

The Dead Donor Rule: Can It Withstand Critical Scrutiny?

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Transplantation of vital organs has been premised ethically and legally on “the dead donor rule” (DDR)—the requirement that donors are determined to be dead before these organs are procured. Nevertheless, scholars have argued cogently that donors of vital organs, including those diagnosed as “brain dead” and those declared dead according to cardiopulmonary criteria, are not in fact dead at the time that vital organs are being procured. In this article, we challenge the normative rationale for the DDR by rejecting the underlying premise that it is necessarily wrong for physicians to cause the death of patients and the claim that abandoning this rule would exploit vulnerable patients. We contend that it is ethical to procure vital organs from living patients sustained on life support prior to treatment withdrawal, provided that there is valid consent for both withdrawing treatment and organ donation. However, the conservatism of medical ethics and practical concerns make it doubtful that the DDR will be abandoned in the near future. This leaves the current practice of organ transplantation based on the “moral fiction” that donors are dead when vital organs are procured.

Keywords: *causing death, medical ethics, organ donation*

I. INTRODUCTION

Established norms and institutional practices may diverge and conflict, creating a tension that can be resolved in different ways. The history of the United States prior to the civil war illustrates a profound conflict between fundamental principles articulated in the Declaration of Independence—all men are created equal and entitled to inalienable rights of life, liberty, and pursuit of happiness—and the “peculiar institution” of slavery. As in this historic example, one way to overcome the conflict between established norms and institutional practices is to change the practice so that it accords with the norms. In this case, it took a civil war, and a civil rights movement 100 years later, to rectify this divergence between established norms and institutional practices relating to the treatment of African-Americans. Indeed, the effort of rectification remains unfinished.

The fault behind such conflicts, however, does not always derive from ethically objectionable practices. Established norms are not always justified or may need to be revised or reconstructed. When institutional practices that are morally legitimate deviate from faulty norms, what is needed is to change the norms, not to abandon norm-conflicting practices. The need for normative reconstruction frequently arises within biomedicine. We contend that this is the very situation that characterizes the conflict between the legitimate practices of vital organ donation and the dead donor rule (DDR).

The conflict between established norms and institutional practices may not necessarily be apparent to practitioners and commentators, who hold allegiance to both the practices and the conflicting norms. The cognitive dissonance between the conflicting norms and the practices may be made invisible or masked by virtue of appeal to “moral fictions” relating to the institutional practices, which bring them in line with the established norms (Miller, Truog, and Brock, 2009). Moral fictions are *motivated* false beliefs that are relevant to the ethical assessment of practices. The motivation to maintain practices that conflict with established norms may not be conscious. Previously, we have argued that this type of cognitive dissonance characterizes end-of-life medical practices (Miller Truog, and Brock, 2009). The morally legitimate practices of withdrawing life-sustaining treatment are made compatible with the established norm of medical ethics (and the law) that doctors must not intentionally kill patients by virtue of a set of moral fictions. These fictions include the understanding that withdrawing life-sustaining treatment allows patients to die but does not cause their death; the claim that doctors do not (and must not) intend to cause (or hasten) the death of patients when they withdraw life support and, accordingly, that doctors are not morally responsible for causing or hastening the death of their patients when they withdraw treatments, such as mechanical ventilation, dialysis, and artificial nutrition and hydration. We argued that these beliefs are moral *fictions* because they mischaracterize the nature of

withdrawing life-sustaining treatment, the causal relationship between acts of withdrawing treatment and patient deaths, the intent of clinicians in withdrawing treatment, and their moral responsibility for doing so. In short, the truth about end-of-life medical practices is obscured in order to bring them in line with traditional medical ethics.

A similar pattern prevails in the practice of vital organ transplantation. Donating vital organs is believed to be ethical only insofar as it conforms to “the DDR” (Robertson, 1999). No vital organs should be procured from living donors in order to save the lives of patients in need of organ transplantation. Therefore, donors must be properly declared dead before vital organs are procured. But are they really dead? This fundamental question must be addressed somewhat differently with respect to the two ways in which vital organs are procured.

