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## "When Has the Grim Reaper Finished Reaping?" How Embracing One Religion's View of Death Can Influence Acceptance of the Uniform Determination Of Death Act

Kenneth Shuster

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**"When Has the Grim Reaper Finished Reaping?" How Embracing One Religion's View of Death Can Influence Acceptance of the Uniform Determination Of Death Act**

Cover Page Footnote

30-3

**“WHEN HAS THE GRIM REAPER FINISHED REAPING?”  
HOW EMBRACING ONE RELIGION’S VIEW OF DEATH CAN  
INFLUENCE ACCEPTANCE OF THE UNIFORM  
DETERMINATION OF DEATH ACT**

*Kenneth Shuster\**

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*“The body is merely a dwelling place for a human mind, the miraculous embodiment of a living brain. When the brain ceases, the miracle ends, leaving behind an inanimate object that should provoke neither fear nor dread.”*<sup>1</sup>

## I. INTRODUCTION

Over thirty years ago, the Presidential Commission for the Study of Ethical Problems in Medicine and Biomedical and Behavioral Research (1978-1983) produced the Uniform Determination of Death Act.<sup>2</sup> However, many still do not accept the Act’s pronouncements on brain death. This is due to religious differences,<sup>3</sup> superstition,<sup>4</sup> ignorance of anatomical reality,<sup>5</sup> the importance given to the heart through speech and thought,<sup>6</sup> and an abundance of caution.<sup>7</sup> This paper informs the debate on when death occurs with Jewish law’s definition of death.<sup>8</sup> This is important, for Jewish thought is

<sup>1</sup> BERNARD LOWN, *THE LOST ART OF HEALING* 271 (1999).

<sup>2</sup> UNIF. DETERMINATION OF DEATH ACT (1981).

<sup>3</sup> See, e.g., Nina Rastogi, *When the Deity Knows You’re Dead: How do different religions define death?*, SLATE MAG. (Nov. 10, 2008, 6:07 PM), [http://www.slate.com/articles/news\\_and\\_politics/explainer/2008/11/when\\_the\\_deity\\_knows\\_youre\\_dead.html](http://www.slate.com/articles/news_and_politics/explainer/2008/11/when_the_deity_knows_youre_dead.html) (noting that most Catholics, Muslims and Jews use a brain dead definition of death; many Evangelicals and Fundamentalist Christians need cardio-respiratory failure; and Buddhists require heart death).

<sup>4</sup> See Jeremy Rosen, *Brain Dead*, JEREMY ROSEN’S BLOG (Jan. 21, 2011, 7:34 AM), <http://jeremyrosen.blogspot.com/2011/01/brain-dead.html>; *Victorian Funeral Customs and Superstitions*, FRIENDS OF OAK GROVE CEMETERY, <http://friendsofoakgrovecemetery.org/Victorian-funeral-customs> (last visited May 2, 2014) (outlining various Judeo-Christian superstitions regarding death).

<sup>5</sup> See Steven Laureys, *Death, unconsciousness and the brain*, 6 NEUROSCIENCE 899, 907 (2005); Jonah Mandel, *YU expert censures rabbis over brain-stem death*, THE JERUSALEM POST (Jan. 5, 2011, 2:08 PM), <http://www.jpost.com/Jewish-World/Jewish-News/YU-ethics-expert-censures-rabbis-over-brain-stem-death> (“scientific ignorance can be dangerous”).

<sup>6</sup> See Faith Lapidus, *Heart to Heart: Some Heartfelt Expressions*, LEARNING ENGLISH VOICE OF AMERICA NEWS (May 29, 2009), <http://learningenglish.voanews.com/content/a-23-2009-05-29-voa4-83141587/129833.html> (transcribing a radio broadcast listing expressions that emphasize the heart); Vijai P. Sharma, *Heart is the Seat of the Emotions and More*, MIND PUBLICATIONS, <http://www.mindpub.com/art411.htm> (last visited May 2, 2014) (noting that many cultures believe the heart is the locus of creativity and emotions).

<sup>7</sup> See James M. DuBois, *Brain Death and Organ Donation*, AMERICA: THE NAT’L CATHOLIC REV. (Feb. 2, 2009), <http://americamagazine.org/node/149137> (stating lack of certainty behind brain death creates opposition); *The Law of Life and Death*, FLORIDA INT’L U. MAG. (Winter 2011-2012), <http://www.fiu.edu/research/newsroom/2011/foley.html> (stating that an abundance of caution is needed due to misdiagnosis of brain death).

<sup>8</sup> *Compare Torah*, JUDAISM 101, <http://www.jewfaq.org/torah.htm> (last visited May 2, 2014) (explaining that “Jewish law” is the entire corpus of Jewish teaching contained in the

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the basis of the Judeo-Christian tradition and, as such, already influences many areas of secular life.<sup>9</sup>

Specifically, this paper references different legal, religious, and cultural positions on death to arrive at a suitable definition of death. It also attempts to answer some of the objections to brain death as a standard that has been offered from religious, philosophical, and medical quarters, as well as objections surrounding the post-mortem transplantation of organs.<sup>10</sup> I conclude that the Jewish legal definition of death means "brain death," and should be expanded to refer to what today is called "whole brain" or "brainstem" death.<sup>11</sup>

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Pentateuch, or Five Books of Moses, the Prophets, Chronicles, Mishnah, Talmud, and the Codes of Jewish law. It is collectively referred to as "Torah," for Torah means "law," and these works constitute both the written and oral traditions within Judaism. The "Mishnah" is a document believed to contain the oral tradition given to the Jews by God at Mount Sinai. The "Talmud" is a rabbinic commentary on both the Mishnah and the written Torah. There are two editions of the Talmud, known as the Babylonian and Jerusalem Talmuds, respectively, because when the Talmuds were written, Jewish scholarship was centered in Pumpaditha, Babylonia and Jerusalem, Israel), with PAUL JOHNSON, *A HISTORY OF THE JEWS* 153 (1987) (citing the Babylonian edition of the Talmud exclusively). See generally Jacob Z. Lauterbach, *Oral Law*, *JEWISH ENCYCLOPEDIA* (1906), available at <http://www.jewishencyclopedia.com/articles/11750-oral-law> (stating that the Mishnah and Talmud are called the "Oral Law," because, originally, this part of Jewish tradition was not written down). See also Kenneth Shuster, *Halacha as a Model for American Penal Practice: A Comparison of Halachic and American Punishment Methods*, 19 *NOVA L. REV.* 965, 969 n.30 (1995) (citing HAYM H. DONIN, *TO BE A JEW* 29 (1972)) (noting that because "halacha" means a "path," in Hebrew, i.e., the "path of conduct" Jews should follow, Jewish law is referred to as halacha. "[H]alachic" means pertaining to Jewish law").

<sup>9</sup> See, e.g., *Roe v. Wade*, 410 U.S. 113, 160 (1973) (citing Jewish tradition as authority that life begins at birth. The Supreme Court was influenced by Jewish law when it decided *Roe v. Wade*, the landmark case that found a right to abortion and that most of America's religious and moral traditions hail from Judeo-Christian sources). See also Russell Kirk, *What are American Traditions?*, 9 *THE GEORGIA REV.* 283-89 (Fall 1955), available at <http://www.kirkcenter.org/index.php/detail/what-are-american-traditions/> (explaining that religious and moral traditions in America are derived from Judeo-Christian sources).

<sup>10</sup> See Laureys, *supra* note 5, at 901, box 1 (discussing fear that a donor may not be truly dead before his or her organs are harvested). See also Dubois, *supra* note 7, at 3 (arguing that organ donation reduces human beings to "objects.").

