over an extended span of time by neurological specialists. The task is not easy. As noted above, the PVS condition can arise from several factors. Different underlying causes of the brain damage can lead to different outlooks for recovery, e.g., some head traumas vs. hypoxia. Thus, Ronald Cranford concludes that "the prognosis about recovery of neurologic function, when the prognosis can be made, and its degree of certainty will vary considerably according to the underlying cause of the brain damage and the specific pathophysiology."²¹

In particular, great caution must be exercised before diagnosing any given PVS condition as being truly irreversible. Currently, there is no set of reliable clinical tests available so the neurologists can make that judgment with absolute certainty. Even when the current criteria have been applied correctly and by experts, there have been occasional well-documented instances of mistaken diagnosis. In these rare cases, patients diagnosed as being in a persistent vegetative state recovered full use of their mental faculties.²²

Once diagnosed as being PVS, what is the life expectancy of such a patient? That depends largely on a combination of two factors: the physical state of the patient and the attitude of family, physicians, health care facilities and society as a whole toward providing aggressive medical care. Young patients who have a strong natural resistance to infections and who have their cough and gag reflexes intact are much less susceptible to fatal respiratory infections than the elderly and the fragile. If treated aggressively with current medical technology, such patients can survive for years or even decades. However, their continued existence relies less on their physical condition than it does on attitudes toward treatment of medical complications in general and the artificial administration of food and water in particular.²³ The question of health care for PVS patients lies

outside the scope and purpose of this work, so a mere mention of its importance will have to suffice. As the number of such patients increases and the strain on medical resources mounts, the medical treatment of such individuals will be among the most pressing and difficult choices confronting society in the future.

Relation to Other Mental States

In light of what is known about the persistent vegetative state, Cranford argues that this state must be clearly distinguished from two other neurological conditions: coma and profound dementia. Unlike the PVS, comatose patients are in a state of eyes-closed unconsciousness triggered by a severe impairment of the arousal system of the brain stem. In contrast to those in the vegetative state, coma patients often have seriously damaged cough, gag and swallowing reflexes. This reflex injury interferes with their ability to clear the passages of their throat and lungs and makes them vulnerable to infection. As Cranford notes, "This impairment leads to frequent, often fatal, respiratory infections — a common cause of death in comatose patients, and one of the major reasons why truly comatose patients do not experience the long-term survival period associated with the vegetative state".²⁴

Profound dementia, e.g., Alzheimer's disease, is similar to the persistent vegetative state in some respects. However, it differs from the PVS condition in two important ways. First, most dementias can scarcely be noticed during their initial stages but become progressively worse over the years. In contrast, the PVS happens within a space of minutes usually from a sudden cardiac or respiratory arrest and does not deteriorate with the passage of time. Secondly, dementia is rarely accompanied by a complete loss of consciousness or of the ability to relate to the surroundings. Persistent vegetative state patients do not have any self awareness.²⁵ Cranford describes the difference like this: "Patients in a persistent vegetative state are not simply demented, but ammented (a complete loss of mental functions)."²⁶ With the basic medical facts in hand, we can turn to a philosophical analysis of the data to determine the status of PVS life.

Critical Reflections

Have PVS patients "lost all capacities for personhood" as Callahan argues? Or are such individuals still persons but in a severely truncated state of existence? Thomistic philosophy must address these questions in light of its concept of person. Just as a person comes into existence with the infusion of the soul, so also the person dies when the soul separates from the body. This latter event cannot be verified empirically, so the soul's absence must be linked to some physical measurement or clinical test. Since the human soul in its role as substantial form enables the person to exist and to function as a simple organism, its departure will be marked

by the irreversible disintegration of the physical basis for human unity and action. Relative to the status of PVS life, then, the crucial question the Thomistic philosopher must answer is: can the destruction of only an essential part of the body, e.g., the cerebral cortex, damage the body so severely that it is simply incapable of sustaining a human soul, even though the rest of the body remains intact and spontaneously alive? Since the issue revolves around brain-related criteria for death, I will frame my remarks in terms of total and partial brain death.

Total Brain Death

I find the arguments for equating total brain death with the death of the person persuasive for two main reasons: first, the medical data indicate that the brain is the physical organ responsible for regulating and integrating the body's vital activities; second, current clinical tests can determine accurately when the loss of brain function is complete and irreversible. Now, a brief comment on each of these points.