Until recently, “cadaveric” organ donation was limited to brain dead donors. These donors have beating hearts and respiring lungs, driven by mechanical ventilation and other life supporting treatments; however, they are considered dead, according to the prevailing rationale, because their brains have lost the capacity to perform the integration of biological functioning necessary for life (President’s Commission, 1981). On this standard view, brain dead patients, in effect, are breathing corpses, despite not appearing dead. Increasingly, commentators have challenged the basis on which patients diagnosed as brain dead are determined to be dead (Veatch, 1993; Truog, 1997; Shewmon, 1998). The problem is that brain dead patients, with the aid of mechanical ventilation, continue to perform a range of integrative biological functioning, such as circulation, hormonal balance, temperature control, digestion and metabolism of food, excretion of wastes, wound healing, fighting infections, and growth and sexual maturation in the case of children (Truog, 2007). Indeed, most dramatically, pregnant brain dead women have gestated fetuses for up to 3 months (Souza et al., 2006; Yeung, McManus, and Tchabo, 2008). These patients not only appear to be alive; the evidence relating to their bodily functions makes a compelling case that they are living, despite devastating and irreversible neurological injury, including the permanent loss of consciousness. We submit that the DDR is upheld in the case of brain dead donors only by virtue of the moral fiction that they are really dead (Miller and Truog, 2008).

Increasingly, vital organs have been retrieved from patients under protocols for donation after cardiac death (DCD). Patients with severe and irreversible neurological injury maintained on life support, but who do not meet criteria for “brain death,” can become donors after life-sustaining treatment is withdrawn and death is declared by traditional cardiopulmonary criteria (Steinbrook, 2007). Typically, vital organs are extracted 2–5 min after asystole; however, in a recent series of heart transplants from infants, organs were extracted after an interval as short as 75 s (Boucek et al., 2008). Clearly, these patients, whose hearts have stopped beating following withdrawal of

life support, are, at least, on the verge of death. But they are dead only if the cessation of vital functioning is irreversible. We normally regard a condition as irreversible if there is nothing that can be done to reverse it. But this is not the case with these patients, as patients have been successfully resuscitated several minutes after asystole. In this situation, however, cardiopulmonary functioning is judged to be irreversible because of the decision to stop or withhold further resuscitative interventions. Thus, it is known to be irreversible as a matter of intention rather than as an unalterable fact. For these patients, it is also a moral fiction that they are unequivocally dead at the time of vital organ removal. The fudging of the truth regarding the patient's death may seem of marginal significance in most cases of DCD. However, this fiction particularly strains credulity in the case of heart transplantation. If the donor's heart has stopped *irreversibly* in the donor, how can it be possible for this heart to function spontaneously in the recipient's body after transplantation? (Veatch, 2008).

We have argued in detail elsewhere that the DDR should be abandoned because it is inconsistent with the legitimate life-saving practices of organ transplantation and that a satisfactory rationale for vital organ donation from living donors can be supplied, in the context of valid consent to withdraw life-sustaining treatment and to donate (Miller and Truog, 2008). In this paper, we provide a more direct critique of the DDR by challenging its normative foundation.

Before engaging in this critique, it is worth noting a third strategy for dealing with conflicts between practices and norms. Instead of changing the practice or abandoning or modifying the prevailing norms, those facing the conflict can attempt to muddle through by maintaining allegiance to the norms while leaving the conflicting practice intact. This strategy characterized the history of the United States with respect to slavery until the civil war. It also characterizes the current practice of vital organ donation, although the conflict to a large extent has not been recognized or acknowledged, owing to the moral fictions that maintain the status quo. Muddling through is theoretically untenable, but it might, nonetheless, be practicably unavoidable or even desirable—an issue that we will address at the end.

