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The Future of Organ Transplantation: From Where Will New Donors Come, To Whom Will Their Organs Go?

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HEALTH MATRIX: Journal of Law-Medicine

THE FUTURE OF ORGAN TRANSPLANTATION: FROM WHERE WILL NEW DONORS COME, TO WHOM WILL THEIR ORGANS GO?

Mark F. Anderson†

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I. INTRODUCTION TO THE ORGAN SHORTAGE

ON JUNE 14, 1993, sixty-one-year-old Robert Casey, governor of Pennsylvania, underwent a rare¹ heart-liver transplant at Presbyterian Hospital in Pittsburgh.² While the operation went extremely well and the governor returned to the governor's mansion to finish his term,³ much of the nation's attention focused not on the details of the operation and the governor's prognosis, but on the circumstances surrounding his receipt of the organs. In many ways, the governor was a very lucky man. At the time of his operation, the average wait for a new heart was 198 days; for a new liver, sixty-seven days.⁴ Thousands were dying each year before an organ became available.⁵ The governor himself had only days to live. Fortunately for him, he beat the odds and received his organs after waiting for only one day.

While Governor Casey was awarded his organs in full compliance with existing policies on organ procurement and allocation,⁶ his case raises two broad questions. First, why is

1. Governor Casey was only the seventh person to receive such a transplant, and at 61 years of age, among the oldest. Don Colburn, *Gov. Casey's Quick Double Transplant; How Did He Jump to the Top of the Waiting List?*, WASH. POST, June 22, 1993, at Z8.

2. The operation was necessary because the governor's heart and liver had been destroyed by a rare disease called familial amyloidosis. Lisa Belkin, *Fairness Debated in Quick Transplant*, N.Y. TIMES, June 16, 1993, at A16.

3. Casey's doctor has predicted that Casey will live at least another 10 years. See Russell E. Eshleman, Jr., *A Year After Transplant Surgery, Casey is Going Strong*, PHILADELPHIA INQUIRER, June 7, 1994, at A1. The governor still experiences minor setbacks, such as rejection episodes, but they have been controlled so far by changes in medication. *Id.* Casey finished his second term as governor in January, 1995. In March 1995, he announced his intention to run against President Clinton in the 1996 presidential primaries. He withdrew from the race only one month later, however, citing concerns about whether he had the stamina to run a two-year race. See Catherine Manegold, *After 4 Weeks, Ex Governor Ends '96 Challenge to Clinton*, N.Y. TIMES, Apr. 19, 1995, at B12.

4. Colburn, *supra* note 1.

5. In 1993, 2889 people died on the waiting list. UNITED NETWORK FOR ORGAN SHARING, 1994 ANNUAL REPORT OF THE U.S. SCIENTIFIC REGISTRY OF TRANSPLANT RECIPIENTS AND THE ORGAN PROCUREMENT AND TRANSPLANTATION NETWORK, app. at H-2 (1994) [hereinafter 1994 ANNUAL REPORT].

6. Available hearts and livers are generally given to people who are medically eligible (having a compatible size and blood type), who are closest to death, and who have been waiting the longest to receive an organ. See 1993 UNITED NETWORK FOR ORGAN SHARING, UNOS POLICIES, at 3-15 to 3-22 (as of June 30, 1993) [hereinafter UNOS POLICIES].

there such a severe shortage of organs available for transplantation, and what, if anything, could or should be done about it? Second, assuming the continued existence of an organ shortage, how is it that those organs which are available should be allocated? This Article will explore these issues in some detail.

