



ETHICAL DEBATE OVER ORGAN DONATION IN THE CONTEXT OF BRAIN DEATH

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ABSTRACT

This study investigated what information about brain death was available from Google searches for five major religions. A substantial body of supporting research examining online behaviors shows that information seekers use Google as their preferred search engine and usually limit their search to entries on the first page. For each of the five religions in this study, Google listings reveal ethical controversy about organ donation in the context of brain death. These results suggest that family members who go online to find information about organ donation in the context of brain death would find information about ethical controversy in the first page of Google listings. Organ procurement agencies claim that all major world religions approve of organ donation and do not address the ethical controversy about organ donation in the context of brain death that is readily available online.

ETHICAL DEBATE OVER ORGAN DONATION IN THE CONTEXT OF BRAIN DEATH

The public position of organ procurement agencies worldwide is the claim that most major world religions approve of organ donation and have nothing in their theologies preventing a person from choosing to be an organ donor.¹ For example, the New York Organ Donor Network carries this typical message: ‘Most major religions encourage organ and tissue donation and at the very least allow their followers to make a personal decision in this regard.’² Guidelines offered by organ procurement agencies do not mention that in several religions, the issue of the ethics of brain-dead organ donation continues to be controversial. Obtaining consent for organ

removal from family members is an important issue as over 90% of organs for transplant come from brain-dead individuals rather than from cadavers.³ During the last 20 years, while the number of people waiting for transplants in the US has continued to increase exponentially, the number of brain-dead organ donors has held steady at between six and seven thousand per year.⁴

Around the world, there is an increasing trend for governments and ministries of health to define brain death and provide a legal path for facilitating brain-dead organ donation.⁵ In the United States, the first set of guidelines for defining brain death as a state of death was set out by physicians at Harvard Medical School in 1968. Attempts to formulate policies about the meaning of brain death have often been conducted in the context of extensive

¹ C. Gallagher. Religious Attitudes Regarding Organ Donation. *J Transpl Coord* 1996; 6: 186–190.

² *Information about Organ Donation*. Available at: <http://www.nyodn.org> [Accessed 12 July 2007].

³ UNOS statistics. Available at: <http://www.unos.org> [Accessed 1 March 2008].

⁴ Ibid.

⁵ J.M. Burns et al. Brain Death Worldwide: Accepted Fact but No Global Consensus in Diagnostic Criteria. *Neurology* 2002; 59: 470–471.

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ethical and religious debate where this legislation has been considered.⁶ Many voices have participated in the dialogue about the ethics of brain-dead organ donation, including politicians and ministry of health officials, organ donation advocates, theologians and representatives of religion, medical personnel and bio-ethicists, health reporters, and lay people.⁷ The public dialogue about the meaning of death and the ethics of brain-dead organ donation has often been controversial.⁸

Presented with a disruptive life event, in this case a hospital organ procurement team seeking consent to take organs from a brain-dead loved one who is warm and breathing sustained on life support, family members would do one of three things, say yes, say no or say they needed more time to consider this decision. It is this third option that is of interest in the current project. In such cases a family member might attempt to contact a spiritual advisor, but it is also possible that he/she might Google information on brain death and a specific religion.

Recent studies demonstrate that when people engage in online information seeking, they begin with Google as the search engine of choice, accounting for 47% of all search queries in 2007.⁹ Information seekers often limit their search to the first page of results from a Google search, and have been shown to focus attention on the first two entries with the greatest likelihood of opening up the first entry.¹⁰ In popular Google sites, the first few highlighted entries are paid for by interested parties. For example, a Google search for lung cancer conducted by the authors resulted in the first three entries sponsored by drug companies promoting cancer drugs. However, paid entries were not found in a Google search for organ donation. Seeking health information on the Internet is very common.¹¹ Of the 200 million Americans with access to the Internet, 80% accessed health-related information in 2007.¹² Medical personnel have generally found health information on Internet sites to include inaccurate

information; however, consumers have been shown to put high credence on this information.¹³

