

## Abstract

I've argued that a version of Pascal's Wager applies to PVS so forcefully that no one who declines continued life without considering it makes a reasoned and informed decision. Thomas Mappes objects that my argument is much more limited than I realize. Of special interest is his appeal to an emerging diagnostic category, the 'minimally conscious state,' to argue that there is much to lose in gambling on life. I will defend the Wager. Along the way I maintain that the chance of recovery from long-term PVS is much better than represented (as is the prospect of regaining independence if one recovers consciousness), and that the 1994 Multi-Society Task Force definitions of 'permanent' PVS are confused in ways that make crafting advance directives dangerously difficult. Valid advance directives require informed consent, I argue; the Wager needs to be part of the process. A consequence of my argument is that withdrawing medically-delivered nutrition and hydration from PVS patients is much harder to justify.

## Pascal's Wager and the Persistent Vegetative State

A version of Pascal's Wager applies to the PVS... People in such condition are not suffering. There remains a small possibility that they will wake up, as some do, or that medical advances will enable doctors to help them. ... Consequently you have everything to win and nothing to lose if you gamble on staying alive: you may wake up and, if you do not, unconscious life is no worse than being dead. The argument concludes that it is in your interest to stay alive if you are comatose, the more so the younger you are. One difficulty is that you may be severely disabled... Severe disability, however, while not as good as normalcy, is usually better than being dead. That's what the severely disabled typically say, anyhow. We generally do not think they are better off dead; but that judgment should guide decisions about ourselves. Another difficulty is that... your financial resources, needed to support your family, will be exhausted. Note that in the famous cases of comatose patients (e.g. Karen Quinlan) insurance or Social Security paid the bills. I submit that anyone who opts for death if he becomes comatose, without first considering this argument, has not reached a reasoned and informed decision.<sup>1</sup>

Thomas Mappes has taken me to task over this passage. He writes: "Although there is some force in Stone's wager argument, I believe the argument is much more limited than he seems to realize".<sup>2</sup> Some of Mappes' concerns about PVS surely do move people to prospectively opt for death. Of special interest is his appeal to an emerging diagnostic category, the 'minimally conscious state', to argue that we have much to lose if we gamble on staying alive. In what follows, I will defend the Wager. As a practical setting is helpful in addressing questions about PVS, I set the stage by raising questions about crafting advance directives. Recent definitions Mappes reports have helped to make that task dangerously difficult.

## I

In 1994, Mappes tells us, the Multi-Society Task Force published a two-part report about PVS, one that 'serves as a basic reference point for medical practice in the United States'.<sup>3</sup> Roughly, PVS involves complete lack of awareness of self and the environment, accompanied by sleep-wake cycles. A VS becomes 'persistent' when it lasts longer than one month. As there are reasonably good prospects of recovery from PVS, however, it is necessary to find a way to encode the prognosis that a PVS is permanent. The Task Force writes:

A patient in a persistent vegetative state becomes

permanently vegetative when the diagnosis of irreversibility can be established with a high degree of clinical certainty--that is, when the chance that the patient will regain consciousness is exceedingly small.<sup>4</sup>

Mappes points out, however, that the Task Force introduces another definition of 'permanent', one that 'is closer to the construction they actually seem to employ'.<sup>5</sup> PVS becomes permanent 'when a physician can tell the patient's family or surrogate with a high degree of medical certainty that there is no further hope for recovery of consciousness or that, if consciousness were recovered, the patient would be left severely disabled'.<sup>6</sup> According to the Task Force, PVS is permanent twelve months after traumatic injury in adults and children, as 'recovery after this time is exceedingly rare and almost always involves a severe disability', and after three months in the case of non-traumatic injury: 'recovery does occur, but is rare and is associated with moderate to severe disability'.<sup>7</sup>

This raises three difficulties for advance directives:

1. The recovery rate on which the Task Force bases its time frame is controversial. Latronico et al write: "[P]atients with traumatic brain injuries have been shown to recover consciousness in a substantially greater percentage (6-7%) than previously appreciated (1.6%). This is hardly compatible with the

peremptoriness of the term permanent..."<sup>8</sup> It is maintained that the Task Force misconstrued its statistics. The Task Force considers 434 head injury patients, and writes:

Three months after injury, 33 percent of the patients had recovered consciousness; 67 percent had died or remained in a vegetative state. Recovery had occurred in 46 percent of patients at 6 months and in 52 percent at 12 months. Recovery after 12 months was reported in only 7 of the 434 patients.<sup>9</sup>

7 is 1.6% of 434. Chris Borthwick responds:

The relevant figure is not the number who recover in any period as a percentage of the whole but that figure as a percentage of the ones available to recover--those who had not died or recovered already. Taking that calculation, at the end of the first year 52% of patients had recovered consciousness, 33% had died, and only 15%, or 65, were still in PVS; and 7 out of 65 is 10.6% ... The boundaries of certainty in PVS from non-traumatic causes are set sooner, at 3 months, and only 4% of patients are said to recover after that time; however, that still represents 5.5% of the 72% remaining in PVS.<sup>10</sup>

The fallacy can be exhibited starkly by considering a hypothetical: if the number of people in PVS is high enough, and

most recover before one year, say, the percentage of the original number who recover after one year will be very low--a mere 'theoretical' possibility--even if they all recover completely. The Task Force mistakes the probability that, if I'm in PVS, I will recover after one year, for the probability that, if I'm in PVS after one year, I will recover.

Prospects may be still better. The Task Force data don't control for medical-care quality. Considering closed-head injury patients discharged from four university trauma centers after receiving state-of-the-art neurological treatment, Levin et al write: "Of 84 patients in a vegetative state who provided follow-up data, 41% became conscious by 6 months, 52% regained consciousness by 1 year, and 58% recovered consciousness within the 3-year follow-up".<sup>11</sup> Of the 84 patients, therefore, 6% (five patients) recovered consciousness after one year; however that's 12.5% of the 40 still in PVS at one year. Levin et al report that 20 died during the follow-up period, however, and were lumped in with those who remained in VS. Supposing ten died by one year (when more were available to die), 17% of those available to recover after one year did so.

Given these probabilities it's false that the chance of regaining consciousness if you're in long-term PVS is 'exceedingly small'; on the first definition, VS isn't 'permanent' when the Task Force says it is. Indeed, as there is

little information one way or the other about recovery after three years, it's possible that the diagnosis is never justified. In addition, in the five late-recovery cases the Task Force is sure of, two are independent (40%) and can resume almost all activities of daily living.<sup>12</sup> As courts typically permit surrogates to withdraw long-term PVS patients' medically-delivered nutrition and hydration, and most states don't require 'clear and convincing evidence' that the patient would wish this, the implications are disturbing.

2. Few who sign directives know the difference between 'persistent' and 'permanent' VS, nor is there any guarantee that medical personnel are better off. Living wills are usually framed in terms of PVS; some specify a 'persistent vegetative state from which there is a high degree of medical certainty that I will not recover'. Given the apparent synonymy of 'persistent' and 'permanent', the added condition seems redundant. As noted above, such diagnoses appear to be generally unwarranted. As people who write their own directions are likely to do so in terms of PVS, they may order their starvation well before a PVS is 'permanent', while there is real hope of regaining independence.<sup>13</sup>

Mappes quotes a standard Maryland directive that provides a checkoff for refusing 'life-sustaining procedures' if "I am in a persistent vegetative state, that is, if I'm not conscious and am not aware of my environment nor able to interact with others and

there is no reasonable expectation of my recovery".<sup>14</sup> This confuses persistence with the absence of 'reasonable' expectation of recovery (which, in turn, is dangerously unclear). It invites implementation in a nursing home, say, simply because you're in PVS. A West Virginia form states: "if I am...certified by one physician...to be in a persistent vegetative state, I direct that life-prolonging medical intervention that would serve solely to...maintain me in a persistent vegetative state be withheld or withdrawn."<sup>15</sup> This confusing and highly interpretable directive invites starvation long before the PVS is 'permanent'.