<sup>11</sup> See Laureys, *supra* note 5, at 901. This article uses "brain death," "whole brain death," and "brainstem death," interchangeably to refer to the cessation of all neurological function, including that of the brain's "stem," i.e., the part of the brain that controls breathing, arousal, locomotion and swallowing. *Id.*; *CTR. FOR BIOETHICS UNIV. OF MINN., END OF LIFE CARE: AN ETHICAL OVERVIEW* 8 (2005), available at [http://www.ahc.umn.edu/img/assets/26104/End\\_of\\_Life.pdf](http://www.ahc.umn.edu/img/assets/26104/End_of_Life.pdf). The chief reason to favor a definition of brainstem death is there is less of a chance of misdiagnosing death when brainstem death is used than there is when "brain death," or "brain failure," is used to find death. This is because "brain death" is often understood synonymously with "brain damage," and used to label a patient with severe and permanent brain trauma as dead before she is. The tragic case of Terri Schiavo (1963-2005) is an example. Miss Schiavo suffered cardiac arrest, which led to her entering a persistent vegetative state on Feb. 25, 1993. Although her brain and heart did not cease functioning

This is to support the present, almost international, definition of death, and inform post-mortem organ donation.

## II. A LEGAL DEFINITION OF DEATH INSPIRED BY HALACHA

The seminal Jewish sources that establish when living things are considered dead are the Mishna in *Oholoth* 1:6, and the Talmud in *Yoma* 85a and *Chullin* 21a. *Oholoth* 1:6 states, “[s]imilarly in the case of cattle or wild animals, they cannot defile until their soul is gone forth. If their heads have been cut off, even though they are moving convulsively, they are unclean;...like a lizard’s tail which

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until March 31, 2005, *over twelve years later*, her tombstone lists her date of death as Feb. 25, 1993. See Laureys, *supra* note 5, at 899. Also, the diagnostic criteria used to determine brainstem death are much more thorough and error-proof than those employed to establish lesser conditions of brain damage. See Sunil Shroff & S. Mahendran, *Brain Death/ Support Brain Death Organ Donor*, MEDINDIA, <http://www.medindia.net/articles/article3.asp> (last visited May 2, 2014). Now, public policy may be used even at this stage in the evolution of brain death diagnostic criteria, to suggest a more inclusive definition of death, i.e., to define as “dead” those who suffer from something less than brain death, such as a permanent vegetative state. One cogent reason for this is that such individuals can no longer communicate, feel, and enjoy relationships and so are no longer alive in any meaningful sense. Also, patients who suffer such a state for a prolonged period of time have close to a zero chance of recovering. See Cheryl Arenella, *Coma and Persistent Vegetative State: An Exploration of Terms*, AM. HOSPICE FOUND., <http://www.americanhospice.org/articles-mainmenu-8/caregiving-mainmenu-10/50-coma-and-persistent-vegetative-state-an-exploration-of-terms> (last visited May 2, 2014). Moreover, many more ill individuals can be saved if vital organs may legally be taken from severely brain damaged patients, for the transplantation of viable organs is much more likely to be successful when organs are harvested from those who are not yet completely brain dead. This is because transplant organs need to be as “alive as possible.” See James Leonard Park, *The Dead-Donor Rule: How Dead do you Have to Be?*, UNIV. MINN., <http://www.tc.umn.edu/~parkx032/CY-DEADD.html> (last updated Dec. 28, 2013). I argue against using anything less than “whole brain death” to define death for three reasons. First, the clinical diagnostic criteria now in place to define brainstem death are much more thorough and error-free than those used to determine lesser states of brain function. Indeed, there is no full-proof way at the moment to assess human consciousness. See Laureys, *supra* note 5, at 904. Moreover, some patients thought to be in a persistent vegetative state have recovered. See *Recovered “Vegetative State” Patient Kate Adamson Speaks Before Schiavo Rally*, LIFESITENEWS (Mar. 14, 2005, 12:15PM), <http://www.lifesitenews.com/news/archive/ldn/2005/mar/05031408>; Sam Howe Verhovek, *Right-to-Die Order Revoked As Patient in Coma Wakes*, N.Y. TIMES (April 13, 1989), <http://www.nytimes.com/1989/04/13/nyregion/right-to-die-order-revoked-as-patient-in-coma-wakes.html> (providing examples of this phenomenon). Furthermore, a standard of death that applies prior to cessation of the entire brain may take society down the proverbial slippery slope of ever-expansive death definitions, until those who are, in fact, very much alive, are in effect snuffed out for their organs, or because society no longer wishes to support life it sees as useless. For an interesting article on defining death in a permanent vegetative state, and its relationship to organ transplantation, see Adrian Treloar, *Organ donation and permanent vegetative state*, THE LANCET, Jan. 17, 1998, at 212 (illustrating the boundaries of this relationship).

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moves convulsively."<sup>12</sup> These animals are unclean because they are dead.<sup>13</sup> This applies to human beings also, for there is no logical reason to differentiate between decapitated humans and animals. Both die when they lose their connection to their central, controlling organ.<sup>14</sup> The Talmud in *Chullin* 21a then records a ruling that the reference in *Oholoth* 1:6 to decapitation means the severing of the head from the body.<sup>15</sup> This seemingly obvious statement is necessary, for *Chullin* 21a records other opinions regarding what "decapitation" means.<sup>16</sup> Although it is obvious that decapitation creates a state of death, the reason why this is so should be spelled out. This is because such clarity will help us understand other texts, as well as why brain death is more controlling than cardiac death in Jewish law.

First, the four "centers" which control breathing in humans are all located in the brain.<sup>17</sup> Upon decapitation, these centers cannot communicate a command to breathe to the body, and death results. Second, another part of the brain, the "stem," controls the rate of the heart.<sup>18</sup> A brain detached from the body cannot regulate the heart, which quickly results in systemic non-circulation and death. Finally, through decapitation, the central nervous system, which consists of the brain and spinal cord, is severed from the body; the result is the brain can no longer control any of the other functions which constitute "life," including thought, memory, touch, vision, and motor

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<sup>12</sup> *Mishna Oholoth* 1:6 (I. Epstein trans.).

<sup>13</sup> *See id.* (stating an individual is not unclean because post-decapitation spasms do not signify life). For an article on death and spiritual uncleanness in Judaism generally, see Susan Handelman, *On the Essence of Spiritual Impurity*, CHABAD.ORG, [http://www.chabad.org/theJewishWoman/article\\_cdo/aid/1542/jewish/On-the-Essence-of-Ritual-Impurity.htm](http://www.chabad.org/theJewishWoman/article_cdo/aid/1542/jewish/On-the-Essence-of-Ritual-Impurity.htm) (last visited May 2, 2014).

<sup>14</sup> *See* Moshe D. Tendler, *Halakhic Death Means Brain Death*, JEWISH REV. 6 (Jan. 1990), available at <http://www.thejewishreview.org/articles/?id=114>.

<sup>15</sup> *Talmud-Mas Chullin*, in TALMUD 21a (I. Epstein trans.), available at <http://halakhah.com/pdf/kodoshim/Chullin.pdf> (last visited May 2, 2014).

<sup>16</sup> Namely, that decapitation means "severance of the spinal column in the thoracic area" with the trachea and esophagus, or "severance of the spinal column in the thoracic area coupled with perforation of . . . the trachea and the esophagus." *See* 4 J. DAVID BLEICH, CONTEMPORARY HALAKHIC PROBLEMS 318 n.4 (1995).