Human life entails the close interaction of three primary bodily systems: the central nervous, the cardiovascular and the respiratory. The permanent loss of function in any one of these systems soon leads to a similar loss in the other two and to the disintegration of the organism as a whole. However, even though they are mutually interdependent, the brain is the organ which plays the crucial role in the body.²⁷ An adequate discussion of the brain's influence is far beyond the scope of this work, so it will be enough merely to mention some areas of the brain which serve as control centers for various bodily systems and functions. Thought and choice come from the cerebral cortex, speech and spatial activity from regions within the association cortex, and emotions and memory from certain structures within the limbic system. The brain stem generates the signal for breathing and also assists in the regulation of circulation. Temperature control, sexual desires and hunger pangs reside in the more primitive hypothalamus.²⁸ This list could be expanded. However, the evidence leads to an almost universal agreement with Bernat's conclusion that the brain is the organ which "integrates, generates, interrelates and controls complex bodily activities".²⁹

Given its indispensable role in the body, it is reasonable to accept the brain as the critical organ for establishing the presence or the absence of the human soul. All the vital activities it controls cease completely when the entire brain suffers a total and irreversible loss of function. In terms of Thomistic philosophy, total brain death indicates that the physical basis for human unity and action has been destroyed. The remaining organism can no longer support the human soul. In short, when the whole brain dies, the soul leaves the body and the person dies. However, even given that total brain death can be equated with the soul's absence, can we be sure that the brain damage is complete and permanent in any particular patient?

The diagnosis of irreversibility can be complicated by the possible presence of such factors as drug-induced coma, young age, hypothermia, etc., which can cause a temporary, but reversible, suppression of all brain functions.³⁰ However, over the past two decades, medical organizations and individual groups have conducted major studies designed to refine and update the clinical tests for determining complete brain death and to avoid fatal mistakes. The consensus among physicians is almost unanimous. When carefully applied, the most recent criteria enable a physician to diagnose brain death accurately. The clinical findings are supported by autopsies disclosing that when the criteria of brain death are satisfied, the brain is dead and the patient cannot recover.³¹ Thus, I find Veith *et al's* conclusion about the tests for establishing brain death to be persuasive. "The validity of the criteria must be considered to have been established with as much certainty as is possible in biology or medicine."³¹

Persistent Vegetative State

The difference between the persistent vegetative state and complete brain death is the distinction between a severely impaired brain function and the total lack of it. There is a world of difference between the two. Unlike complete brain death, the arguments for neocortical death are far from conclusive. My disagreement with those who equate the PVS condition with personal death concerns the amount of physical damage the body can undergo and still be compatible with the spiritual soul. Advocates of PVS death contend that the irreversible destruction of only the cerebral cortex causes death by destroying all potentialities for personhood. I disagree with that conclusion. In its role as substantial form, the human soul unifies all the human functions into an integrated system. Since the PVS condition is accompanied by the loss of only the higher human activities, it does not completely destroy the body's ability to function as an organized entity. The brainstem remains intact generating vegetative activities, including spontaneous respiration. In my judgment, this partial loss of brain function is not damaging enough to force the soul's departure and thus not enough to cause death.

Before accepting the radical implications of equating the PVS condition with the death of the patient, we need definitive answers to at least two important questions.³³ First, can it be proven that the neocortex is solely responsible for controlling all higher human functions? That is not possible today. On the contrary, current brain research indicates that the cooperative efforts of several brain systems and regions may be needed for these human activities. Moreover, while rationality and freedom are the essential human characteristics, our entire human worth cannot be collapsed into our thoughts and choices. Second, even assuming a positive answer to the first question, can the irreversibility of the persistent vegetative state be diagnosed accurately? As noted above, there is not enough reliable evidence available today to provide a definitive answer

to this question. As Smith and Cranford insist, such evidence would have to provide "unequivocal certainty, substantiated by medical data and experience, empirically verifiable, and supported by autopsy studies confirming the clinical analysis. . . . Merely a severe dysfunctioning is insufficient evidence for pronouncing death".³⁴

The conclusion that PVS patients have not died does not resolve the issue of whether artificial nutrition and hydration should always be administered to them. It merely insists that no matter how fragile their grasp on life may be, such individuals are persons who must be treated with love and compassion, dignity and respect. Traditionally, health care efforts were considered extraordinary and morally optional if they were useless, too painful, too expensive or experienced as too burdensome. The question of tube feeding must be decided within that moral framework. The moral issue is not whether PVS patients can be kept alive but whether there is a moral obligation to do so.

Conclusion

This study has attempted to evaluate the status of PVS existence in the light of Thomistic anthropology. I have argued that the persistent vegetative state cannot be equated with personal death because it introduces an erroneous dichotomy between person and body. In effect, it reduces personhood to the rational or to what can be consciously experienced. I have argued further that PVS brain damage does not completely destroy the body's unity and integrity and thus is not indicative of the soul's separation.

It is true that practically none of the PVS patients will ever regain consciousness or mental functions. However, their bodies remain intact, spontaneously alive and able to carry out a whole range of vegetative functions. While severely impaired, such patients retain enough functional integrity to be compatible with the human soul. This is not to minimize the health care problems PVS patients pose for society. It is enormous now and will continue to increase as their number grow and their demand on medical resources mount. However, defining them out of existence is not the solution.

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