3. On a plain reading, the operative definition of 'permanent' is incoherent. I paraphrase: "A PVS is permanent when a doctor has a high degree of certainty that there is no hope for recovering consciousness or that, if consciousness were recovered, the patient would be severely disabled". This eases the 'medical certainty' problem for the 'permanent' diagnosis: it's more likely that I will remain unconscious or be disabled than that I will remain unconscious. (Given 40% recovery from long-term PVS to moderate disability if consciousness is regained, however, the problem remains.) On a plain reading, it's sufficient for VS to be permanent that the doctor has a 'high degree of certainty' that if consciousness were recovered, I would be left 'severely' disabled (despite efforts to standardize 'severely', realistically this will mean different things to different

physicians). My PVS can be permanent even though she believes accurately that I will recover consciousness.

Something has gone wrong and not just logically--a quality-of-life judgement is being packed into the definition of 'permanent' VS. The idea is that severe disability is no better than being forever unconscious, so if you're in PVS and the likely outcome of regaining consciousness is severe disability, we might as well treat you as though your PVS is permanent. Task Force members are imposing this judgement on the nation by embedding it in a definition that purports to express a medical prognosis. At best, the Task Force is proceeding on a badly confused definition of its subject matter; at worst, this marks the beginning of an effort to assimilate severe disability, for medical and legal purposes, to PVS.

This creates another difficulty for advance directives: most signers will be unaware that it's sufficient for PVS to be 'permanent' (if this term finds its way into directives) that an attending physician is persuaded that they will be 'severely' disabled if they regain consciousness. I submit that it is irresponsible to suppose that operative terms in advance directives will never be taken to mean what they are literally defined to say. As 'permanent' doesn't mean permanent, many signers won't understand the implications. The confusion may also infect directives that don't use 'permanent', for a consequence

of the definitions is that a 'high degree of medical certainty' for 'irreversibility' can be established on the prognosis: 'severe disability if consciousness is regained'. Note, too, that the definitions invite the 'irreversible' diagnosis in advance of the proposed time-frame, about which the signer knows nothing. If the purpose of advance directives is to give people real choices about their future medical care, the Task Force definitions have substantially defeated it.

## II

Mappes objects that my application of the Wager to PVS is much more limited than I realize. I believe he misses my intention. I don't maintain that the Wager ought to persuade every reasonable person to opt for life, but that 'anybody who opts for death if he becomes comatose, without first considering this argument, has not made a reasoned and informed decision'. In short, considering the Wager is necessary for informed consent. Nobody believes that people making a life-and-death medical decision should be told a consideration only if it persuades everyone who hears it to opt one way or another. It's sufficient that it will persuade a fair number of reasonable people, that those who aren't informed of it might have decided differently.

Isn't the Wager solipsistic, however? Mappes objects that 'for a typical person thinking prospectively about the

possibility of a PVS', the emotional burden to family would almost certainly provide an interest in opting for death.<sup>16</sup>

If I were mired in a PVS with a medical determination of permanence, I would want my family and those who love me to be free of the emotional confusion associated with what would have to appear to them as my 'half-alive-half-dead' existence. My prospective interest here is to reject life-sustaining treatment, so that my family can complete the grieving process and move on with their lives.<sup>17</sup>

Mappes can't help himself to the 'typical person', however. Many have no close family, or are estranged from their family, or don't care about their family (or vice versa). My family might badly want me to have my chance at recovery, or be devastated at implementing a directive starving me to death. Consequences may be still worse if they suspect that I chose starvation for their sake. Indeed, there is much to be said for discussing the Wager with my family. As the family-related concerns Mappes raises are ones that people ought to sort out for themselves or with their family, he has provided another reason for the Wager to be part of the process of signing a relevant directive.