The first successful solid organ⁷ transplant was performed in 1954, a kidney transplant between identical twins.⁸ By the late 1960s, kidney transplants had become a standard therapy for treating kidney failure.⁹ Problems with organ rejection,¹⁰

Lacking any national guidance, however, on combined heart-liver transplants, the local organ procurement agency in Pittsburgh had adopted a policy of giving priority to those awaiting a combined heart-liver transplant over those needing a heart or a liver alone. Colburn, *supra* note 1. Governor Casey happened to be the only person on the list for the two organs, so when a combined heart and liver became available from the same donor, he got them. *Id.* The United Network for Organ Sharing (UNOS), the nonprofit organization under contract to the United States Department of Health and Human Services for national transplantation policy coordination, has since adopted a new policy requiring that patients waiting for heart-liver transplants be placed on the individual lists for each organ. When they become eligible to receive an organ on one list, they will then be offered the second organ from the same donor. See Karen Pallarito, *Pennsylvania Governor's Transplant Prompts Change in Policy*, MOD. HEALTHCARE, July 12, 1993, at 18. Local transplant organizations must follow UNOS policies to remain eligible for Medicare and Medicaid reimbursement by the federal government. See also 42 U.S.C. § 1320b-8(a)(1)(B) (1988). Elsewhere in this Article, I argue that Governor Casey should not have received his organ transplants, but for different reasons.

7. "Solid organ" means kidney, heart, liver, lung, pancreas, or any of the digestive organs. In subsequent references, the phrases "solid organ" and "organ" are used interchangeably. This Article will not focus, for the most part, on transplants of renewable body products, like blood and bone marrow, which generally come from living donors, and on other body tissues, such as corneas, bones, and skin, which, while not renewable, are generally not needed to save lives but to improve quality of life. Transplantation of solid organs is worthy of separate attention because it raises more troublesome ethical issues. First, as currently practiced, someone usually has to die before these solid organs become available for transplant. Second, if the organs are not made available, the patient who needs the organ usually dies. These two facts combine to create extraordinary pressures to find new and more productive donor sources.

8. See John P. Merrill et al., *Successful Homotransplantation of the Human Kidney Between Identical Twins*, 160 JAMA 277, 277 (1956) (discussing the process involved with transplanting a kidney, which had not been performed up to that date).

9. See John Lantos & Mark Siegler, *Re-evaluating Donor Criteria: Live Donors*, in THE SURGEON GENERAL'S WORKSHOP ON INCREASING ORGAN DONATION: BACKGROUND PAPERS 271, 272 (1991). By 1978, more than 40,000 kidney transplants had been performed worldwide. See RUSSELL SCOTT, *THE BODY AS PROPERTY* 19 (1981).

10. Rejection is the phenomenon whereby the immune system of the organ recipient recognizes the transplanted tissue as foreign and seeks to destroy it. Much the same process is at work when the body seeks out and destroys foreign bacteria or viruses which threaten the health of the body. The severity of the rejection phenomenon can be reduced if organs are transplanted between donors and recipients whose HLA antigens (the proteins on cell surfaces which control the rejection process) are similar. For an in-depth discussion of the rejection process and its management, see Charles Chandler & Edward Passaro, Jr., *Transplant Rejection: Mechanisms and Treatment*, 128 ARCHIVES SURGERY 279 (1993).

however, prevented significant numbers of transplants for other organs from occurring until 1983, when the anti-rejection drug cyclosporine was approved for general use.¹¹ From that point on, the number of solid organ transplants performed each year in this country mushroomed, exceeding 18,000 by 1994.¹²

Unfortunately, there is an upper limit on the number of organs currently available for transplantation.¹³ Most organs are taken only after the donor's death,¹⁴ and only certain of the deceased are appropriate donors. Most donors are individuals whose brains have died but whose heartbeat and respiration are artificially maintained by mechanical ventilators. According to legal definition,¹⁵ these individuals are dead, so their organs can be removed without fear of criminal prosecution based on a claim that the organ removals caused the patient's death. The artificial maintenance of respiration and circulation allows the organs to remain healthy and fully oxygenated until the moment they must be removed from the donor's body for transplantation.¹⁶ Organs have been obtained from an average of ap-

11. See Peter Gorner, *Wonderworker: Despite Rejection, He Pursued an Odd White Mold that Brought Transplant Surgery Back to Life*, CHI. TRIB., Dec. 28, 1988, at C1 (discussing the use of cyclosporine).