Given this high frequency of relying on Google as a first search option for information,¹⁴ it is not unreasonable to posit that while a person waits for a spiritual advisor to return your call, he or she might turn to the Internet to find out more about the ethics of brain-dead organ donation to be able to make an informed decision for their loved one. We polled thirty-five young adults in March of 2008, to see whether they would Google brain death organ donation in the situation where consent is requested to take the organs of a loved one who is brain-dead, with these results. Most respondents described themselves as heavy users of the Internet, with 90% of their Internet use devoted to various forms of online information seeking. They said they would be very likely to go to the Internet to seek health-related information and expressed the belief that the information they would find there was reliable to very reliable. Most respondents said they would try to reach their spiritual advisor as a first alternative when asked to give consent to donate organs for their brain-dead loved one, but at least half of the respondents said they would also be likely to go to the Internet on their own and see what information they could find about brain death and their religion. While it is important to point out that participants were not actually in donor families making this important decision, the choice of the Internet as a second alternative is still an interesting finding, supporting the claim that Internet-savvy young people might be likely to turn to the Internet in a situation of crisis to reduce uncertainty through online information seeking.

The inclusion criteria for website selection in this study are the sites found on the first page of a Google search using the search rubric of name of a particular religion and 'brain death'. Studies of online information-seeking behavior have shown that most people find the information they are seeking on the first page of Google results.¹⁵ The Google entries were analysed for content about brain death for sites from five major religions including Buddhism, Hinduism, Judaism, Islam, and Catholicism.¹⁶ The five religions were selected as they account for a large portion of the world's population. Content analysis

⁶ A. Akabayashi & M. Morioka. Ethical Issues Raised by Medical Use of Brain-dead Bodies in the 1990s. *Biolaw* 1991; 2: 531–538.

⁷ D. Gallimore. The Diagnosis of Brainstem Death and its Implications. *Nurs Times* 2006; 102: 28–30.

⁸ D.M. Shaner et al. Really, Most SINCERELY Dead: Policy and Procedure in the Diagnosis of Death by Neurologic Criteria. *Neurology* 2004; 62: 1683–1686.

⁹ B. Pan et al. In Google we Trust: Users' Decisions on Rank, Position, and Relevance. *J Comp Med Com* 2007; 12: 801–823.

¹⁰ Ibid.

¹¹ S.L. Ayers & J.J. Kronenfeld. Chronic Illness and Health-Seeking Information on the Internet. *Health* 2007; 11: 327–347.

¹² Internet User Profiles. Available at: <http://www.c-i-i.com/pr0106.htm> [Accessed 6 March 2008].

¹³ R.J.W. Cline & K.M. Haynes. Consumer Health Information Seeking on the Internet: The State of the Art. *Health Education Research* 2001; 16: 671–692.

¹⁴ G. Eysenbach & C. Kohler. How do Consumers Search for and Appraise Health Information on the World Wide Web? Qualitative Study Using Focus Groups, Usability Tests, and In-depth Interviews. *Brit Med J* 2002; 324: 573–577.

¹⁵ Pan et al., *op. cit.* note 9.

¹⁶ K. Krippendorff. 1981. *Content Analysis: An Introduction to Method*. Beverly Hills, CA: Sage Publishers.

examined whether the site mentioned brain-dead organ donation, the degree of explicitness of the discussion, and an assessment of whether the discussion encouraged or discouraged organ donation. Generally, controversy about the meaning of death and the ethics of organ donation in the context of brain death was observed by the fifth website. In a high percentage of the websites, there were in-depth discussions about why brain-dead organ donation is controversial. The study presents evidence for existence of an ethical debate about organ donation in the context of brain death in these religions that is not mentioned on FAQ files about religion sponsored by organ procurement agencies. A family member asked for consent to donate organs of a brain-dead loved one might be surprised to discover the extent of the ethical debate evident even from the first page of Google results.