Permit me to add that I find Mappes' unquestioning endorsement of the desire that my existence not be a 'burden to my family' troubling; arguably it has the moral order of things

reversed. The job of the young and the strong is to care for the old, the sick and the disabled, not vice versa. A proper function of family, I believe, is to support members who are in desperate trouble. If it's in my interest to opt for life if I have no family, my family has a good reason to support my opting for life. This consideration is especially relevant because the prospects of recovering from long-term PVS appear to be much better than represented.

Mappes offers a second objection: "if I am thinking prospectively about the possibility of continued existence in a state devoid of consciousness, I will express an interest...in not being maintained in an undignified state..."<sup>18</sup> Unfortunately he is silent about what is undignified about PVS. This is another idea it's best not to 'sign on' to uncritically. Personally I find nothing undignified in being disabled, unconscious, or in being cared for in such circumstances. I don't think the badness of these conditions flows from loss of self-respect and proper pride. I don't want to be incontinent; but I don't see why it detracts from my worthiness. Incontinence under anaesthesia during lengthy surgery isn't undignified; why should it be in PVS? Unconscious sleep/wake cycles will make me behave oddly. Afflicted behaviour is often odd, however, including that of people recovering from severe strokes; but it is not beneath me. I much prefer not being physically dependent on others, but

embodiment involves, indeed, at some stages of life requires, that we be so. People who view being cared for intensively as a blow to their self-respect are unrealistic about the human condition, I submit. Hubris, not proper pride, discovers that we are too good for human life.

In any case, concern about not being maintained in an undignified state won't arise for those who don't see PVS as undignified or don't care that it's undignified. As there are rational people like this, they, along with those who for whatever reason aren't worried about being a 'burden to their family', would so far have no reason to resist the Wager. Others who think PVS is undignified (or who don't wish to be a burden) might nonetheless gamble on life because for them the possibility of recovery trumps their concern about indignity (or about being a burden). There still appear to be a good number of people who would gamble on life, therefore, and surely everybody should have an opportunity to sort out these considerations for themselves.

### III

Mappes writes: "Stone explicitly claims that life with severe disability is usually better than being dead, but consider this Task Force description of patients who have emerged from a PVS without recovering beyond a state of severe disability".<sup>19</sup>

Patients with severe disability are no longer capable of

engaging in most previous personal, social, and work activities. Such patients have limited communication skills and abnormal behavioral and emotional responses. They are partially or totally dependent on assistance from others in performing the activities of daily living.<sup>20</sup>

Mappes acknowledges that some would say that continued existence in this state is better than being dead. (Of course, this is all my argument needs.) He also observes that many would say the opposite. "A person's principal concern in this regard is likely to be the perceived burden to oneself of life in such a compromised state, but one also may want to avoid both an undignified existence and being a burden to one's family".<sup>21</sup>

My 59-year-old sister, who suffered a stroke at 28 due to an aneurism, fits the Task Force description. She depends on intensive nursing care, she's hoisted from her bed into her wheelchair, she has range in only her left arm. Occasionally she's incontinent. She is aphasic and apraxic so that she gets out at most three or four words at a time; often they're the wrong words or she can't find words. She can't read, write her name, or count past 3. She doesn't know what day or time it is; her short-term memory is poor. Nonetheless she is a happy, funny, and brave woman who is no more interested in dying prematurely than anybody else. I once said to her: "You've changed a lot since the stroke, Michele." "Better!" she answered. "How better?" "Grew up!" When

her husband divorced her and remarried she grieved for months, but one day I found her smiling and cheerful. 'What's changed?' I asked. "Plenty of fish!" she said. The moral core of people, the 'place' where courage and spirit reside, can survive considerable brain damage. The Task Force makes a moral error in writing off the value of such lives.<sup>22</sup>

My sister lives in an apartment in a facility where most everybody is severely disabled, and they're reasonably happy people. That's what they say, anyway, those who can talk--all seem happy enough. I've followed my sister through various facilities for decades and as far as I can tell, severely disabled people who are treated decently are about as happy as everybody else. The greatest human success is moral, arguably--being kindly and fair, coming to terms with the human condition, not taking oneself too seriously. A life that is a moral success is a successful life, however deficient it may be in other respects. Extraordinary levels of handicap are consistent with successful human lives, therefore; given good nursing care, severe handicap is also consistent with a reasonably pleasant life. Severe disability is quite an adjustment at first, but a family man, for example, might prefer it to the loss of his wife and children in an automobile accident. Many in that circumstance wish to die: should we craft advance directives declining antibiotics for pneumonia, say, if such a tragedy befalls us and we are unable (due to the pneumonia)

to speak for ourselves?