II. NORMATIVE RATIONALE FOR THE DDR

The DDR has the status of a moral axiom undergirding the practice of vital organ donation. To many, it appears self-evident, and we are not aware of any systematic efforts to either justify this moral rule or show that it is mistaken. Two normative rationales for the DDR are found in the literature. First, it is a deontological constraint on the life-saving practice of vital organ transplantation, regarded as necessary to make this practice consistent with the fundamental norm of medical ethics that doctors must not intentionally

kill patients. (From a legal perspective, the DDR is necessary to make vital organ donation consistent with the laws against homicide.) The norm prohibiting intentional medical killing, as well as the DDR, is held to be absolute. Neither the altruistic nature of organ donation nor the fact that patients, or surrogate decision makers acting on their behalf, consent to vital organ donation cancels the wrong of doctors intentionally killing patients. Second, taking vital organs from a living patient to save the life of a recipient constitutes exploitation of vulnerable individuals.

There is also a practical rationale for the DDR. Adherence to the DDR contributes to assuring people that their life-sustaining treatment will not be stopped, or their death hastened, in order to retrieve their organs. We argue below that neither of these normative rationales can withstand critical scrutiny, and we discuss practical concerns relating to abandoning the DDR.

Medical Killing

The basic problem with regarding the DDR as a deontological constraint on vital organ donation is that it is question begging. It begs the question of whether the norm that doctors must not intentionally kill patients is absolute. If there are circumstances in which it is justified for doctors intentionally to kill patients, then it cannot be presumed that vital organ donation is legitimate only when donors are dead. Some attention to what is meant by “killing” is necessary to set the stage for evaluating the moral force of the DDR. To kill a person certainly means to cause his or her death; however, it is possible to explicate killing in a way that encompasses some, but not all, cases of causing death. For the sake of this discussion, we will stipulate that killing and causing death are equivalent. Killing human beings is always a matter of moral concern, but not necessarily wrongful. Killing is recognized as justified in self-defense, in the practice of law enforcement to protect innocent persons from criminal violence and in a just war. The concept of justified killing is not recognized within traditional medical ethics (Beauchamp and Childress, 2009, 174). As noted by the President’s Commission (1983, 64), “particularly in medicine, ‘killing’ is often understood to mean actions that wrongfully cause death, and so is never justifiably done by health care professionals.” Nevertheless, this stance is difficult if not impossible to uphold when killing is understood as causing death without assuming that deliberate causing of a patient’s death is always a wrongful act.

We contend that the now routine practice of stopping life-sustaining treatment is an act of medical killing, which is masked by the dogma—a moral fiction—that it merely allows the patient to die from an underlying medical condition (Miller, Truog, and Brock, 2009). Consider the case of a 40-year-old man with a cervical spinal cord injury that leaves him quadriplegic and ventilator dependent. After living for a few years in this condition, he decides that his life is no longer worth living and seeks to be admitted to a

hospital for the purpose of dying peacefully. After assessing his competence and reasons for the decision, clinicians provide sedation followed by withdrawal of the ventilator. The patient dies 20 min later.

Does withdrawing the ventilator kill the patient or merely allow him to die? The patient has the potential to live for an extended period of time, perhaps a decade or more, supported by continued mechanical ventilation and personal care. What explains his death following withdrawal of mechanical ventilation is not his spinal cord injury but the act of turning off the ventilator. It is the proximate cause of death. This conclusion is bolstered by the following thought experiment. Suppose that another patient in the hospital also with the same condition was admitted to treat sepsis, with the aim of returning home. Deliberately disconnecting the ventilator from this latter patient without his consent would be homicide. The very same act of stopping treatment that causes death in the latter case of homicide is performed by a clinician with the former patient's consent (Brook, 1993). The consent makes the difference between homicide and legitimate treatment withdrawal, but this ethical and legal difference has nothing to do with the cause of the patient's death, which is the same in both cases.