Buddhism and brain death

Buddhists believe that organ donation is a matter of individual conscience and place high value on acts of compassion. Buddhist belief honors people who donate their organs for the advancement of science and saving lives.¹⁷

Keown (2005) explains: 'In Buddhism, there is no central authority competent to pronounce on matters of doctrine or ethics, nor is there a college or other body of Buddhist medical practitioners that exists to provide guidelines or codes of conduct for the health-care professional. Instead, individuals should follow their own consciences informed by reflection on scriptural teachings, custom and tradition, and the opinions of distinguished teachers.'¹⁸ A fundamental tenet of Buddhism is that there is virtue in the elimination of suffering. This position lends itself to acts of altruism toward those in need, and suggests that donating one's organs would be seen as a positive good.¹⁹ Even so, the first indication of a debate within Buddhism is over whether brain death means death of the conscious brain only or whether a declaration of death also requires death of the brain

stem.²⁰ A further problem occurs with the meaning of death. Buddhism has a complex set of beliefs about when the spirit of the person is thought to leave the body and whether death of the conscious brain only is the same as dying. This engenders the question of how Buddhists understand the meaning of when death has occurred.²¹ Keown (2005) explains: 'According to the most ancient authorities, death occurs when the body is bereft of three things: vitality (*ayu*), heat (*usma*), and sentiency (*viññana*). A problem for contemporary Buddhists, is how to express these three traditional indicators in terms of the concepts of modern medical science.'²² Given these questions about when the spirit of the dead person leaves the body and whether the spirit is still there in a brain-dead person, whose heart is beating and who is breathing with assistance of life support, harvesting organs in this situation potentially poses an ethical dilemma for Buddhists.

The following anecdote illustrates the ambiguity of the situation presented by brain death for Buddhists. Recently, in Boston, a 72-year-old Asian-American Buddhist man was declared brain-dead after he suffered cardiac arrest. After a week, doctors wanted to remove him from life support, but his family refused saying that a beating heart meant his spirit was not ready to move on. The family obtained a restraining order preventing the hospital from removing life support.²³ They wanted to keep him on life support until his heart stopped beating on its own. The hospital argued that his body was decomposing and that it was inhumane to keep him alive under these conditions. Ultimately he was removed from life support even though the family resisted. John Makransky, professor of Buddhism at Boston College, offered this explanation for the complication that brain death poses for Buddhists. 'Even if there is no measurable activity in the brain, many Buddhists believe that there still could be consciousness.'²⁴

The explanations that scholars, theologians and bioethicists have provided for the meaning of death may

¹⁷ *Organ Transplants and Religion*. 2007. Available at: <http://www.organtransplants.org/understanding/religion> [Accessed 1 July 2007].

¹⁸ D. Keown. End of Life: The Buddhist View. *Lancet* 2005; 366: 952–955: 952. Available at: <http://www.socialwelfare.berkeley.edu/academic/syllabi/fall07/250m/reading13.pdf> [Accessed 5 March 2008].

¹⁹ J.J. Hughes & D. Keown. Buddhism and Medical Ethics: A Bibliographic Introduction. *J Buddh Ethics* 1995; 2: 25–32. Available at: <http://www.changesurfer.com/Bud/BudBioEth.html> [Accessed 5 March 2008].

²⁰ H. Hardacre. Response of Buddhism and Shinto to the Issue of Brain Death and Organ Transplant. *Camb Q Health Ethics* 1994; 3: 585–601. Available at: <http://www.ncbi.nlm.nih.gov/pubmed/7858757> [Accessed 6 March 2008].

²¹ S.H. Sugunasiri. The Buddhist View Concerning the Dead Body Transplant Pro 1990; 22: 947–949. Available at: <http://www.changesurfer.com/Bud/BudBioEth.html> [Accessed 5 March 2008].

²² D. Keown. *op. cit.*, p. 952.

²³ M. Tench. 2006. *After Buddhist Dies, Legal Battle Continues: Kin, Hospital Split on When Death Occurs*. *The Boston Globe* 3 December. Available at: http://www.boston.com/yourlife/health/other/articles/2006/12/03/after_buddhist_dies_legal_battle_continues [Accessed 13 December 2006.]

²⁴ *Ibid.*

offer a possible explanation for the reluctance of many Asians and Asian-Americans to participate in organ donation registration. This debate is clearly reflected in websites discussing Buddhism and brain death. Any Buddhist person with a brain-dead loved one who consulted these websites might be reluctant to consent to donating organs as there is ambiguity about the meaning of death described on these sites and about the ethics of organ donation when the brain-dead person is sustained on life support. What is clear from examining available documents on organ procurement and religious websites is that there is discrepancy between procurement agency claims that Buddhism encourages individual decisions about organ donation and the intensity of the internal ethical debate on Buddhist-based websites about when death has occurred and the ethics of removing organs from someone who is brain-dead.