<sup>17</sup> These are the Inspiratory, Expiratory, Pneumotaxic and Apneustic centers. They are located in the Medulla Oblongata and the Pons regions of the brain. S. West, *Components of the Respiratory System*, AMBULANCE TECHNICIAN STUDY, <http://www.ambulancetechnicianstudy.co.uk/respsystem.html#UvQZdRZfQII> (last updated Apr. 20, 2009); *anatomy of the brain*, MAYFIELD CLINIC, <http://www.mayfieldclinic.com/PE-AnatBrain.htm#UvQS0BZfTFI> (last updated Feb. 2013).

<sup>18</sup> *See Brain Stem*, DNA LEARNING CENTER, <http://www.dnalc.org/view/2094-Brain-Stem.html> (last visited May 2, 2014) (illustrating that the brain controls the heart rate).

skills.<sup>19</sup> In fact, the brain controls every function of the body, and when it stops working death results.

Now it is true that one can die from cardiac failure even when there is no direct injury to the brain. Many Jewish and secular scholars, as well as medical experts, think that because of this, either brain *or* cardiac death, or brain *and* cardiac death should define death.<sup>20</sup> This is a mistake. Cardiac and brain death *contribute* to death equally. However, the heart and brain do not possess equal control over life. To appreciate this, imagine a decapitated body, i.e., one that contains a heart but is completely detached from a brain. Even if that heart is kept beating mechanically, and even if this is done *indefinitely*, is this person alive? She cannot speak, feel, move, or think. On the other hand, imagine someone whose brain is working, but whose heart has been medically stopped (for example, to perform an “open heart” operation), and whose blood is being circulated by machine. Such an individual will universally be regarded as “alive” even though her heart is not working. Yet another way to view this reality is that it is possible for a heart to continue to beat outside a body. A brain, on the other hand, cannot think, or perform any of its functions, after it is detached from a body. For these reasons, the function of the brain in humans and animals is of more importance than the beating of a heart. Yet many religious, medical, and lay authorities continue to believe the function of the heart provides as much evidence of death as cessation of brain function.<sup>21</sup> In fairness, this may be due to a passage in the Talmud, in *Yoma* 85a, which we now turn to.

In *Yoma* 85a, the Talmud describes a scenario in which a human being may be trapped under the rubble of a collapsed building

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<sup>19</sup> See *Central nervous system*, MEDLINEPLUS, <http://www.nlm.nih.gov/medlineplus/ency/article/002311.htm> (last updated Feb. 26, 2014) (explaining that the brain and spinal cord control all the workings of your body); see also *Nerves and Muscle Control*, KIDPORT, <http://www.kidport.com/reflib/science/HumanBody/MuscularSystem/MuscleNervousSystem.htm> (last visited May 2, 2014).

<sup>20</sup> See BLEICH, *supra* note 16, at 338-40 (describing opinions that death does not happen until cessation of cardiac function); Laureys, *supra* note 5, at 900. Also, as we shall see, the first clause of the Uniform Determination of Death Act seems to state that death can result from either cardiac or neurological death. See UNIF. DETERMINATION OF DEATH ACT § 1.

<sup>21</sup> Rastogi, *supra* note 3; see, e.g., Alan Rubinstein, Eric Cohen, & Erica Jackson, *Staff Discussion Paper: The Definition of Death and the Ethics of Organ Procurement from the Deceased*, THE PRESIDENT’S COUNCIL ON BIOETHICS (Sept. 2006), available at <https://bioethicsarchive.georgetown.edu/pcbe/background/rubenstein.html> (last visited May 2, 2014) (stating that the brain-dead body hooked up to a ventilator is not dead . . . . “In the past, whole-brain death led imminently . . . to death . . . . In the age of modern medicine it . . . [is] difficult to know when or whether death has occurred”).



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on the Sabbath. Although it is usually a capital offense to violate the Sabbath,<sup>22</sup> the Sabbath must be compromised to save human life;<sup>23</sup> even if doing so will only prolong life for a short while.<sup>24</sup> This is true even when it is doubtful whether violating Shabbat will save such life.<sup>25</sup> Accordingly, the Talmud concludes that such rubble must be cleared even on Shabbat as long as doing so may save human life. However, once it is evident that either no one is buried beneath the debris, or a trapped individual has expired, the clearing of such rubble cannot continue.<sup>26</sup> The Talmud then questions how much of a person who is buried beneath such rubble must be uncovered to determine whether she is alive. Its first answer is that the person may be uncovered only until you reach the nose. Because we can tell if someone is alive by whether she is breathing, there is no reason to continue beyond the nose. The second answer is we must stop once we arrive at the chest. This is because once we arrive at the chest, we can tell if the person is alive or dead, for life cannot be maintained in the absence of a beating myocardium. Now, although it appears initially as if the Talmud is presenting two opposing positions, this is not so. Rather, these answers reflect two different circumstances. The first imagines a case in which a person is uncovered "from the top down." Therefore, once we arrive at the nose we must stop, for if the person is alive she will be breathing. The second opinion refers to a case in which the body is uncovered "from the bottom up." Accordingly, when we arrive at the heart, first we can tell if the person is alive or dead by whether there is a heartbeat. Now, much of the confusion that concerns definitions of death may stem from a misunderstanding of this passage. This is because, although these two posi-

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<sup>22</sup> *Makkoth*, in BABYLONIAN TALMUD 23b; *Exodus* 31:15 (New King James); see also Shuster, *supra* note 8, at 971.

<sup>23</sup> See *Yoma*, in BABYLONIAN TALMUD 85b (discussing *Leviticus* 18:5); see also YOSEF KARO, SHULCHAN ARUCH 329:1-5, available at <http://www.torah.org/advanced/shulchan-aruch/classes/orachchayim/chapter24.html> (all manner of work is required on the Sabbath to save or extend human life); MISHNEH TORAH 2:1, available at [http://www.chabad.org/library/article\\_cdo/aid/935201/jewish/Chapter-Two.htm](http://www.chabad.org/library/article_cdo/aid/935201/jewish/Chapter-Two.htm). Although it is permitted to violate the Sabbath to preserve human life, at least when it comes to biblically prohibited conduct, Shabbat may not be desecrated to save animal life. See *Shabbat*, in BABYLONIAN TALMUD 128b (I. Epstein trans.), available at <http://halakhah.com>.

<sup>24</sup> See KARO, *supra* note 23, at 329:4 (stating one is required to violate Shabbat to prolong human life even for a short while); MISHNEH TORAH 2:18.

<sup>25</sup> MISHNEH TORAH 2:18; see also KARO, *supra* note 23, at 329:3 (stating that Shabbat must be violated to save even doubtful life).

<sup>26</sup> MISHNEH TORAH 2:19; see KARO, *supra* note 23, at 329:3-4 (stating that Shabbat may only be violated to save human life).

tions, i.e., respiratory failure and cardiac death, appear to be equally valid to determine death, depending on the order in which the nose or heart is uncovered, this is not the case. In fact, as we saw in *Oholot* 1:6, it is cessation of respiration that is the main Talmudic criterion of whether someone is dead. The Talmud's second opinion, i.e., that absence of cardiac function establishes death only when the person is uncovered from the "bottom up," is due to an irrebuttable presumption that once the heart is not beating, there can be no respiration. In other words, once a heartbeat is not detected there is no need to continue to violate Shabbat by removing the rubble, for, if a person's heart is not working he cannot be breathing and must be dead. If this were not the case, we would be required to continue to uncover even a non-breathing victim down to her chest to ensure she has no heartbeat. Now, it should be emphasized already at this point, that the reason why the rabbis require lack of respiration, and not lack of a heartbeat, to find someone dead is not due to an inability to breathe *per se*, but due to the fact that in Talmudic times, when society lacked the means to keep someone who could no longer spontaneously breathe alive, lack of respiration conclusively indicated a non-functioning brain.<sup>27</sup> It was, therefore, the lack of a functioning brain, or "brain death," indicated by no respiration, which conferred the status of "dead." This distinction is important, for with the help of modern technology, many patients who can no longer breathe on their own can be kept alive through mechanical ventilation.<sup>28</sup> It goes without saying that such persons are not "dead." Therefore, we will refer to Jewish law's acceptance of neurological versus cardiac death, as not being due to the absence of spontaneous respiration, but due to the fact that the absence of spontaneous respiration is *prima facie* evidence of brain failure. To recap, the Mishnah in *Oholot* 1:6 and the

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<sup>27</sup> This is clearly evidenced in another rabbinic ruling that one who has had his esophagus and trachea severed still has legal capacity to execute a bill of divorce, provided he can gesture. See *Gittin* in BABYLONIAN TALMUD 70b (I. Epstein trans.) available at <http://halakhah.com>. This is so, although the husband faces imminent death, and can obviously no longer breathe. This is because he can still presumably think. If respiratory failure were conclusive evidence of death, this man would be considered dead from the moment his vital organs, necessary for breathing, are severed.