Withdrawing life-sustaining treatment, when followed shortly by the patient's death, is a life-terminating intervention. Indeed, the very fact that mechanical ventilation is necessary to sustain life for patients incapable of breathing spontaneously implies that stopping mechanical ventilation will end their lives. In other words, the power to sustain life by technological means goes hand in hand with the power to end life when these means are withdrawn. This characterization of medical practice in the case of life-sustaining therapy is an obvious application of our common sense understanding of causation (Hart and Honore, 1985), which is obscured by the moral fictions embraced by conventional medical ethics. To be sure, this patient's inability to breathe on his own is part of the causal explanation for why he dies after his ventilator is stopped. But withdrawing the ventilator causes his death precisely because had it not been withdrawn he would continue living, likely for a substantial period of time. The withdrawal of the ventilator accounts for the patient dying at the time and in the manner that he does. It is difficult to see how it can reasonably be denied that stopping the ventilator causes this patient's death. Maintaining the moral fiction that treatment withdrawal in this case merely allows the patient to die testifies to the strongly felt need to square a practice regarded as legitimate with an entrenched norm.

Typical cases of withdrawing life-sustaining treatment in the contemporary hospital differ from this case, in that such patients are likely to have much shorter life expectancies and to be incompetent, with decisions to stop treatment made by surrogates, usually close family members. This makes no difference, however, with respect to causation. The treatment withdrawal hastens death, causing it to occur earlier than it would if the treatment was maintained.

The moral justification for withdrawing life-sustaining treatment appeals to self-determination—respecting the right of the patient (or surrogates acting on behalf of the patient) to refuse treatment—and to prevent harm, based on the judgment that, in light of the patient's medical condition, the burdens of continued treatment outweigh the benefits of sustaining life (Brock, 1993). The fact of causing death by stopping treatment does not undermine these justificatory considerations. In short, withdrawing life-sustaining treatment is justified killing, notwithstanding that this is not the way that it is understood within conventional medical ethics. If we are right about this conclusion, then invoking the absolute norm that doctors must not intentionally kill their patients cannot underwrite the DDR. The fact that taking vital organs from living patients on life support, prior to treatment withdrawal, would cause their death does not suffice to make this practice unethical.

But is not cutting out the heart from a brain dead but living patient a very different act from stopping the ventilator? It is different and feels different. However, the descriptive and psychological differences do not entail that the patient, from an ethical perspective, is legitimately allowed to die in the latter case but wrongfully killed in the former. Both of these medical acts cause the patient's death, and both can be justified under specified conditions.

In sum, the ethical necessity of regarding the DDR as a deontological constraint on the beneficent practice of vital organ donation is open to question. Given that it is ethical to cause death by withdrawing life-sustaining treatment, it cannot be presumed that it is necessarily unethical to procure vital organs from living patients prior to withdrawing treatment. Indeed, it is the consent of the patient or surrogate in each case that underlies the fundamental ethical justification of each practice. Without that consent, it is widely agreed to be wrong intentionally to kill even in order to save the lives of a greater number of persons. Moreover, this alleged deontological constraint is no more than a veneer because the current practice of vital organ donation routinely violates the DDR (Miller and Truog, 2008). Patients diagnosed as brain dead remain alive, and we cannot justifiably determine that donors under DCD protocols are dead at the time that organs are being procured because we do not know that the cessation of cardiac functioning is irreversible.