12. United Network for Organ Sharing, *Facts About Transplantation in the United States*, May 4, 1995 [hereinafter UNOS 1995 Facts] (available from UNOS, P.O. Box 13770, Richmond, VA 23225-8770).

13. This same limitation is not true for some tissue transplantations, like bone marrow and blood, where the potential exists to meet the needs of all for donated material. The reason is that people can donate these kinds of tissue while they are still alive without incurring substantial long-term risk to their health. See Mark F. Anderson, *Encouraging Bone Marrow Transplants from Unrelated Donors: Some Proposed Solution to a Pressing Social Problem*, 54 U. PITT. L. REV. 477, 478-79 (1993).

14. There are exceptions. Living donations of kidneys are possible and fairly common. Partial liver and lung donations also can be made by living donors under certain circumstances. For more on these issues, see text at notes 106-56 *infra*.

15. A majority of states have adopted the Uniform Determination of Death Act that states: "An individual who has sustained . . . irreversible cessation of all functions of the entire brain, including the brain stem, is dead." UNIF. DETERMINATION OF DEATH ACT § 1, 12 U.L.A. 386 (1980).

16. Before organs are actually removed, physicians circulate a cold preservative solution throughout the donor's body to begin the process of preparing the organs for removal. As soon as the organs are removed, they are placed in a preservative solution at a temperature only a few degrees above freezing. See Anthony M. D'Alessandro et al., *Current Status of Organ Preservation with University of Wisconsin Solution*, 115 ARCHIVES PATHOLOGY LABORATORY MED. 306-307 (1991). The standard practice is to transplant hearts and lungs within four hours of removal, livers within 16 hours, and kidneys within 48 to 72 hours. See United Network for Organ Sharing, *UNOS Statement of Principles and Objectives of Equitable Organ Distribution* 28-29, 32-33 (1994). Waiting any longer usually means the transplant will fail.

proximately 4500 such donors in each of the last four years.¹⁷ For recipients of these donated organs, short-term prognosis is reasonably good. The one-year success rate for both kidney and heart transplants now exceeds 80% and for liver transplants is more than 70%.¹⁸

Unfortunately, there are many more candidates for organ transplantation than there are donors. As of May 4, 1995, 39,845 people were waiting for new organs,¹⁹ a figure that has continued to grow for as long as records have been kept. The sense of urgency for these patients depends on the type of organ they need. About 75% of these patients are waiting for a new kidney. Until a replacement kidney is found, artificial kidney machines, using a process known as dialysis, can keep most of them alive for a number of years, albeit with a less desirable quality of life.²⁰ Persons in need of other solid organ trans-

17. Roger W. Evans, *Organ Procurement Expenditures and the Role of Financial Incentives*, 269 JAMA 3112, 3113 (1993) (providing data on organ donor supply in the United States from 1990 to 1992); Amanda Husted, *Health Watch*, ATLANTA CONST., Jan. 12, 1994, at B4 (showing a slight increase for 1993 to 4824 donors).

18. 1994 ANNUAL REPORT, *supra* note 5, app. at E-7. These figures are based on 1992 data, the latest year for which national numbers are available. If historical trends have continued, success rates should be even higher today. The one-year patient survival rates are even better than the organ survival rates. In the case of kidneys, when a transplant fails, the patient can return to dialysis. See *infra* text accompanying note 111. In the case of liver or heart transplants, if an organ fails, retransplants are sometimes done. See *infra* note 194.

Unfortunately, long-term organ survival has not kept pace with short-term results. The typical transplanted organ lasts about seven years, a percentage that has not changed much over time. Apparently, the only way to improve long-term success significantly is to ensure a close tissue match between donor and recipient. See Paul I. Terasaki, *Histocompatibility Testing in Transplantation*, 115 ARCHIVES PATHOLOGY & LABORATORY MED. 250 (1991).