Here is an argument. On the face of things, any condition in which many are able to live happily beats being dead, even if it's considerably less fortunate than our present condition. That includes severe disability, certainly. On the face of things, we ought to opt prospectively for life under conditions in which people are often able to live happily. It isn't as though by doing so we will miss our chance to be dead. Therefore, on the face of things, we ought to opt prospectively for life in severe disability. I don't see the severely disabled as being in an undignified condition (the presumption cries out for support); and the idea that severe disability is worse than death because one will be a 'burden' to one's family is alarming and morally disordered. Of course, many perceive my sister's condition as worse than death. Her physician apologized to me for saving her life; he no-coded her without consulting her when she was 43 and in good health; medical professionals often wish to help speed the disabled on their way to the next world. But it's unclear how this entails a limitation in my argument. On the face of things, they are mistaken.<sup>23</sup>

#### IV

Mappes acknowledges that some who recover from long-term PVS are independent and can resume most activities of daily living.<sup>24</sup>

He maintains, however, that people who 'emerge from a PVS of long duration into a state of severe disability typically are so disabled that they are not likely to be able to understand what is at stake or to make any judgment at all'.<sup>25</sup> His support for this bold claim consists entirely of the assertion that 'one especially notable outcome of emergence from a PVS of long duration' is 'the *minimally conscious state* (MCS)',<sup>26</sup> which is supposed to be a state of profound neurological dysfunction in which there is occasional minimal awareness.

This new diagnostic category is the proposal of the Aspen Neurobehavioral Consensus Conference, consisting of many Task Force members. According to the Aspen Group, the MCS diagnosis requires that clearly discernible evidence of self or environmental awareness be demonstrated on a reproducible basis by one or more behaviors: following simple commands, gestural or verbal yes/no responses (regardless of accuracy), intelligent verbalization, purposeful behavior (for example, appropriate smiling or crying, reaching for objects, or pursuit eye-movement). The upper limit of MCS is ill-defined; recovery to higher states is 'necessarily arbitrary', according to the Aspen Group. Emergence is characterized by consistent 'functional interactive communication' or consistent 'functional use of two different objects'. There are many reasons why this standard might not be satisfied; the Aspen Group acknowledges that 'the criteria for

emergence from MCS may underestimate the level of consciousness in some patients'. Nonetheless "Until these diagnostic ambiguities can be resolved by future research, the above definitions should be applied to all patients whose behavior fails to substantiate higher levels of consciousness".<sup>27</sup>

Three questions arise immediately: whether the MCS exists, whether it is reasonable to believe, as Mappes suggests, that it's a state of suffering, and whether there is good reason to think that people who recover from long-term PVS are ever in it.

Concerning the first question: Mappes describes MCS as an 'emerging, although controversial, diagnostic category'.<sup>28</sup> Here's how controversial. James L. Bernat, MD, in an editorial in *Neurology*, writes:

However, unlike the PVS Multi-Society Task Force, the Aspen Neurobehavioral Consensus Conference could not identify evidence-based guidelines for the diagnosis, prognosis, and management of the MCS and therefore developed consensus-based guidelines. Proposing a new clinical state immediately raises questions: the scientific question of whether it is justifiable to carve a new syndrome out of the continuum of diffuse neuronal damage; and the ethical, legal, and political question of the risks and benefits to society of renaming the condition of certain patients with severe