Exploitation

Transplantation makes use of donors' hearts, lungs, livers, and kidneys to save the lives of recipients with life-threatening conditions. This use of vital organs is considered legitimate, with proper consent, when the donor is dead. It is claimed, however, that extracting such vital organs from living patients, in violation of the DDR, would be exploitative. The [President's Council on Bioethics \(2008\)](#), in its recent "white paper" *Controversies in the Determination of Death*, in effect voices this charge of exploitation by invoking the Kantian injunction against using human beings merely as a means. To abandon the

DDR would mean that “*a living human being* may be used merely as a *means* for another human being’s *ends*, losing his or her own life in the process” (President’s Council on Bioethics, 2008, 71). Edmund Pellegrino, Chairman of the Council, explicitly invokes “exploitation” in his “personal statement” appended to the white paper: “Eliminating the DDR promises a future of moral and legal chaos. Above all, it exposes the vulnerable or gullible patient to an increased danger of exploitation for the benefit of others.” (President’s Council on Bioethics, 2008, 113)

No position advocating eliminating the DDR could be morally defensible if it would license killing some patients to save the lives of others without the constraint of prior valid consent for vital organ donation. Absent such consent, still-living patients, from whom vital organs are extracted for transplantation, would be treated *merely* as a means. In many areas of interpersonal conduct, consent marks the difference between wrongfully using a person merely as a means and morally permissible interaction, as in the differences between slavery and employment, theft and borrowing, rape and consensual sexual intercourse, or treating patients as human guinea pigs and ethical clinical research. Limiting vital organ donation to patients on life support for whom prior decisions to withdraw such treatment have been made freely would further constrain their being used to benefit others. Under this constraint, which we discuss further below, no patient would be made dead by vital organ donation who would not otherwise imminently be made dead by withdrawing life-sustaining treatment.

In his influential analysis of the concept of exploitation, Wertheimer (1996) defines exploitation paradigmatically as one person *unfairly* taking advantage of another. It is important to note that taking advantage of another is not ipso facto exploitation; rather, unfairness in advantage taking constitutes exploitation. Wertheimer discusses two types of exploitation: harmful and mutually beneficial exploitation. In harmful exploitation, A takes advantage of B in a way that harms B and violates B’s rights. In mutually beneficial exploitation, the unfairness concerns the distribution of benefits and burdens between the two parties. If people have an inalienable right not to be killed, then vital organ donation from living patients would be harmful exploitation. There is no reason here to delve into the philosophically controversial issue of whether any rights are inalienable. Recognizing the legitimacy of withdrawing life-sustaining treatment (understood as causing death) with valid consent suffices to demonstrate that the right not to be killed is not inalienable. Therefore, the fact that abandoning the DDR would involve killing patients does not make this practice necessarily harmful exploitation that violates their right not to be killed. Furthermore, in the case of patients with prior valid decisions to withdraw life-sustaining treatment, it is difficult to see how they can be harmed or wronged by vital organ donation with valid consent, provided that adequate anesthesia is maintained during organ extraction and treatment withdrawal.

Vital organ donation can be a mutually beneficial transaction between donor and recipient. The patient donors will soon die and so rarely will be able to obtain any (temporary) psychic benefit from knowing that their organs will be used to save the life of another, as they are usually mentally incapacitated at the time that the decision is made to donate. However, if a patient has a strong preference that her organs be used to save others' lives, then doing so is a benefit to her. Moreover, we do not regard charitable acts, which benefit recipients even at some sacrifice to donors, as involving exploitation, so long as they were freely undertaken. There need be nothing unfair in the transaction. In vital organ donation, some sacrifice in the goal of achieving a peaceful and dignified death may be entailed by undertaking organ extraction during the process of dying, but the patient or surrogate who consents to the donation has judged this sacrifice to be justified for the sake of saving another's life. The organ extraction is made legitimate by the consent of the donor or surrogates acting on the donor's behalf, as well as by measures to assure comfort and respectful treatment of the patient, within the constraints of surgery to procure organs.

The Slippery Slope

Our critique of the normative rationale for the DDR has reached two conclusions. First, appealing to an absolute norm prohibiting medical killing fails to ground the DDR because invoking this conventional but erroneous norm would also rule out the legitimate practice of withdrawing life-sustaining treatment. It cannot be simply by virtue of killing patients that vital organ donation from living patients, in violation of the DDR, is wrong. Second, the charge of exploitation fails. Vital organ donation from living patients does not necessarily use them merely as a means nor unfairly take advantage of their vulnerability.