19. UNOS 1995 Facts, *supra* note 12.

20. Artificial kidney machines do not perform as well as a real kidney, so patients often feel tired and anemic. The machines also require the patient to come for treatment two or three times a week for four to six hours per visit. Many patients on dialysis are unable to stay employed and must go on disability. For a description of some of the problems facing patients on dialysis, see ROGER GABRIEL, A PATIENT'S GUIDE TO DIALYSIS AND TRANSPLANTATION 71-76 (3d. ed. 1987). In recent years, the drug recombinant human erythropoietin has alleviated some of the anemia-related problems for dialysis patients. See Roger W. Evans et al., *The Quality of Life of Hemodialysis Recipients Treated with Recombinant Human Erythropoietin*, 263 JAMA 825 (1990). Even when using the drug, however, many dialysis patients still experience pain (57%), fatigue (58%), and continued unemployment (only 23% are able to hold a job, the same percentage as before use of the drug). *Id.* at 828. Kidney transplants, therefore, still offer a better quality of life. Most kidney recipients return to their normal life patterns following a successful transplant. See Ralph E. Tarter et al., *Quality of Life Before and After Orthotopic Hepatic Transplantation*, 151 ARCHIVES INTERNAL MED. 1521 nn. 4-8 (1991). For some patients, dialysis is no longer an option. For them, the choice is either a new kidney or death. In 1993, for example, 1277 people died awaiting a kidney transplant. 1994 ANNUAL REPORT,

plants are not so lucky. For those with end-stage liver,²¹ heart,²² or lung disease, organ transplantation is the only alternative to an early death.²³ And for at least one-third of these patients, death comes before a new organ.²⁴

Watching a patient die when there is no cure for her disease is difficult enough. It becomes even more difficult when a

supra note 5, app. at H-9. The long-term survival for dialysis patients who receive transplants is significantly better than for those who remain on dialysis. See Friedrich K. Port et al., *Comparison of Survival Probabilities for Dialysis Patients vs. Cadaveric Renal Transplant Recipients*, 270 JAMA 1339, 1340 (1993).

21. Medical researchers are working on creating an artificial liver. Their task is made more difficult by the complexity of the liver's function. It is a biological laboratory, simultaneously removing toxins, manufacturing enzymes, and storing food energy. The only way to replicate its functions is to build a device which uses liver cells from animals or human beings to perform the necessary chemical magic. Current devices undergoing testing will probably suffice to buy extra time for transplant patients as they wait for an organ to become available. There is, of course, no guarantee that a new liver will become available even if the patient is able to wait a few extra months. Scientists also hope that the new devices will allow the livers in some patients to mend while the machine takes over some of the liver function. See Marilyn Dunlop, *Artificial Livers Being Developed*, TORONTO STAR, Nov. 27, 1993, at K2.

22. Scientists have been working on developing an artificial heart for many years. In 1982, the first artificial heart intended as a permanent replacement was implanted in Dr. Barney Clark. He lived for 112 days. The device, known as the Jarvik heart named after its inventor, was subsequently implanted in four other patients, one of whom lived 620 days. The heart created serious quality of life problems for the patients. It was connected by six-foot tubes to a refrigerator-sized air compressor outside the patient's body. The tubes caused repeated infections. Blood clots generated by the heart caused a number of strokes. For a history of the project, see William C. DeVries, *The Permanent Artificial Heart: Four Case Reports*, 259 JAMA 849 (1988) (describing the clinical courses of four patients who received the Jarvik artificial heart). The Jarvik heart also was used as a temporary bridge for about 150 patients who were awaiting transplants. Lawrence K. Altman, *U.S. Halts the Use of Jarvik Heart*, N.Y. TIMES, Jan. 12, 1990, at A20. Because of manufacturing defects, the Food and Drug Administration withdrew its approval for the heart's use in 1990. *Id.* Other temporary heart replacements, both total and partial (the ventricular-assist device) continue to be used for patients on transplant waiting lists. See Kathy McCabe, *To Mend a Broken Heart*, BOSTON GLOBE, Feb. 13, 1994, at 80. Work also continues on building a totally implantable replacement heart (with its own internal power source) aided by grants from the federal government. The year 2000 is the current goal for a workable device. *Id.*