<sup>28</sup> Linda L. Bieniek, Judith R. Fischer, Joan L. Headley & Edward Anthony Oppenheimer, *Breathing Problems of Polio Survivors*, 17 POLIO NETWORK NEWS (Spring 2001), available at <http://www.gbppa.org/breath.htm>. As is found, for example, in conditions like Amyotrophic Lateral Sclerosis (ALS), commonly referred to as "Lou Gehrig's Disease," phrenic and vagal nerve injuries, and polio. See also MDA ALS DIVISION CAREGIVER'S GUIDE 74 (2013), available at <http://als-mds.org/publications/alscare/ch3/>.

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Talmud in *Chullin* 21a, by citing decapitation as a cause of death, and the Talmud in *Yoma* 85a, by making death depend, not on asystole, but on the lack of spontaneous respiration as an indication of brain failure, suggests it is brain death and not cardiac death that determines death in Jewish law.

Moreover, both Moshe Maimonides,<sup>29</sup> and Yosef Karo,<sup>30</sup> the author of the *Shulchan Aruch*,<sup>31</sup> cite the ruling of respiratory death as legally dispositive.<sup>32</sup> Both define death according to halacha, and that may be seen in that both of them, in their rulings regarding uncovering one found on Shabbat under rubble, which mirror the Talmud, and do not require detection of a heartbeat in the presence of a lack of respiration.

### III. IS PHYSIOLOGICAL BRAIN DEATH AKIN TO DECAPITATION?

The fact that Jewish law recognizes lack of spontaneous respiration as evidence of brain failure leads to the conclusion that today, when it is possible to determine lack of brain function more precisely, even in the absence of decapitation, brain death, and not cardiac death, will create the status of a corpse according to halacha. In fact, Rabbi Moshe D. Tendler, a halachic authority and professor of biology at Yeshiva University, insists physiological brain death is the equivalent of decapitation, or "virtual decapitation," and so renders a human being dead even in the presence of a heartbeat.<sup>33</sup> For all intents and purposes, Rabbi Tendler has expanded the halachic defini-

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<sup>29</sup> Moshe Maimonides (1135-1204) was a Spanish-born philosopher, decisor of Jewish law, and physician. He wrote the MISHNEH TORAH, or "Repetition of the Torah," one of the two most authoritative codes of Jewish law and the *Guide for the Perplexed* on Aristotelian philosophy. He also served as the Chief Physician to the Egyptian Sultan Saladin. See Ben Zion Bokser, *Moses Maimonides*, ENCYCLOPAEDIA BRITANNICA, available at <http://www.britannica.com/EBchecked/topic/358539/Moses-Maimonides>.

<sup>30</sup> Yosef Karo (1488-1575) was a Spanish-born scholar, mystic and decisor of Jewish law. He authored one of the two most authoritative codes of Jewish law, known as *Shulchan Aruch*, or "Prepared Table," in Hebrew. See *Joseph Karo*, JEWISH VIRTUAL LIBRARY, <http://www.jewishvirtuallibrary.org/jsource/biography/JosephKaro.html> (last visited May 2, 2014).

<sup>31</sup> "Shulchan Aruch" means "Prepared Table," in Hebrew. It was authored by Yosef Karo, and is the more recent of the two most authoritative codes of Jewish law, the other one, known as "Mishneh Torah," or "Repetition of Torah," was written by Maimonides. Rabbis mean Karo's work when they cite the "Code of Jewish Law" without a qualifier. See *Karo*, *supra* note 30.

<sup>32</sup> MISNEH TORAH 2:19 (Eliyahu Touger trans.); SHULCHAN ARUCH, *supra* note 23, at 329:4.

<sup>33</sup> Tendler, *supra* note 14.

tion of brain death to include “total brain failure” or “cessation of the brainstem.”<sup>34</sup> This is because only the loss of brainstem function will result in the loss of all regulatory, integrative, and executive brain functions, and achieve the same loss of control over bodily functions as decapitation.<sup>35</sup> To comport with this reality I use “brain death” “total brain death” and “brainstem death” synonymously to refer to halachic brain death.

Rabbi Tendler’s position finds support in Maimonides’s *Commentary to the Mishnah Oholot* 1:6, which states that an entity cannot be considered alive when the source of its locomotion does not originate in one source, but is spread throughout the limbs.<sup>36</sup> Clearly, after actual or virtual decapitation, the power of human or animal locomotion no longer “originates from one source.”<sup>37</sup>

#### IV. BRAIN DEATH PROMOTES AND FACILITATES ORGAN TRANSPLANTATION IN JEWISH LAW

Saving human life is vitally important in Jewish law,<sup>38</sup> and utilizing a definition of brain death over cardiac death creates a broader window of opportunity to perform cadaver organ transplants to save lives. This is because tissue necrosis<sup>39</sup> – in all organs except

<sup>34</sup> Fred Rosner, *Jewish Perspectives on Death and Dying*, 2 JEWISH MED. ETHICS, No. 1 (1991), <https://www.hods.org/pdf/Death-R.Rosner.pdf>.

<sup>35</sup> See Laureys, *supra* note 5, at 899-900, 903; END OF LIFE CARE, *supra* note 11, at 7-9.

<sup>36</sup> See Fred Rosner & Moshe D. Tendler, *Definition of Death in Judaism*, 17 J. HALACHA & CONTEMP. SOC’Y 29 (Spring 1989).

<sup>37</sup> Interestingly, the Catholic Church’s reason for using a brain death definition seems to follow Maimonides; Pope John Paul II, addressing a Congress on Organ Transplants, stated that a “neurological standard is considered the sign that the individual organism has lost its integrative capacity.” John B. Shea, *Death and Catholic Church Teaching*, ALL: AMERICAN LIFE LEAGUE (Mar. 18, 2011), <http://www.all.org/article/index/id/ODcxMQ/> (internal quotation marks omitted). For Maimonides, death occurs when the power of locomotion does not originate in one source. Rosner & Tendler, *supra* note 36, at 29.

<sup>38</sup> Indeed, the Mishnah teaches, “whoever destroys a single soul, . . . it is as if he destroyed a full world; and whoever saves a soul . . . , it is as if he saved a full world.” MISHNAH TORAH 4:5 (citing BABYLONIAN TALMUD, *Sanhedrin*), available at <http://onfoot.org/print/237> (last visited May 2, 2014); Eliezer ben Shlomo, *The Obligation To Save Life*, INT’L CENTER FOR HEALTH, L., & ETHICS, available at [http://www.daat.ac.il/daat/kitveyet/assia\\_english/benshlomo.htm](http://www.daat.ac.il/daat/kitveyet/assia_english/benshlomo.htm) (last visited May 2, 2014).