neurological disabilities.<sup>29</sup>

D. Alan Shewmon, MD, Professor and Chief of Pediatric Neurology, UCLA Medical Center writes: "MCS is an inaccurate name for an invalid concept". He continues: "There is no clinical or research need for, and there are strong reasons against, inventing a new diagnostic entity that inherently cannot be meaningfully demarcated from 'severe disability'".<sup>30</sup> The disability rights community is concerned that Dr. Ronald Cranford, an Aspen Group (and Task Force) co-chairman, and an active 'right-to-die' advocate, deployed the MCS to argue in court for the right to withdraw Robert Wendland's medically-delivered nutrition and hydration, before the diagnostic category was debated by neurologists. Diane Coleman, JD, president of *Not Dead Yet* writes: "It does not take a trained physician to see that the criteria for diagnosing MCS are vague and overbroad".<sup>31</sup> In short, the question is widespread whether MCS exists. Also, there is concern that its construction marks an attempt to assimilate, for legal and medical purposes, severe disability to PVS.

Concerning the second question: Mappes supports his 'deep concerns' that MCS is a state of suffering by appealing to two papers co-authored by Ronald Cranford and associates. He writes: "Thus, Nelson and Cranford, who emphasize similarities between PVS and MCS and call both states 'profoundly dysfunctional', reasonably conclude that 'being kept alive in the minimally

conscious state may be far worse for the individual than being maintained in a vegetative state'".<sup>32</sup> Let's consider, then, Nelson and Cranford's account of what being in MCS is like. Comparing PVS and MCS they write: "For all intents and purposes, both states equally obliterate an individual's personal and sapient existence, leaving him profoundly neurologically impaired".<sup>33</sup> Indeed, "for individuals reliably diagnosed as being permanently in the vegetative state, as well as those in the minimally conscious state, their biographical and personal life is over."<sup>34</sup> This is just the beginning, however. They also maintain that "continued treatment of minimally conscious patients...may result in them suffering for years, or even decades, and probably being wholly unable to express adequately to anyone the depth of their pain, not to mention their elemental sense of frustration and loss".<sup>35</sup> They add: "In Mr. Wendland's case, the 'life sentence' is to an indefinite term in a prison of solitary confinement, unable to reach out to other persons, unable to express himself, unable to even move, possibly deeply frustrated by being stranded in a diminished life he never wanted...".<sup>36</sup>

One can't have it both ways, of course. If I'm deeply frustrated at being stranded in a diminished life I never wanted, condemned to solitary confinement and so on, my personal and sapient existence is not obliterated. As I'm in psychological torment because I hate my situation, MCS is starkly different from

PVS. Conversely, if my personal and sapient life is obliterated in MCS, as in PVS, I'm at most capable of physical pain. Nelson and Cranford's incoherent account indicates a confusion in the very idea of MCS: if it's compatible with deep frustration at being stranded in a diminished life I never wanted, how is it 'minimally' conscious? What condition are they talking about? It also presents a dilemma for Mappes: if MCS is a state in which I cannot make judgments or understand what's going on (PVS with flickers of physical sentience, in effect), why consider it worse than PVS? On the other hand, if MCS is compatible with frustration at being stranded in a life I never wanted, appealing to it cannot support the claim that people awakening from long-term PVS cannot make judgements or understand what's at stake.

What about physical pain? With good nursing care, severely disabled people are unlikely to be made miserable by pain. Spasticity due to brain damage is challenging but can be addressed with nerve blocks, muscle relaxants and specific anti-spasmodics. Proper aggressive nursing care at outset can prevent contractures, and these, if they do happen, are painful only when stretched; some can be released surgically, if necessary. Regular dental care is required, obviously. MCS patients have sufficient behavioural range to signal discomfort by moaning, pulling away, grimacing and so on. Robert Wendland, whom Nelson and Cranford maintain was in MCS, "not infrequently during physical therapy would manifest a

definite snarl on his face and was observed to strike out at the therapist with his left hand".<sup>37</sup> So did my sister.<sup>38</sup> If I may raise obvious questions: Does this sound like somebody unable to move, whose personal and sapient life has come to an end?