23. Those awaiting a pancreas transplant share a fate more akin to that of those looking for a new kidney. Pancreatic transplants are done to cure diabetes. Until a replacement pancreas is found, patients can usually be maintained by supplemental insulin injections. Accordingly, while there were 771 pancreas transplants performed in 1993, only 3 patients died while waiting for one. See 1994 ANNUAL REPORT, *supra* note 5, app. at D-18, H-9. A transplant is superior to insulin injections because it produces a better quality of life for the patient and because it can reduce the incidence of diabetic complications, such as kidney disease. See Paul R. Robertson, *Seminars in Medicine of the Beth Israel Hospital, Boston: Pancreatic and Islet Transplantation for Diabetes—Cures or Curiosities*, 327 NEW ENG. J. MED. 1861 (1992).

24. Stuart J. Youngner et al., *Ethical, Psychosocial and Public Policy Implications of Procuring Organs from Non-Heart-Beating Cadaver Organs*, 269 JAMA 2769 (1993).

cure has been developed but the patient still dies because there is a shortage of the curative agent. As organ supply has failed to keep pace with organ demand,²⁵ pressure has grown to find new sources of organs. A number of proposals have been made to obtain more solid organ donors. They divide into two major categories — those intended to increase donations from the living and those intended to increase donations from the dead.²⁶ After examining many of these proposals, this Article concludes that the primary emphasis should be placed on increasing donations from living donors. Such a course would maximize the overall number of lives saved while simultaneously reducing the unsavory reliance on increasingly ghoulis-

25. Altruism may not be the only thing motivating those who seek to increase the supply of transplantable organs. The number of organ transplant centers in recent years has ballooned. Just as hospitals compete to offer the latest high-tech diagnostic machinery, so they compete to offer the latest in transplant technology. But these transplant centers need to be supported financially. And the only way to make them pay their way is to have more transplants. While there were 164 heart transplant programs in the country in 1993, they performed only 2298 heart transplants that year, an average of only 14 transplants for each program. See United Network for Organ Sharing, *Facts About Transplantation in the United States*, Apr. 20, 1994. Fierce competition exists among transplant programs for those organs that are available. In 1994, for example, two western Massachusetts hospitals left an organ-sharing organization based in Boston for one based in Hartford, Connecticut so that they could keep more of the kidneys coming from donors in their area for their own patients. See Richard Saltus, *Two Mass. Medical Centers Pull Out of N.E. Organ Bank*, BOSTON GLOBE, July 14, 1994, at 1 (Metro). Fewer transplant centers with more procedures being performed at each center would produce better results at a lower cost.

26. This Article will not address "high-tech" fixes for the transplantation problem which may become available in the future. Two in particular show promise — transplants from animals (known as xenografts) and artificial (mechanical) replacements. Xenografts have been tried on several occasions in recent years but with uniformly poor results. Because the tissue differences between animal and human are so great, they generate a rejection response, known as the "complement reaction," that is far more powerful than the normal rejection response which results from human-to-human transplants. The complement reaction cannot be controlled by ordinary anti-rejection drugs. However, scientists are now developing genetically altered pigs whose organs will contain human proteins on their cell surfaces. With these human proteins, the pig organs will be able to fool human immune systems into thinking that the organs are human. If that can be accomplished, rejection problems will be no more difficult than with regular human-to-human transplants and will be controllable with already available anti-rejection drugs. As with any research agenda, success is by no means assured, and even if all obstacles are overcome, the operational status is a number of years away. See generally Philip J. Hiltz, *Gene Transfers Offer New Hope for Interspecies Organ Transplants*, N.Y. TIMES, Oct. 19, 1993, at C3 (stating that the medical community is developing techniques and technology to avert rejection of transplanted organs by the body's immune system). Recent reports from researchers in England claim that human trials will begin in three years. See *Pigs Bred for Transplant Organs*, CHI. SUN-TIMES, Mar. 30, 1994, at 34. Regarding artificial replacements, see *supra* notes 21 and 22 for a brief discussion of the status of the artificial liver and artificial heart.