<sup>39</sup> “Tissue necrosis” means the irreversible death of body tissue. It occurs when insufficient blood enters the tissues of an organ, and can be caused by radiation, injury, or chemicals. *Necrosis*, MEDLINEPLUS: TRUSTED HEALTH INFORMATION FOR YOU, <http://www.nlm.nih.gov/medlineplus/ency/article/002266.htm> (last visited May 2, 2014).

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corneas and kidneys<sup>40</sup> – starts very quickly after systemic circulation stops, and so most organs lose their transplant value unless they are harvested while blood is still circulating.<sup>41</sup> Now, although organs can be transplanted after heart death through mechanical circulation, because a heart/lung machine cannot replicate the function of a heart exactly, a cardiac definition of death will severely reduce the number and quality of organs that can be transplanted.<sup>42</sup> Therefore, although halacha does not define death as brain death in order to increase post-mortem transplants, it does promote such donations. It is, therefore, a positive act to sign living wills or organ donor cards so that in the event one experiences brain death, her organs can save the life or sight of others.<sup>43</sup>

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<sup>40</sup> Because they do not contain blood vessels, corneas may be transplanted for up to five days from the time they are harvested from a cadaver, provided they are kept in an appropriate solution and treated with antibiotics. Mea Weinberg, *Corneal Transplantation*, MEDSCAPE TODAY NEWS (2011), available at [http://www.medscape.com/viewarticle/741939\\_3](http://www.medscape.com/viewarticle/741939_3). Because kidneys deteriorate very slowly, they may be preserved outside the body for as long as thirty-six hours. Univ. of Mich. Transplant Ctr., *FAQ 24: How long can donated organs last outside the body?*, TRANSWEB.ORG, <http://www.med.umich.edu/trans/transweb/faq/q.24.shtml> (last updated Feb. 4, 2010, 3:57 PM).

<sup>41</sup> See Paul A. Byrne, *Vital Organ Transplantation and "Brain Death": A Re-Examination of the Basic Issues* by Dr. Paul A. Byrne, CATHOLICCULTURE.ORG, <http://www.catholicculture.org/culture/library/view.cfm?recnum=7952> (last visited May 2, 2014).

<sup>42</sup> See S.W. TRANSPLANT ALLIANCE, *Organ Donation After Cardiac Death*, ORGAN.ORG, [http://www.organ.org/v2/assets/documents/brochures/Brochure\\_DonationAfterCardiacDeath.pdf](http://www.organ.org/v2/assets/documents/brochures/Brochure_DonationAfterCardiacDeath.pdf) (last visited May 2, 2014) (comparing donations after brain death (DBD), in which the heart, lungs, liver, pancreas, kidneys and intestines may be recovered, with donations after cardiac death (DCD), in which only the kidneys can be recovered with a possibility of other organs).

<sup>43</sup> See Gabrielle Loeb, *Living Judaism: Judaism's perspectives on Organ Donation After Death*, THE PHILADELPHIA JEWISH VOICE (Sept. 2008), <http://www.pjvoice.com/v38/38700judaism.aspx> (explaining that many religions and secular institutions promote organ donation and donor cards, including the Rabbinical Assembly of America); see also DuBois, *supra* note 7, at 1 (explaining how the late Pope John Paul II supported organ donation); NAT'L. HEALTH SERV. BLOOD & TRANSPLANT, *Islam and Organ Donation: A Guide to Organ Donation and Muslim Beliefs*, ORGAN DONATION, [http://www.organdonation.nhs.uk/how\\_to\\_become\\_a\\_donor/religious\\_perspectives/index.asp](http://www.organdonation.nhs.uk/how_to_become_a_donor/religious_perspectives/index.asp) (last visited May 2, 2014) (demonstrating that many Muslim scholars see organ donation as an act of merit); *The Dalai Lama Closes Hamburg Visit With Call for Compassion*, HIS HOLINESS THE 14TH DALAI LAMA (July 28, 2007), <http://www.dalailama.com/news/post/141-the-dalai-lama-closes-hamburg-visit-with-call-for-compassion> (discussing how the Dalai Lama also supports organ donation); Guru Babu Gogineni, *Donating Organs, Opening Eyes*, INTERNATIONAL HUMANIST NEWS, January/February 2002, at 12, available at <http://www.docstoc.com/docs/151012880/IHEU-news-2002-revised---International-Humanist-and-Ethical-Union> (stating that humanists encourage organ donation and transplants).

## V. CONTROVERSY SURROUNDING THE DEFINITION OF DEATH AND ORGAN TRANSPLANTATION IN JEWISH LAW

That Judaism defines death as happening when brain function stops is not without controversy. Although the classic halachic position, as presented in the Talmud and codes, and confirmed by major decisors, is that brain death constitutes death in Jewish thought, some refuse to accept this and argue that a person is dead only when her heart stops beating. Reasons for this include misreading the pertinent sources, lack of medical and anatomical knowledge and expertise,<sup>44</sup> an overabundance of caution, and loyalty to certain authorities.<sup>45</sup> However, rabbinic rulings that loss of cardiac function is necessary for death are not innocuous. Because of them, some Jews will not give or receive organs until asystole occurs, at which time organ transplantation is not as optimal. An even more harmful result of not using brain death to define halachic death would be that, because, as we shall see, many jurisdictions uphold a brain death standard, a ruling that Jews may not donate organs until their hearts stop might not prevent them from accepting organs from brain dead non-Jews, who they believe fall under the secular definition of death. This could result in a given Jew being willing to receive, but not to give an organ. Aside from the grave ethical problems inherent in such non-reciprocity, the increase in anti-Semitism that such a dynamic would almost certainly cause is enormous.<sup>46</sup> One way to avoid this is to

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<sup>44</sup> Indeed, most of the halachic authorities who eschew brain death as a definition of death lack training in medical science and do not appreciate the ways medical technology augments, and at times renders obsolete, prior halachic opinions. For example, Rabbi J.D. Bleich, a foremost opponent of the brain death standard, employs medieval anatomical musings to prove cardiac inactivity is required for death. See J. DAVID BLEICH, *CONTEMPORARY HALAKHIC PROBLEMS* 378 n.10 (1977) (citing 13th century opinion that respiration is dependent on cardiac activity because breathed air warms and cools the heart). Moreover, Rabbi Bleich apparently believes doctors lack competence to determine death, which he sees as a “theological and moral problem, not a medical or scientific one.” *Id.* at 375.

<sup>45</sup> See Avi Shafran, *Winter Harvest*, SIMPLETOREMEMBER.COM: JUDAISM ONLINE, <http://www.simpletoremember.com/articles/a/judaism-brain-death/> (last visited May 2, 2014) (explaining that the cardiac death standard should be followed, due to possibility of misdiagnosis and because many rabbis do not use brain death standard); see also RAV ASHER BUSH, *HALACHIC ISSUES IN THE DETERMINATION OF DEATH AND IN ORGAN TRANSPLANTATION: INCLUDING AN EVALUATION OF THE NEUROLOGICAL “BRAIN DEATH” STANDARD* 11 (2010) (explaining that opinion on brain death may be due to loyalty of a student to the teachings of his rabbi).

<sup>46</sup> For Jews would be open to the accusation that, although they will use the organs of Gentiles to save themselves, they will not give their organs to non-Jews. At least one rabbinic authority has warned this could lead to a “blood libel.” See Yossi Schneider, *Rabbi Moshe*

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forbid those who do not wish to donate organs until their hearts stop from receiving organs from donors who are not heart dead.<sup>47</sup> However, because such an outcome will further reduce the number of viable transplants, a better solution is for rabbis who disagree with brain death to reconsider their opinion, and encourage congregants and students to favor a brain death standard.