It might be objected that despite our arguments calling into question the rationale for the DDR, it remains necessary as a "moral compass." Without the DDR, there is no way to place acceptable limits on the scope of legitimate vital organ donation. As posed by the [President's Council on Bioethics \(2008, 72\)](#), "[i]f a patient need not be dead in order to be eligible for such life-ending organ donations, where would the ethical line be drawn?" Absent the DDR, what would ethically preclude killing of the mentally retarded (with parental consent), or of healthy persons with their own consent, for the sake of providing "the gift of life" to others?

A reasonable line can be drawn by limiting vital organ donation to patients with prior justified plans to withdraw life-sustaining treatment. Moreover, guidelines could require that the decision to withdraw life-sustaining treatment be made entirely independent of any decision about organ donation. As stated above, this means that no patient would die as a result of organ donation who would not otherwise soon die from withdrawing treatment. In that sense, no person is being killed *in order to* save the life of another.

Nevertheless, ethical worries might arise concerning pressure being put on patients or families to procure organs from those who are being maintained on life-sustaining treatment. These worries generally would be misplaced in the case of patients diagnosed with brain death. Although not biologically dead, such patients remain in an irreversible coma, with no prospect of regaining consciousness. Accordingly, it is reasonable to hold that the person who occupied the still-living body has ceased to exist. Absent belief in the value of merely vegetative human life, the lack of any prospect of recovering mental life precludes the possibility that brain dead patients can be harmed or wronged by extracting vital organs prior to stopping life-sustaining treatment. Moreover, the requirement of consent protects patients and families from lethal organ procurement that violates their religious or personal beliefs. In the situation of vital organ donation from such patients without the DDR, organs would be procured as currently practiced, though without the need for a prior declaration of death. In the case of other irreversibly compromised patients on life support, who do not meet the criteria for brain death, the potential for illegitimate pressure to donate organs would be no different in principle than what families of patients currently face in the context of DCD, which requires a prior decision to withdraw treatment. Whether life support is stopped before or after organs are retrieved from these patients, the necessary prior decision to withdraw treatment must satisfy standard ethical criteria and appropriate oversight: it reflects, or is consistent with, the preferences of the patient; the treatment is judged to be more burdensome than beneficial; or continued treatment would be futile. Any lingering doubts about the legitimacy of the prior decision to withdraw treatment, necessary to make vital organ donation permissible according to the position that we propose, might be addressed by means of ethics consultation.

Some who agree with abandoning the DDR might argue that limiting vital organ donation to patients on life support is unjustified from an ethical perspective. Why should not healthy persons be able to make a self-sacrificing organ donation to save the life of a loved one? We would not regard the donor's plan as unethical per se; indeed, in some circumstances, it might be morally praiseworthy. But, many would hold that it is unethical for clinicians, professionally committed to promoting health, to comply with such a plan (Miller and Brody, 2001). (In any case, clinicians would be entitled to refuse to comply.) It would be all the more dubious from the perspective of policy. Putting aside any concerns about legal ramifications, it is reasonable to suppose that it would be exceedingly rare that any competent clinical team would be prepared to assist a healthy person of sound mind in accomplishing a self-sacrificing organ donation. Accordingly, the social costs of prohibiting such rare donations would be slight as compared with the value of placing clear and reasonable limits on vital organ donation to protect the vulnerable.