niques for scavenging organs from the dead and dying. The Article also will address the troubling question of what limitations, if any, should be placed on the actions of living donors, either in terms of the risks they assume or of the rewards they receive. Finally, the Article will discuss how to make the most rational use of those organs that are available for donation, emphasizing the need to maximize benefits while minimizing injustice. Throughout the discussion, this Article will attempt to determine whether in our enthusiasm to save one group of patients and families, we are running roughshod over the interests of another.²⁷

II. OBTAINING MORE DONORS

A. Cadaveric Donors

The total pool of potential organ donors, that is, those people whose brains have died but whose other vital organs remain in good shape and whose circulation and respiration are being

27. Another subject this Article will not address is whether allowing, let alone encouraging, organ transplantation makes economic sense. This Article assumes our society will provide the necessary resources to transplant whatever organs become available. The general trend in recent years has been to make transplantation more widely available, both under private insurance and under the federal Medicare and Medicaid programs. UNITED NETWORK FOR ORGAN SHARING, ANNUAL REPORT OF THE U.S. SCIENTIFIC REGISTRY FOR ORGAN TRANSPLANTATION AND THE ORGAN PROCUREMENT AND TRANSPLANTATION NETWORK, at IV-8 to IV-10 (1990) [hereinafter, 1990 ANNUAL REPORT]. The ability to pay for a transplant is a critical factor in making it on an organ waiting list. *Id.* at IV-11. See also Arthur L. Caplan, *Obtaining and Allocating Organs for Transplantation*, in HUMAN ORGAN TRANSPLANTATION 5, 6 (Dale H. Cowan et al., eds., 1987) (wherein Caplan invented the phrase "green screen" to describe the practice of limiting transplants to those who can pay). Organ transplantation procedures are very expensive. First-year costs for the average liver transplant, for example, exceed \$200,000, for the average heart transplant, \$140,000, for the average lung transplant, \$240,000. See 1990 ANNUAL REPORT, *supra*, at IV-7; Jon R. Doud et al., *The Loyola University Lung Transplant Experience*, 153 ARCHIVES INTERNAL MED. 2769 (1993). Based on the cost estimates in these two reports, the total transplant bill for 1993 was \$1.3 billion (excluding the \$600 million spent on kidney transplants since they are cheaper in the long run than dialysis). One advantage of the current shortfall in organ supply is that it helps control the number of actual transplants performed. The nation is currently involved in a struggle to make health care services available to all while simultaneously reducing the rate of growth in health care expenditures. Achieving the goal of universal healthcare at an affordable price will certainly be more difficult if expensive procedures like transplants are made widely available. If the current need for all transplants were satisfied based on the estimates in the Evans study, *infra* note 74, the annual bill for organ transplants alone (exclusive of kidney transplants) would exceed \$13 billion. Even these estimates probably underestimate the actual cost because, except for lung transplants, they are based on 1988 data and do not take into account costs incurred in subsequent years for medication and other follow-up medical care. See *id.*

artificially maintained, is currently estimated to be no more than about 11,000 each year.²⁸ Under existing federal law, all hospitals wishing to retain their eligibility for Medicare and Medicaid reimbursement must adopt written procedures to "assure that families of potential organ donors are made aware of the option of organ or tissue donation and their option to decline."²⁹ Many states also have adopted similar requirements.³⁰ For a variety of reasons, however, these procedures are often honored in the breach. Families must be asked about organ donation at the same time that they have just learned of their family member's death. It is a very emotional and sensitive period, made even more so by the sudden and unexpected nature of the death.³¹ Health care professionals are understandably reluctant to intrude at this time with questions about organ retrieval.³² Even when the donor family is approached, permission to remove organs is denied almost half of the time.³³ It is, of course, possible for the potential donor herself to choose before death whether to donate her organs. Unfortunately, fewer than 20% of all Americans fill out an organ donor card