## VI. THE SECULAR LEGAL DEFINITION OF DEATH MATCHES JUDAISM'S DEFINITION OF DEATH

Jewish law's definition of death informs the standard used throughout the civilized world to define death. In the United States, there is no federal definition of death, and each state may judge for itself when death occurs. However, as a practical matter, all states follow the Uniform Determination of Death Act, which holds that death occurs when someone has suffered "either (1) irreversible cessation of circulatory and respiratory functions, or (2) irreversible cessation of all functions of the entire brain, including the brainstem."<sup>48</sup> This Act follows the halachic definition of death in its second provision. Yet, in its first clause, the Act provides that stoppage of spontaneous systemic circulation or respiratory failure is enough to find death. This choice of language is unfortunate for two reasons. First,

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*Tendler, On Rampage, Slaughters RCA for "Dramatic Chillul Hashem" and "Nonsense," Claims Shitah is "Close to a Blood Libel"*, MATZAV.COM (Jan. 24, 2011, 9:17 AM), <http://matzav.com/rabbi-dr-moshe-tendler-slaughters-rca-for-dramatic-chillul-hashem-and-nonsense-claims-shitah-is-close-to-a-blood-libel>. "Blood libels" are accusations that Jews kill Gentile children to use their blood in rituals. They were especially prevalent in the Middle Ages. The last documented one happened as recently as 2007 in Russia. See *Blood Libel*, ZIONISM AND ISRAEL ENCYCLOPEDIA AND DICTIONARY, [http://zionism-israel.com/dic/blood\\_libel.htm](http://zionism-israel.com/dic/blood_libel.htm) (last visited May 2, 2014). For an essay about particular blood libels, see Richard Utz, *The Medieval Myth of Jewish Ritual Murder: Toward a History of Literary Reception*, in *THE YEAR'S WORK IN MEDIEVALISM* 24 (Gwendolyn Morgan ed., 1999).

<sup>47</sup> Many high profile Jews have argued this. For example, Robert Berman, founder of the British Halachic Organ Donor Society has said, "[i]f Jews don't donate organs, they should not receive organs. If a Jew who is brain dead is alive in their eyes, then so is a Gentile." See Jerome Taylor, *Britain's Orthodox Jews in Organ Donor Card Row*, THE INDEPENDENT (Jan. 24, 2011), <http://www.independent.co.uk/news/uk/home-news/britains-orthodox-jews-in-organ-donor-card-row-2193173.html?origin=internalSearch>. Also, over 100 rabbis have publicly stated that a position which encourages Jews to receive but not donate organs is "morally untenable." See Dov Linzer et al., *Rabbinic Statement Regarding Organ Donation and Brain Death*, BLOGGERS (Friday, Jan. 7, 2011), <http://organdonationstatement.blogspot.com>.

<sup>48</sup> See UNIF. DETERMINATION OF DEATH ACT §1; see also DuBois, *supra* note 7, at 2 (explaining that brain death criteria are used legally in all states).

although clause one of the Act demands “*irreversible* cessation of circulatory or respiratory functions” because one can be revived after his heart or lungs stop, the possibility of pronouncing someone dead when she is, in fact, alive or can be revived, is greater under cardiac or respiratory definitions of death than it is when brain death is used to establish death.<sup>49</sup> Second, the Act as written is confusing, for most people, in the absence of heroic measures, will expire from brain death within just four to six minutes after the heart and lungs stop.<sup>50</sup> Therefore, the two clauses of the Act essentially say the same thing in different words: we all die from lack of oxygen to the brain. This may be due to direct trauma to the brain, or to the indirect insult of cardiac or respiratory failure. Because of this, the plain meaning of the Act does not inform two different standards, i.e., death occurs when either the heart and lungs *or* the brain and brainstem stop working. However, because of how the Act is written, many persons, including medical specialists, understand it to create two definitions of death.<sup>51</sup> To prevent confusion and reduce the possibility of mistake in diagnosing death, the Act should be rewritten to omit its first clause. As it is, the Act’s second clause is the almost universally recognized standard for establishing death in the civilized world. In fact, brain death is used to define death, not only in the fifty United States, but throughout Europe, as well as in Canada, Asia, Africa, Latin America, and Australia.<sup>52</sup>

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<sup>49</sup> See Karen Dyer, *Death and the Organ Donor*, HEKTOEN INTERNATIONAL: A JOURNAL OF MEDICAL HUMANITIES, [http://www.hektoeninternational.org/Death\\_and\\_organ\\_donor.html](http://www.hektoeninternational.org/Death_and_organ_donor.html) (last visited May 2, 2014) (stating that “donation after cardiac death” is more alarming than brain death to the would-be donor).

<sup>50</sup> See, e.g., *CPR Facts and Statistics*, SPRING HILL FIRE RESCUE, available at [http://www.springhillfire.com/cpr\\_training.htm](http://www.springhillfire.com/cpr_training.htm); P. Safar, *Cerebral Resuscitation After Cardiac Arrest: A Review*, 74 *Circulation* (6 Part 2) IV 138-53 (1986), available at <http://www.ncbi.nlm.nih.gov/pubmed/3536160> (cerebral recovery hampered after five minutes of cardiac arrest).

<sup>51</sup> See END OF LIFE CARE, *supra* note 11, at 8 (“In other words, the UDDA states that a person can be declared dead when *either* the heart and lungs *or* the brain and brain stem stop functioning permanently.”).

<sup>52</sup> See WF. Haupt & J. Rudolf, *European Brain Death Codes: A Comparison of National Guidelines*, 246(6) *J. NEUROLOGY* 432 (1999), available at <http://www.ncbi.nlm.nih.gov/pubmed/10431766> (explaining that the brain death standard is accepted in all European countries); see also Shroff & Mahendran, *supra* note 11, at 1-2; Masahiro Morioka, *Brain Death and Transplantation in Japan: Some Remarks on the Proposals for the Revision of Japan’s Organ Transplantation Law*, LIFESTUDIES.ORG, <http://www.lifestudies.org/specialreport02.html> (last updated Apr. 2010) (stating brain death is death for purposes of organ transplantation); see also Laureys, *supra* note 5, at 907 (explaining that Australia and New Zealand use the brain death standard); see also D. Escudero, R. Matesanz, C.A. Soratti, & J.L. Flores,



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Not all jurisdictions *require* adherence to a brain death standard. For example, New Jersey and New York have "conscientious objection" provisions to the legal definition of death which allow such persons to not be pronounced dead until their hearts stop, and to not have their organs donated until such time.<sup>53</sup> However, this is due to a misunderstanding of when death occurs (for cardiac death swiftly results in loss of brain function). In any event, the Uniform Determination of Death Act should be rewritten without its first clause, and clergy, doctors, and educators should promote a brain death standard to facilitate more extensive organ transplantation.

## VII. ARGUMENTS AGAINST USING BRAIN DEATH TO DEFINE DEATH

One way to accomplish this is to counter arguments against brain death. For example, that brain death is insufficient, i.e., without a cardio-respiratory definition of death, we cannot be sure someone is dead.<sup>54</sup> Although there *are* recorded instances of persons who recov-

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*Brain Death in Ibero-America*, 33(9) MED. INTENSIVA 415 (Dec. 2009), available at <http://www.ncbi.nlm.nih.gov/pubmed/19833413> (stating that brain death is used to define death in all Latin American countries except Nicaragua); see also Peter Baklinski, *Canada's new 'brain death' criteria slammed as scheme to increase organ donations*, LIFESITENEWS.COM: LIFE, FAMILY AND CULTURE NEWS (Sept. 4, 2012, 11:09 PM), <http://www.lifesitenews.com/home/all-stories-on-date/2012/09/04/#canadas-new-brain-death-criteria-slammed-as-scheme-to-increase-organ-donation> ("[T]he updated CCDT criterion of death requires that only the lower part of the brain which is responsible for breathing, wakefulness, and certain other reflexes be shown to be permanently non-functional."); see also S.D. Shemie, *How Brain-Death Guidelines Protect Patients*, Full Comment, NAT'L POST (Sept. 6, 2012), <http://fullcomment.nationalpost.com/2012/09/06/sam-d-shemie-how-brain-death-guidelines-protect-patients/> ("A person who is brain dead is medically and legally dead—period.").