III. PRACTICAL CONCERNS

The DDR lacks a cogent ethical rationale. Furthermore, maintaining commitment to the DDR is theoretically problematic in the face of current practices of vital organ donation that, as a matter of fact, conflict with it. Patients diagnosed as brain dead are not biologically dead; in view of the range of vital functioning, they can sustain with the aid of mechanical ventilation. Patients whose organs are extracted at a very short interval after asystole are on the verge of death, but we cannot be justified in declaring them as dead because the cessation of cardiac function might be reversible by resuscitative efforts. In spite of these critical considerations, abandoning the DDR poses serious practical concerns that must be addressed. Will the trust in the medical profession that underwrites the practice of organ donation be eroded if the public believes that organ donors are not dead at the time that vital organs are procured for transplantation? Abandoning the DDR might also require changing the laws against homicide—a daunting task in the US federal system (and in other jurisdictions around the world).

Whether adherence to the DDR is necessary to maintain public trust in the practice of organ donation is an empirical issue. It is not clear that most people believe that brain death equals death, and it is doubtful that many lay people have given any thought to whether we should regard patients as dead within a few minutes after their hearts have stopped beating in order to proceed with organ donation. News articles frequently describe brain death as a condition distinct from death (Truog, 2007). For example, a recent report of a policeman killed in the line of duty stated that “a police officer shot during a traffic stop was pronounced brain dead but remained on life support Oakland police spokesman Jeff Thomason . . . said that [officer] Hege was being kept alive while a final decision was made about donating his organs” (Collins and Leff, 2009). Such reports do not generate outrage concerning patients who are being killed to procure organs for transplantation. The public may be prepared to see brain death as “as good as death,” thus legitimating vital organ donation from living patients. Extant survey data are ambiguous with respect to public attitudes relating to the DDR. A telephone survey of a randomly selected sample of 1,350 adults in Ohio found that “significant numbers of people were willing to donate the organs of patients they had classified as alive” (Siminoff, Burant, and Youngner, 2004, 2,331). Surveys designed to probe this issue more systematically would be desirable prior to any effort to formally abandon the DDR. Additionally, public education would be a necessary condition for any successful policy change. In sum, this practical concern does not obviously amount to an insurmountable barrier.

The probable necessity for changing homicide laws poses a more formidable challenge. Dramatic legal change of this sort is not impossible, as legislation was passed throughout the United States, within a relatively short period of time, to recognize the legality of declaring death on the basis of

neurological criteria. This legal transformation occurred with very little controversy. In contrast, a proposal to change the homicide laws to accommodate vital organ donation from living patients is apt to be highly controversial, especially in view of the “culture wars” that have characterized social policy in the United States in recent years.

IV. MUDDLING THROUGH

Current practices of vital organ donation, as a matter of fact, violate the DDR. This fact is masked by appeal to moral fictions regarding the status of living, or not clearly dead, bodies from which vital organs are currently being procured. Despite growing awareness and professional discussion regarding the incoherence between theory and practice in this domain, the DDR appears to remain an unshakeable moral and legal norm. Although we have argued that it is desirable from an ethical perspective to abandon the DDR, we predict that this is unlikely to happen any time soon.

Once one recognizes the moral fictions underlying the status quo, it becomes difficult to pay lip service to the DDR as a moral norm. Moreover, we have argued that the DDR lacks a solid ethical rationale. Is there any way to maintain intellectual integrity in face of the conceptual incoherence that characterizes the practice of vital organ donation today? A not unreasonable half-way measure is to transform the unacknowledged moral fictions about our current practices into explicit legal fictions. We can understand patients diagnosed as brain dead as legally dead despite being biologically alive. Likewise, patients who donate vital organs after cardiac death is declared are dead in the eyes of the law, despite our not being confident that they are dead as a matter of fact. In this context, to be legally dead would be akin to being “legally blind,” which does not require the total loss of vision (Taylor, 1997). Legal fictions, when justified, are convenient heuristic devices of public policy. These legal fictions would make it possible to continue the current practices of vital organ donation without running afoul of the homicide laws.

Ideally, we should seek moral clarity and honesty by abandoning the DDR in ethics and in the law. Not only would this bring conceptual and ethical coherence into the practice of vital organ donation but it would also potentially permit an expansion in viable organs for life-saving transplantation, as all legitimate procurement of vital organ would occur before life-sustaining treatment is withdrawn. In the short run, however, we are likely to continue to muddle through.