28. Roger W. Evans, *The Potential Supply of Organ Donors*, 267 JAMA 239, 243 (1992).

29. 42 U.S.C. § 1320b-8(a)(1)(A)(i) (1988 & Supp. I 1989).

30. See, e.g., UNIF. ANATOMICAL GIFT ACT § 5(b), 8A U.L.A. 47 (1987), now adopted in fifteen states.

31. Brain death which qualifies one as an organ donor is ordinarily caused by car accident, stroke, gunshot wound, or other sudden injury. See 1994 ANNUAL REPORT, *supra* note 5, app. at B-4.

32. One study of midwestern hospitals found that 25% of hospitals with emergency rooms or trauma centers (the type of hospitals most likely to admit patients who would become potential organ donors) had no experience with organ or tissue donation. See Arthur L. Caplan & Beth Virnig, *Is Altruism Enough?*, 6 CRITICAL CARE CLINICS 1007, 1013 (1990). And in those institutions which *did* have experience with organ or tissue donation, many potential donors were not recruited. *Id.* at 1014. Arthur Caplan, the bioethicist who first proposed the required request procedure, has since expressed anger over the health care profession's reluctance to comply with society's "collective desire" and has argued that health care personnel "need to be taught to make requests, or if they are too discomfited by death, to yield authority over matters pertaining to procurement to those more adept at dealing with this harsh reality." Arthur L. Caplan, *Professional Arrogance and Public Misunderstanding*, 18 HASTINGS CENTER REP. 34, 37 (1988). Organ procurement organizations, those groups responsible for locating transplantable organs and arranging for their transportation to recipients, now usually offer to have their own personnel (who have no pre-existing relationship with the patient's family and who have a vested interest in acquiring the organs) approach the family. Query the wisdom of such a system.

33. 1990 ANNUAL REPORT, *supra* note 27, app. at N-2. See also Caplan & Virnig, *supra*, note 32 at 1014 (describing the results of a survey of hospital personnel responsible for actually requesting organ donations from next-of-kin, many of whom report consent rates of only 25%).

or otherwise indicate before death their desire to donate their organs.³⁴ Even in those cases where a donor card has been filled out, many hospitals make it a policy also to gain family approval. If the family says no, the organs are not taken.³⁵ The result is that only 4500 cadaveric donors are obtained each year, considerably less than the 11,000 or so that are potentially available.

1. Presumed Consent

One way to increase the yield is to adopt a system of presumed consent. Under this approach, an affirmative consent from the donor or the family is not required. Consent will be *presumed* without evidence to the contrary. Proposals differ in the extent to which they would offer opportunities to object. Under so-called "quasi-presumed consent," reasonable efforts must be made to contact the deceased's family to ensure that there is no objection to removal of the organs. Only if the family cannot be contacted within a reasonable period may the organs be taken without consultation.³⁶ Under a "pure" presumed consent system, organs may be removed without seeking permission so long as neither the donor nor the family has managed to register an objection.³⁷

Advocates of either form of presumed consent make two claims for this system of organ procurement—that it frees the family from having to make a difficult choice under traumatic

34. See Diane L. Manninen, *Public Attitudes and Behavior Regarding Organ Donation*, 253 JAMA 3111, 3112 (1985).

35. See the discussion at notes 55-69 *infra*.

36. See Daphne D. Sipes, *Does it Matter Whether There is Public Policy for Presumed Consent in Organ Transplantation?*, 12 WHITTIER L. REV. 505, 524-26 (1991) (discussing presumed consent statutes).