Because of the danger that, for the sake of their organs, brain-dead individuals may be pronounced dead before they are actually dead, Canada, like the United States, has multiple safeguards to ensure that brainstem death has in fact occurred before organs may legally be transplanted. See *id.* (explaining that the CCDT consulted with ninety leading medical experts from thirty Canadian areas and provinces to craft world-recognized and scientifically proven guidelines to govern brain death).

<sup>53</sup> See N.J. STAT. ANN. § 26:6A-5 (West 2013) ("The death of an individual shall not be declared upon the basis of neurological criteria pursuant to sections 3 and 4 of this act when . . . such a declaration would violate the personal religious beliefs of the individual."); see also N.Y. STATE DEP'T OF HEALTH, GUIDELINES FOR DETERMINING BRAIN DEATH 2 (2005), available at <https://csnsonline.org/guidelines.php?id=2> (stating hospitals must accommodate religious or moral objections to brain death as definition of death).

<sup>54</sup> See Paul A. Byrne, *Understanding Brain Death*, AMERICAN LIFE LEAGUE, <http://www.all.org/nav/index/heading/OQ/cat/MjA2/id/MjQ4OA> (stating that it is wrong not to assume that one with a beating heart is dead); see also Joe Wright, *How to Declare People*

ered after being pronounced brain dead,<sup>55</sup> the vast majority of such cases are actually due to misdiagnosis,<sup>56</sup> and today most jurisdictions have safeguards to help establish that a brain dead patient is in fact dead. Especially when brain death is narrowed to brainstem death, the possibility of an inaccurate determination of brain death in a living patient is so remote as to be, for all intents and purposes, impossible. For example, consider that in locales as diverse as the United States, the United Kingdom, and India, criteria for diagnosing brainstem death include: pupils must be fixed and unresponsive to light, there must be no corneal or oculovestibular reflexes,<sup>57</sup> no motor responses to painful stimuli,<sup>58</sup> no gag reflex,<sup>59</sup> and a positive apneic test.<sup>60</sup> There are the additional safeguards that brainstem death must be diagnosed by two doctors, each of whom has been licensed to practice medicine for some time.<sup>61</sup> Finally cerebral angiography<sup>62</sup>

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*Dead*, HEMODYNAMICS BLOG (July 1, 2007), <http://hemodynamics.blogspot.com/2007/07/how-to-declare-people-dead.html> (death should not be pronounced until heart sounds are absent for one minute).

<sup>55</sup> See Stephen Drake, *Miracles, Malpractice, Survivors and Recovery*, NOT DEAD YET (Sept. 17, 2007), <http://www.notdeadyet.org/2007/09/miracles-malpractice-survivors-and.html> (providing examples of survivors of coma and “virtual” brain death); Mike Celizic, *Pronounced Dead, Man Takes ‘Miraculous’ Turn*, TODAY.COM (Mar. 24, 2008, 10:23 AM), [http://today.msnbc.msn.com/id/23775873/ns/today-today\\_people/t/pronounced-dead-man](http://today.msnbc.msn.com/id/23775873/ns/today-today_people/t/pronounced-dead-man) (demonstrating how Zack Dunlap and others recovered after being pronounced brain dead).

<sup>56</sup> See Drake, *supra* note 55.

<sup>57</sup> A corneal reflex is an eye blink caused by the edge of the cornea being touched by a wad of cotton. See ALEXANDER G. REEVES & RAND S. SWENSON, *Facial Sensations & Movements*, in DISORDERS OF THE NERVOUS SYSTEM, CHAPTER 5 (2008), available at [http://www.dartmouth.edu/~dons/part\\_1/chapter\\_5.html](http://www.dartmouth.edu/~dons/part_1/chapter_5.html). Absence of an oculovestibular reflex means the eye does not move when water is placed in the adjacent ear. See *Determination of Brain Death*, MASS. GEN. HOSP. STROKE SERV., <http://www2.massgeneral.org/stopstroke/protocolBrainDeath.aspx> (last updated May 25, 2011).

<sup>58</sup> Motor responses, consisting of quick, jerky movements in the extremities, should be absent in a suspected brain dead patient, even after pain or vocal commands. See *Clinical Neurologic Examination*, BRAINDEATH.ORG, <http://www.braindeath.org/clinical.htm> (last visited May 2, 2014).

<sup>59</sup> A gag reflex occurs when you stick something, like a stick or breathing tube, down the throat. It is absent in one who is brain dead. See Leslie C. Olson, *How Brain Death Works*, HOWSTUFFWORKS, <http://science.howstuffworks.com/life/inside-the-mind/human-brain/brain-death.htm> (last visited May 2, 2014).

<sup>60</sup> The apneic test is considered the ultimate test to determine brainstem death. Here, supplemental oxygen is administered to the patient for five minutes before she is disconnected from the ventilator. After this, the patient is disconnected from the ventilator for at least ten minutes. In the absence of mechanical ventilation, the amount of carbon dioxide in a patient’s body will begin to rise. In someone with an intact respiratory center, this eventually causes the patient to breathe on her own. However, this will not occur in one who lacks brainstem function. See Shroff & Mahendran, *supra* note 11; see also Olson, *supra* note 59.

<sup>61</sup> For example, in England, both doctors must be registered to practice medicine for at

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and electroencephalograms<sup>63</sup> may also be used to determine brainstem death, and should be repeated at appropriate intervals.<sup>64</sup> Because it is impossible for a misdiagnosis of death to happen when these criteria are utilized, brain death diagnostic criteria are much more preferable than tests designed to find asystole or absence of respiration.

It is further objected that one reason for employing brainstem death as a definition of death is that doing so permits a greater number of organ transplants.<sup>65</sup> Although, as we have seen, this is true because it permits organs to be harvested from brain dead patients before asystole, or while such patients are mechanically circulated, using a brain dead definition of death does not derive from a desire to transplant organs before the lack of systemic circulation renders such organs useless or not as valuable, but from a realization that death occurs from the moment of whole brain death, certainly upon cessa-

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least five years. See J.M. Elliot, *Brain Death*, 5 *TRAUMA* 23, 26 (2003), available at <https://hods.org/pdf/Brain%20Death%20JM%20Elliot%20Traum%202003.pdf>.

<sup>62</sup> Cerebral angiography helps to confirm brainstem death through demonstrating lack of blood flow to the brain. An iodinated contrast substance is injected into the cerebral vessels. Because of raised intracranial pressures in those who are brain dead, the contrast dye will not flow through the brain vessels. However, due to its expense, and the risk the contrast material poses to potential organs that can be transplanted, cerebral angiography is more popular in Europe than in the United States. Mel W. Flowers, Jr. & Bharti R. Patel, *Persistence of Cerebral Blood Flow After Brain Death*, 93(4) *S. MED. J.* 364-70 (2000), available at <http://www.medscape.com/viewarticle/410525> (last visited May 2, 2014).