Cranford acknowledges elsewhere that 'little data' has been collected about what MCS patients experience.<sup>39</sup> He notes that "at this time it is unknown how often and to what degree pain and suffering occur in MCS patients".<sup>40</sup> Indeed, "no one can ever really know with any degree of certainty exactly how much pain, pleasure, suffering, or enjoyment such patients are experiencing".<sup>41</sup> Nonetheless Cranford and Ashwal (another Aspen Group member and Task Force co-chair) write:

In is our view that, if there were a better understanding of MCS, especially in the critical issues of consciousness and likelihood for pain and suffering, a broader consensus would develop, that being in a permanent MCS would actually be worse than being in a permanent VS. In other words, just as VS is considered to be "a fate worse than the death", being in a permanent MCS is a fate worse than VS.<sup>42</sup>

Mappes quotes this speculation to support his concern that MCS is a state of suffering. Fear mongering aside, no reason has been provided to suppose MCS patients are more likely to be suffering than other disabled people.

Finally, why believe that people who recover from long-term PVS are ever (not to mention 'typically') in permanent MCS? Mappes offers no evidence for this assumption, nor can I find any in the literature on recovery from PVS. Of course, given the broad definition of MCS, anyone who transitions from PVS to independence is likely to be in a MCS of some duration. Ashwal and Cranford describe the current state of research:

The natural history and long-term outcome of MCS have not been investigated in children or adults. It is uncertain as to how often patients in the post-traumatic or nontraumatic VS transition to MCS. Data from the Multi-Society Task Force Report found that patients diagnosed as being in a VS 1 month after injury could recover consciousness. Presumably these patients would be in an MCS at some point.<sup>43</sup>

Two points in conclusion:

First, my appeal to the Wager rests on a radical thesis-- valid advance directives require informed consent. Any signed directive that contains medical instructions should include a doctor's statement that he has explained the operative terms, the implications of signing, and the meaning of any written instructions. An accurate estimate of the probabilities is essential, too. Issues surrounding advance directives are often thought to be obvious and the directives transparently clear. As

the opposite is the case,<sup>44</sup> without informed consent few will understand what they sign. If we are willing to accept uninformed, unreasoned, or confused optings for death, the question arises forcibly: whose interests are advance directives meant to serve? Drumming on the PVS is a good way of getting people to sign a directive: "Why risk a fate worse than death?" As informed consent requires that they hear both the pros and the cons, however, practical considerations that might persuade them to opt for life should be included.<sup>45</sup> The Wager qualifies, and it provides an opportunity to consider the options and weigh personally their respective benefits and costs.

Second, if my argument is sound, withdrawing medically-delivered food and water is typically much harder to warrant on the standard ground that it's in the PVS patient's 'best interest'.<sup>46</sup> Nor can an advance directive provide 'clear and convincing evidence' that she would wish this--unless it constitutes informed consent.<sup>47</sup>

1. J. Stone. Advance Directives, Autonomy, and Unintended Death. *Bioethics* 1994; Vol. 8, No. 3, 223-246, note 17.

2. T. A. Mappes. Persistent Vegetative State, Prospective Thinking, and Advance Directives. *Kennedy Institute of Ethics Journal* 2003; 13(2): 119-139, p. 128. All references to Mappes

are from this article.

3. Ibid, 121.

4. Multi-Society Task Force on PVS. Medical Aspects of the Persistent Vegetative State. Part I. New England Journal of Medicine 1994; 330: 1499-1508, p. 1501.

5. Mappes, 124.

6. MSTF, op. cit. 4, 1501.

7. MSTF on PVS. Medical Aspects of the Persistent Vegetative State. Part II. New England Journal of Medicine 1994; 330: 1572-79, p. 1575. Note that the 'severe disability' requirement is dropped in the second case.

8. N. Latronica et al. Approach to the Patient in Vegetative State. Part III: prognosis. Minerva Anestesiologica 2000; 66(4): 241-8, p. 241.

9. MSTF, op. cit 7, 1572.

10. C. Borthwick. The Permanent Vegetative State. Issues in Law and Medicine 1996; 167-185, p. 179.

11. H. L. Levin et al. Vegetative State After Closed-Head Injury: A Traumatic Coma Data Bank Report. Arch Neurol 1991; 48: 580-585, p. 580.