Hinduism and brain death

Donation of organs is an individual decision for Hindus.²⁵

Two concepts are central to Hinduism: *dharma*, which is about virtuous personal conduct and *karma*, which is the belief that all acts have positive or negative consequences in the next life. Firth (2005) described that in Hinduism a good death is marked by all of the following events. 'Just before death, a person is laid on the floor or ground symbolizing Mother Earth with the head to the north. Ganges water and a *tulasi* (basil) leaf are placed in the mouth of the dying individual. Signs of a good death are a shining forehead and a peaceful expression, with the eyes and the mouth slightly open indicating that the soul has left from these orifices. Bad deaths are violent, signified by vomit, feces, urine, and an unpleasant facial expression.'²⁶ A relative's failure to perform rituals associated with a good death will mean that the person who fails to carry out these rituals will have bad luck, nightmares, illness, and infertility. Fire is carried from the home to the cremation ground where the eldest son ignites the pyre at the feet of his dead mother or the head of his father. It is critical that cremation take place soon after death to prevent the soul of the dead person from re-entering the dead body and bringing evil onto the family. After ten days, the relatives perform a cleansing ritual (men shave their heads and women wash their

hair), and the belief is that the soul of the departed holding onto a cow's tail is finally able to cross the *Vaitarani*, a dangerous river, into the land of the dead.²⁷ In the traditional Hindu belief system, it is important not to short-circuit any of these rituals and to keep the body of the deceased intact until the time of cremation soon after death. There is a large, recently constructed, conservative Hindu temple with an active congregation of worshippers near the university where this study was conducted. To what extent traditions for a good death are maintained by Hindu immigrants in the United States has not been investigated.

Nagral (1995) observed that while both Hindu and Vedic religious scholars accept the concept of brain death as death, 'organ transplantation is not just about surgery. It touches a host of other issues – legal, social, emotional, religious – that have to be addressed with sensitivity and thoroughness. No other field of medicine has raised so many ethical, moral, legal and social issues as has organ transplantation.'²⁸

Judaism and brain death

All branches of Judaism support and encourage donation. In 1991, the Rabbinical Council of America approved organ donations as permissible, and even required, from brain-dead patients.²⁹

There are four major movements within Judaism including Orthodox, Reform, Reconstructionist, and Conservative Judaism. In traditional Jewish religion, bodies are not embalmed and are buried undisturbed and quickly after death as a manifestation of respect. The belief is that a person must be buried whole for the coming of the Messiah. Internal discussion within the Jewish religion about whether it is permissible to harvest organs for transplant from a brain-dead person is a source of debate. Of all the websites visited in this investigation, the websites that were most explicit about the connection between brain death, the teachings of religion and organ donation were those found for the Jewish religion. These websites were clear about the meaning of brain death and the tenets of Judaism. While all streams of Judaism permit Jews to donate organs at death, there is contro-

²⁵ *Hindu Death Practices*. 2007. Available at: <http://Encyclopedia Britannica Online> [Accessed 1 September 2007].

²⁶ S. Nagral. Ethics of Organ Transplantation. *Indian J Med Ethics* 1995; 3: 1–10: 10. Available at: <http://www.ijme.in/032ed019.html> [Accessed 1 March 2008].

²⁷ *Organ Transplants and Religion*. 2007. Available at: <http://www.organtransplants.org/understanding/religion> [Accessed 1 July 2007].

²⁵ *Brain Death and Religion*. 2007. Available at: <http://www.organtransplants.org/understanding/religion> [Accessed 9 September 2007].

²⁶ *Ibid*: 683.

versy among Orthodox Jews regarding whether brain death also comports with the halachic definition of death.³⁰ There is clear awareness of what brain death organ donation entails on these sites and anyone going there for help will get a clear explanation of what family consent in this situation means.