<sup>63</sup> An electroencephalogram, or EEG, is a test that measures and records the brain's electrical activity. It can help to confirm brain death, for a brain that is truly dead will usually not show electrical activity. See *Electroencephalogram*, WEBMD, available at <http://www.webmd.com/epilepsy/electroencephalogram-eeeg-21508?> (last visited May 2, 2014). Although EEG testing is not full proof, it is valuable as an ancillary diagnostic tool, especially when it is allowed to record for at least thirty minutes. See N.Y. STATE DEP'T OF HEALTH, *supra* note 53, at 8.

<sup>64</sup> Different jurisdictions differ regarding the time that must elapse before brain death testing is repeated. In the United Kingdom, doctors need not wait any specific period, and the interval between tests is left to their "clinical judgment." See Elliot, *supra* note 61, at 26. The American Academy of Neurology advises that repeat testing be separated by six hours, but this is arbitrary and doctors may decide differently based on their clinical experience and the unique facts of each case. See Laureys, *supra* note 5, at 902.

<sup>65</sup> See END OF LIFE CARE, *supra* note 11, at 9 (stating that one argument against the Uniform Determination of Death Act is that its "intention is to increase the number of organs for transplant"); see also Brandon Keim, *Bioethicists Save Organ Donation by Tweaking the Definition of Death*, WIRED (Jan. 13, 2009, 4:38 PM), <http://www.wired.com/wiredscience/2009/01/braindeath> (stating that people are worrying that medicine is "pushing the standard of death to get organs"); see also Elliot, *supra* note 61, at 25 (stating that transplant needs are the main reason to redefine death); *id.* at 37 (explaining that the only need for brain death definition is organ transplantation).

tion of brainstem function. Therefore, the possibility of viable organ transplantation, which brain death as a standard promotes, should not invalidate the use of brain death. To argue otherwise would be like denying the benefits of rainfall after a catastrophic storm, or of a monetary settlement due to negligence. As we have seen, the consensus of medical and religious experts is that a definition of death which employs brain death, especially brainstem death, simply reflects the reality of when death occurs.

One reason so many people are discomforted by the use of brain death to define death is brain dead patients, especially those attached to heart and lung machines, often do not “look dead.” This is because the bodies of such persons are usually still warm, and their chests rise and fall in simulation of breathing.<sup>66</sup> To counter such an impression, health care workers should remind loved ones that, although brain dead patients may not *look* dead, they in fact have passed, and even if they look alive, it is solely because machines are filling their lungs and circulating their blood.

Other arguments against a brain death standard from the field of bioethics<sup>67</sup> are: brain death is a philosophical opinion which has no basis in scientific fact,<sup>68</sup> it does not allow for the possibility that we are kept alive by a soul,<sup>69</sup> and it reduces one’s sorrows, memories, and very identity, to no more than “the behavior of a vast assembly of nerve cells and their associated molecules.”<sup>70</sup> However, the reality that we are made up of cells and molecules need not be viewed as a negative. After all, the same way great works of art are created through the placing of paint (a mastic substance that has been liquefied, applied to a substrate, and then converted to an opaque solid

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<sup>66</sup> See *Understanding Death Before Donation*, THE GIFT OF A LIFETIME, <http://www.organtransplants.org/understanding/death> (last visited May 2, 2014).

<sup>67</sup> “Bioethics” is a discipline that studies the relationship of ethics to medicine. See *Multi-Organ Transplant*, UNITED HEALTH NETWORK, [http://www.uhn.ca/MOT/About/Pages/transplant\\_bioethics.aspx](http://www.uhn.ca/MOT/About/Pages/transplant_bioethics.aspx) (last visited May 2, 2014).

<sup>68</sup> See Stéphane Bauzon, *Brain Death vs. Heart Death*, EDUBIOETHICS-PARIS WORKSHOP 41, 43 (Oct. 2007), available at <http://art.torvergata.it/bitstream/2108/78508/2/braindeath.pdf> (indicating that brain death is based on the philosophical assertion that human life is brain activity).

<sup>69</sup> See Shea, *supra* note 37 (indicating that the Catholic Church describes death as separation of soul from body and that there is no “moral certitude” that brain dead bodies are corpses); see also Byrne, *supra* note 41 (indicating that true death occurs when the soul leaves the body, but questions arise as to whether brain dead patients are truly dead).

<sup>70</sup> Bauzon, *supra* note 68, at 43 (quoting FRANCIS CRICK, *THE ASTONISHING HYPOTHESIS: THE SCIENTIFIC SEARCH FOR THE SOUL* (1994)).

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film) onto canvas, the emotions, memories and aspirations which render us human are not denigrated because they derive from biological processes. Moreover, although theologians, philosophers, and scientists have been trying to prove and locate the soul from time immemorial, they have been unable to do so. Even if we could locate a "soul," why would its existence contradict brain death? To be sure, even proponents of the existence of a soul concede that it leaves the body at *some* point, i.e., when death occurs. Why not believe this happens when the brain stops functioning?

Yet another argument against brain death is that a brain dead person, whose blood and oxygen are being (mechanically) circulated, will still show signs of life, i.e., an ability to fight infection, heal wounds, maintain body temperature and even give birth.<sup>71</sup> However, this objection presumes that a human being is alive when he is simply existing, i.e., when his organs and cells are functioning. In fact, what sets us apart from lower organisms is our ability to not merely exist, but to interact with our environment. We do this in two ways: first, we are receptive to stimuli and signals from our surroundings, and second, we can act to get what we need from our environment.<sup>72</sup>

Because these characteristics define what it means to be human, their absence may also be used to negate human status and render a human being deceased. Of course, because a human being may find herself transiently unable to be stimulated by, or interact with, her environment due to a number of reversible causes, society may only pronounce her dead and strip her of her status as a living human being when her inability to be stimulated by, and interact with, her environment is permanent.

### VIII. CONCLUSION

Judaism, through its use of a brain death standard to deter-

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<sup>71</sup> See PRESIDENT'S COUNCIL ON BIOETHICS, *CONTROVERSIES IN THE DETERMINATION OF DEATH: A WHITE PAPER BY THE PRESIDENT'S COUNCIL ON BIOETHICS* 60 (2008), available at <https://bioethicsarchive.georgetown.edu/pcbe/reports/death/> ("[E]ven in a patient with total brain failure, some of the body's parts continue to work . . . for example, to fight infection, heal wounds, and maintain temperature."); see also Emily Anne Epstein, *'It's a miracle': Family rejoice as brain dead mother 'killed' by aneurysm delivers twin boys 42 days after being put on life support*, MAILONLINE (Apr. 21, 2012, 1:25 PM), <http://www.dailymail.co.uk/news/article-2133212/Death-brings-new-life-Mother-killed-brain-aneurysm-miraculously-delivers-twin-boys.html> (revealing that a woman gave birth to twins after she was declared brain dead).

<sup>72</sup> See *CONTROVERSIES IN THE DETERMINATION OF DEATH*, *supra* note 71, at 61.

mine death, has given society a cogent, realistic, and empirical standard to decide when death occurs. Although the rabbis of the Talmud could not have envisioned that modern medical technology would allow brain death to be defined more precisely and accurately than by cessation of respiration, most of the civilized world has expanded halacha's definition of brain death to include "brainstem death," and, in that incarnation, has embraced it. Under this standard, it is virtually impossible to misdiagnose brain death. Utilizing brainstem death to define death also facilitates many more successful organ transplants. This, in turn, will ultimately benefit not only the recipients of needed organs, but all of society, including the dead donors themselves, who, in the paraphrased words of the author Mary Roach, will become "superheroes" who are employed to perform "notable achievements while dead."<sup>73</sup>

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<sup>73</sup> See MARY ROACH, *STIFF: THE CURIOUS LIVES OF HUMAN CADAVERS* 10 (2003).