12. Ibid, table 5, 583. Only one of those five recovered from trauma-induced PVS; this individual was severely disabled. However it's a mistake to generalize from one case that the prospect for recovering independence for such individuals is lower than for non-trauma induced PVS. The Task Force acknowledges a moderately disabled late-recovery from trauma-induced PVS reported by The Traumatic Coma Data Bank, but appears to question whether recovery was late (MSTF, op. cit. 7, 1575).

13. Concerning the 434 patients considered above, by the end of one year 7% had made a virtually complete recovery, 17% were moderately disabled (which means they're independent), and 28% were severely disabled (Ibid, table 3, 1574).

14. Mappes, note 16, 137.

15. Ibid.

16. Ibid, 128.

17. Ibid.

18. Ibid.

19. Ibid, 129.

20. MSTF, op. cit. 7, 1572.

21. Mappes, 129.

22. Here are two better recoveries than my sister's, both from non-traumatic 'permanent' VS. First, a woman, 26, recovers after six months in PVS; she returns home to her parents, with regular periods in a home for severely disabled people. She remains in a wheelchair and communicates by letter board. In two years tests show she's in a normal range for most tasks assessed; she remains wheel-chair bound and can't speak. She has made almost a complete cognitive recovery and feels positive about her life (B. A. Wilson et al. Cognitive Recovery From 'Persistent Vegetative State': Psychological and Personal Perspectives. Brain Injury 2001; 15 (12): 1083-92.) Second, a 43-year-old man remains in a VS for 18 months after cardiac arrest. Over a six-month period he regains speech and limited use of hands and legs. His verbal IQ is 100, with some recent-memory impairment. He tells stories and jokes but can't read (G. A. Rosenberg et al. Recovery of Cognition after Prolonged Vegetative State. Ann Neurol 1977; 2: 167-168).

23. Mappes argues that, as most would chose to avoid an undignified existence or being a burden, long-term PVS is commonly worse than death (Mappes, 128-129). The inference is invalid. He needs the premiss that these judgements aren't mistaken.

24. Mappes, 130.

25. Mappes, 129. 'Typically' doesn't jibe with the 40% recovery to moderate disability mentioned earlier.

26. Mappes, 129-130.

27. J. T. Giacino et al. The Minimally Conscious State: Definition and Diagnostic Criteria. *Neurology* 2002; 58:349-353. All quotations in the above paragraph are from 351.

28. Mappes, note 14, 137.

29. J. L. Bernat. Questions Remaining About the Minimally Conscious State. *Neurology* 2002; 58:337-338, p. 338.

30. D. A. Shewmon. Correspondence. *Neurology* 2002; 58: 506-507, p. 506.

31. D. Coleman. Correspondence. *Neurology* 2002; 58: 506-507, p. 506.

32. Mappes, 130.

33. L. J. Nelson and R. E. Cranford. Michael Martin and Robert Wendland: Beyond the Vegetative State. *Journal of Contemporary Health Law and Policy* 1999; 15:425: 427-453, p. 447.

34. *Ibid*, 453.

35. *Ibid*, 448.

36. *Ibid*.

37. *Ibid*, 434.

38. PT was discontinued finally, because she plainly didn't want it.

39. S. Ashwal and R. Cranford. 2002. The Minimally State in Children. *Seminars in Pediatric Neurology* 2002; 9(1): 19-34, p. 33.

40. *Ibid*, 29.

41. Ibid, 31.

42. Ibid, 29.

43. Ibid, 26.

44. See myself, op. cit. 1.

45. In obtaining informed consent we don't just feed people statistics; we point out standard advantages alleged in favor of the options--especially when these may not occur to them.

46. See Nelson and Cranford, op. cit. 32.

47. Thanks for discussion or comments to John Cottingham, Mary Crane, R. N., Thomas Marzen, David Newman, M. D., and Ronald Sandler. Special thanks to Judith Crane.