In 1986, the leading Rabbis of the Jewish faith including the Chief Rabbinate of Israel ruled that 'death would be determined by clear knowledge of the cause of injury, absolute cessation of natural breathing, clinical proof that the brain stem is indeed dead, and objective proof such as the BAER test that the brain stem is dead for at least 12 hours under full and normal treatment.'³¹ Most Rabbis agree that the greatest mitzvah (good deed consistent with any of the 613 commandments given in the Torah)³² that a person can perform is to save a life of another. Hence this mitzvah trumps all other mitzvahs about preserving the integrity of the body of the dead person. Even so, in spite of this strong theological argument supporting brain-dead organ donation, several websites reveal that there is still some major opposition offered to organ donation from brain-dead donors from Orthodox Rabbis.

What's more, neither American Jews nor Jews in Israel consent to register as organ donors. The rate of registration is very low (only 3% in Israel); according to Robert Berman, founder of the Halachic Organ Donation Society, Israel was expelled from the European Union Organ Donor Network because they accepted donations but did not donate organs in reciprocal numbers.³³ Feld, Sherbin, and Cole (1998) observed that nearly half of the Jews in an Ontario community in Canada reported that they believed that organ donation violated Jewish law.³⁴ So even though the Jewish religion characterizes organ donation as the highest mitzvah (altruistic deed) a person can do and most Rabbis would support this position strongly, in practice, North American and Israeli Jews generally do not register to become organ donors.

Islam and brain death

The religion of Islam believes in the principle of saving human lives. Most Muslim scholars have invoked the

principle of priority of saving human life and have permitted organ transplant as a necessity to procure that noble end.³⁵

Islam has spread across a wide geographic area including India, Pakistan, Afghanistan, Indonesia, Malaysia, China, and the Philippines in addition to the Middle East. In the United States, Islam is the fastest growing religion currently with about 5 million American Muslims. The five pillars of Islam include: 'declaration of faith in God and the mission of the prophet (*shahadah*), undertaking canonical worship (*salat*), fasting during the month of Ramadan (*saum*), supporting the underprivileged through charity (*zakat*), and completion of the pilgrimage (*hajj*) to Mecca at least once in a lifetime.'³⁶

Websites reveal a lack of unanimity among Muslim jurists regarding organ donation in the context of brain death. For example, an article in *Islamic Voice* advocated: 'After trustworthy doctors certify that the brain stem has died, organs needed to save others' lives might be taken from the body and then the life support machine may be switched off.'³⁷ But there are others who disagree with this statement of Islamic law. Sachedina (2005) says: 'If three attending physicians attest to a totally damaged brain that results in an unresponsive coma, apnea, and absent cephalic reflexes, and if the patient can be kept alive only by a respirator, then the person is biologically dead, although legal death can be attested only when the breathing stops completely after the turning off of life-saving equipment.'³⁸ Waiting until after the respirator is turned off and the patient stops breathing is too late for harvesting organs.

An even greater metaphysical stumbling block described by Abdulaziz et al. (2007) is the Islamic concept of death. 'Death in Islam is an active process, a transition for the soul from the material world to a spiritual world. Brain death, technically, is not considered death as far as Islamic metaphysics is concerned. That is not to say that Islamic scholars have not recognized the clinical role of brain death. However, as concerns end-of-life rituals, a person is not considered to be dead until the body has become cold and rigor mortis sets in. In this sense, the family should be allowed to stay with the patient and continue with end-of-life rituals until cardiopulmonary arrest is complete and the signs of death have become

³⁰ *Judaism and Organ Donation*. 2007. Available at: <http://www.jewishsf.com> [Accessed 9 September 2007].

³¹ *Jewish Beliefs about Organ Donation*. 2006. Available at: <http://www.pjvoice.com/v8/8701donation.html> [Accessed 9 September 2007].

³² Available at: <http://www.Wikipedia.com> [Accessed 10 April 2008].

³³ Y.A. Breitowitz. *The Brain Death Controversy in Jewish Law*. Available at: <http://www.jewishvirtuallibrary.org/jsource/Judaism/braindead.html> [Accessed 6 March 2008].

³⁴ *Ibid*.