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REFERENCES

- Beauchamp, T. L., and J. F. Childress. 2009. *Principles of biomedical ethics*, 6th ed. New York: Oxford University Press.
- Boucek, M. M., C. Mashburn, S. M. Dunn, R. Frizell, L. Edwards, B. Pietra, D. Campbell, and Denver Children's Pediatric Heart Transplant Team. 2008. Pediatric heart transplantation after declaration of cardiocirculatory death. *New England Journal of Medicine* 359: 709–14.
- Brock, D. W. 1993. *Life and death*. New York: Cambridge University Press.
- Collins, T., and L. Leff. (2009, March 23). Wounded Oakland officer brain-dead. *The Washington Post*, A4.
- Hart, H. L. A., and T. Honore. 1985. *Causation in the law*, 2nd ed. New York: Oxford University Press.
- Miller, F. G., and H. Brody. 2001. The internal morality of medicine: An evolutionary perspective. *Journal of Medicine and Philosophy* 26:581–99.
- Miller, F. G., and R. D. Truog. 2008. Rethinking the ethics of vital organ donation. *Hastings Center Report* 38(6):38–46.
- Miller, F. G., R. D. Truog, and D. W. Brock. 2009. Moral fictions and medical ethics. *Bioethics*. Advance Access published July 7, 2009; doi:10.1111/j.1467-8519.2009.01738.x.
- President's Commission for the Study of Ethical Problems in Medicine and Biomedical and Behavioral Research. 1981. *Defining death: Medical, legal and ethical issues in the determination of death*. Washington, DC: Government Printing Office.
- President's Commission for the Study of Ethical Problems in Medicine and Biomedical and Behavioral Research. 1983. *Deciding to forego life-sustaining treatment*. Washington, DC: Government Printing Office.
- President's Council on Bioethics. 2008. *Controversies in the determination of death*. Washington, DC: President's Council on Bioethics. Available: <http://www.bioethics.gov/>. (Accessed June 10, 2009).
- Robertson, J. 1999. The dead donor rule. *Hastings Center Report* 29(6):6–14.
- Shewmon, D. A. 1998. Chronic 'brain death': Meta-analysis and conceptual consequences. *Neurology* 51:1538–45.
- Siminoff, L. A., C. Burant, and S. J. Youngner. 2004. Death and organ procurement: Public beliefs and attitudes. *Social Science & Medicine* 59:2325–34.
- Souza, J. P., A. Oliveria-Neto, F. G. Surita, J. G. Cecatti, E. Amaral, and J. L. Pinto e Silva. 2006. The prolongation of somatic support in a pregnant woman with brain-death: A case report. *Reproductive Health* 3:3.
- Steinbrook, R. 2007. Organ donation after cardiac death. *New England Journal of Medicine* 357:209–13.
- Taylor, R. M. 1997. Reexamining the definition and criteria of death. *Seminars in Neurology* 17:265–70.
- Truog, R. D. 1997. Is it time to abandon brain death? *Hastings Center Report* 27(1):29–37.
- . 2007. Brain death—Too flawed to endure, too ingrained to abandon. *Journal of Law, Medicine & Ethics* 35:273–81.
- Veatch, R. M. 1993. The impending collapse of the whole-brain definition of death. *Hastings Center Report* 23(4):18–24.
- . 2008. Donating hearts after cardiac death—Reversing the irreversible. *New England Journal of Medicine* 369:672–3.

- Wertheimer, A. 1996. *Exploitation*. Princeton, NJ: Princeton University Press.
- Yeung, P., C. McManus, and J.-G. Tchabo. 2008. Extended somatic support for a pregnant woman with brain death from metastatic malignant melanoma: A case report. *Journal of Maternal-Fetal and Neonatal Medicine* 21:509–11.