³⁵ A. Sachedina. End of Life: The Islamic View. *Lancet* 2005; 366: 774-779. Available at: <http://people.virginia.edu/~aas/article/article6.htm> [Accessed 3 March 2008].

³⁶ *Ibid*: 774.

³⁷ *A Juristic Ruling Regarding Organ Transplant*. 1998. Available at: <http://OrganTransplantandIslam> [Accessed 1 September 2007].

³⁸ Sachedina, *op. cit.* note 35, p. 775.

apparent to the laity.³⁹ Given this set of beliefs linked to Islamic theology, the reluctance of family members to allow physicians to cut into the breathing body of their loved one being sustained by life support is understandable and this set of beliefs is not easily reversed.⁴⁰

Other more conservative Islamic websites are less supportive of any kind of organ donation. 'The bequest (Wasiyyat) of a person that after his death, his organs be donated is forbidden in Shariah.'⁴¹ Another conservative Islamic website offers this advice: 'Organ donation would be considered the forbidden desecration of the body of a Muslim. Reception of such an organ obtained under those circumstances would be opposed.'⁴² The opinions represented on these websites show that brain death organ donation is a source of controversy for followers of Islam.

Catholicism and brain death

Catholics view organ and tissue donation as an act of charity and love. Transplants are morally and ethically acceptable to the Vatican.⁴³

Catholics seeking guidance from their religion may find a very conservative approach to organ donation and brain death if they look to official Vatican texts or to Catholic theologians. Google results for Catholicism and brain death list a webpage from www.catholicculture.org featuring an article by Paul A. Byrne, MD, a regular contributor to the site. He writes: 'In the past, physicians took the time needed to determine death because they did not wish to treat the living as dead. Today, however, death is often declared for reasons not related to the patient's welfare – such as organ transplantation, cost containment, and propagation of the euthanasia movement. How did this change occur?' The author implies that proper end-of-life medical procedures have given way to an ideology of turning human organs into commodities in recent years.

³⁹ A. Abdulaziz et al. Organ Donation after Brain Death 2007. *Saudi J Kidney Dis Transpl* 18(1): 60–64. Available at: <http://www.sjkd.org/temp/SaudiJKidneyDisTranspl18160.123158.pdf> [Accessed 5 March 2008].

⁴⁰ A.F. Ebrahim. Organ Transplantation: Contemporary Sunni Muslim Legal and Ethical Perspectives. *Bioethics* 1995; 9: 291–302.

⁴¹ M.E. Desai. 2007. *Report of the Council of Muslim Theologians*. Bishopgate, South Africa. Available at: <http://www.jamiat.org.za>. [Accessed 25 January 2007].

⁴² Islam and Organ Donation. 2007. Available at: http://jmahoney.com/middle_eastern_family_rel_groups.htm [Accessed 11 October 2007].

⁴³ *Catholicism and Organ Donation*. 2007. Available at: <http://www.organtransplants.org/understanding/religion> [Accessed 11 October 2007].

The tone of the page – and indeed the article – is anti-organ donation, and ultimately argues for a conservative attitude toward organ donation. Byrne (1999) asserts that certain organ donations are permissible during life, and certain are permissible during death, but in cases where the removal of organs would transform a patient from arguably dead to indisputably dead, organ removal is not permissible.⁴⁴

Byrne's question is the same as ours: Where can one go for guidance in these serious moral matters of determination of brain death and organ donation? Byrne makes the case that Catholicism is clear about its stance that Catholics should give life the benefit of the doubt, and not presume certain states are irreversible. This attitude is exemplified in an address by Pope John Paul II to the participants of the 1989 Pontifical Academy of Sciences. He stated: 'There is a real possibility that the life whose continuation is made unsustainable by the removal of a vital organ may be that of a living person, whereas the respect due to human life absolutely prohibits the direct and positive sacrifice of that life, even though it may be for the benefit of another human being who might be felt to be entitled to preference.' However, Pope John Paul II also stated that neurological death consists of 'the complete and irreversible cessation of all brain activity in the cerebrum, cerebellum, and the brain stem.'⁴⁵

This ambiguous dictum, coupled with the implicit message that any life that is entirely and indefinitely dependent on machines is not life, leaves enough of a window for some Catholics to argue that death may occur while a heart is still beating, and that therefore, certain vital organs may be removed while they are still useful to the recipient. On the other hand, Byrne and other conservative Catholic theologians come to the opposite conclusion, saying that if the separation of the body and life cannot be verified, or if there is doubt about the separation of the body and life, organ excision is morally prohibited and should not be allowed. These websites show that there has not been a definitive ruling by the Catholic Church on brain death organ donation and that Catholic theologians and bio-ethicists continue to debate harvesting organs from a brain-dead person.

⁴⁴ P.A. Byrne. Catholics and Organ Donation. *Homilet Pastor Rev* 1999; 25: 63–85. Available at: <http://www.cwnews.com/news/viewstory.cfm?recnum=35044> [Accessed 4 April 2008].

⁴⁵ John Paul II. 2000. *Address of the Holy Father John Paul II to the 18th International Congress of the Transplantation Society, 29 August 2000*. p. 2. Available at: http://www.vatican.va/holy_father/john_paul_ii/speeches/2000/jul-sep/documents/hf_jp-ii_spe_20000829_transplants_en.html [Accessed 8 March 2008].

DISCUSSION AND IMPLICATIONS OF THE STUDY

Health-information-seeking theory suggests⁴⁶ that when people receive a medical diagnosis that they do not fully comprehend, such as the declaration that someone that they care about is brain-dead and will never recover, they are likely to seek information online where copious, easily available information is readily accessible. While there are more sophisticated health-information search engines, Google is the default search engine for most users of the Internet, handling a staggering 26% of all Internet traffic.⁴⁷ If family members of a brain-dead person sustained by life support go online to see what their religion has to say about the ethics of brain-dead organ donation, they are likely to learn that brain-dead organ donation is controversial in the five religions included in this study. The first page of the Google search results listed for each of these religions reveals a substantial amount of ethical debate on the issue of brain-dead organ donation.

The claim of organ procurement agencies, promoted on their websites, that all major world religions approve of organ donation, doesn't tell the whole story of the ethical debate in many religions on the meaning of brain death and organ donation and the difficulty that such decisions pose for many families confronted with the request to donate organs of a loved one. This analysis of five major world religious organizations about brain death and organ donation shows that the situation has greater ambiguity and complexity than the simple religious endorsement suggested by organ procurement websites. The websites included in this study are sites that people would be likely to see first if they seek information online. The controversy about the meaning of brain death extends beyond lay people to politicians and planners, health reporters in the mass media, theologians and

ministers of religion, and to members of the medical community and bio-ethicists who continue to debate the definition of brain death.⁴⁸ The ethics of organ donation in the context of brain death is not as clear as organ procurement agencies' claim about approval would suggest. This is an important issue for procurement agencies because the discrepancy between the need for organs and their availability has continued to increase.⁴⁹

Organ donation and procurement agencies are silent on the topic of organ donation in the context of brain death. These agencies might benefit from publicly weighing in on this issue and becoming part of the ethical dialogue about organ donation in the context of brain death, if they wish to have any further impact on persuading additional people to consider organ donation in the context of brain death. The course of silence that procurement agencies have pursued on this issue appears to be counterproductive and failure to address this important issue appears to contribute to people's concern about the ethics of organ donation in the context of brain death. The evidence analysed in this study demonstrates the existence of an extensive, heated ethical debate on religious websites about organ donation in the context of brain death. Learning about these ethical concerns might prompt online information seekers to refuse to give consent to donate organs of a loved one who is brain-dead. It is important for procurement agencies to find arguments supporting the ethics of organ donation to allay these fears and to encourage consent when organs sustaining life are in such great demand.

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⁴⁶ Ayers & Kronenfeld, *op. cit.* note 11.

⁴⁷ Google Usage Statistics. Available at: http://www.alexa.com/data/details/traffic_details/Google.com [Accessed 6 March 2008].

⁴⁸ J. McMahon. The Metaphysics of Brain Death. *Bioethics* 1995; 9: 91–126.

⁴⁹ UNOS statistics, *op. cit.* note 3.