37. *Id.* at 526. The only pure presumed consent statutes adopted to date have been for removal of corneal and pituitary tissue. *Id.* at 524-26. No doubt this is anomaly occurs because corneas and pituitary glands can be taken long after the patient has been removed from life-support systems and without significantly altering the patient's post-mortem appearance. See, e.g., MICH. COMP. LAWS § 333.10202 (2)(c) (1993) (stating as one of the requirements for cornea removal that it not "alter postmortem facial appearance"). In other words, no one from the family will realize it has been done. For a list of jurisdictions which have adopted pure presumed consent for pituitary glands, corneas, or both, see Erik S. Jaffe, Note, *"She's Got Bette Davis[s] Eyes": Assessing the Nonconsensual Removal of Cadaver Organs under the Takings and Due Process Clauses*, 90 COLUM. L. REV. 528, 535 n.35 (1990) (listing 17 such jurisdictions). An ethics organization called the Communitarian Network, founded by sociologist Amitai Etzioni, has endorsed the pure presumed consent concept for all organs. See *Mandatory Organ Donation Sought*, N.Y. TIMES, Dec. 23, 1992, at C7.

circumstances³⁸ and that it would produce greater numbers of organs for transplantation.³⁹ Both claims are debatable. As to the first, it is true that families of the deceased are placed in an extremely difficult situation when they are asked to donate organs. Family members are usually in a state of shock and acute grief. The death of their loved one has come suddenly, not gradually, and they were not prepared for it.⁴⁰ A hospital emergency room provides neither the necessary time nor the proper environment for making a truly informed decision.⁴¹ Nevertheless, under a quasi-presumed consent system, the family still has to make a very difficult decision under very difficult circumstances. Under this system, the decision is whether to veto an organ donation that would otherwise proceed. While it may be more difficult to say no, it is no less traumatic to decide.⁴² Even under pure presumed consent, the practical realities of solid organ donation are such that it is hard to imagine how organs can be removed without the family finding out and being forced to decide, once again, whether to object to the procedure. If family members are at the hospital, and the patient's body is being maintained on artificial support systems, as most organ donors are, the family will want to be there when the machines are turned off. That does not happen until the organs are first removed, events that will be hard to keep from the family's view. In addition, once the system of pure presumed consent has been in operation for awhile, families can be expected to become aware of the new standard practice. In those cases where the families object to organ donation, we can anticipate that they would be more forthcoming about their opposition to donation and would not wait to be asked for their consent. In fact, they will have to worry about whether they can raise their objections quickly enough.⁴³

38. See, e.g., Arthur L. Caplan, *Organ Transplants: The Cost of Success*, HASTINGS CENTER REP. Dec. 1983, at 23, 25-28 (explaining the difficulties experienced by families who are grieving); Jesse Dukeminier, Jr., *Supplying Organs For Transplantation*, 68 MICH. L. REV. 811, 830-31 (1970).

39. Caplan, *supra* note 38, at 28.

40. See *supra* note 31 (identifying the leading causes of death for solid organ donors as stroke, car accident, and shootings).

41. See Caplan, *supra* note 38, at 25-27.

42. See Theodore Silver, *The Case for a Post-Mortem Organ Draft and a Proposed Model Organ Draft Act*, 68 B.U. L. REV. 681, 706 (1988).

43. Moreover, experience in many European countries that have adopted a pure presumed consent system shows that doctors still ask families for their approval before they

Presumed consent also may not be that much more effective as a way to procure organs. If the quasi-presumed consent system is adopted, families who objected under the old system would still object under the new one. There might be a modest increase in donations if families were told that normal procedure is to donate, if we assume that this would increase pressures to conform and "to do the right thing." On the other hand, one would think that pressures are already fairly high to approve donations under the current system. After all, what good are the organs to the deceased, particularly when there are others whose lives could be saved by these organs? The only certain change would be for those patients whose families were difficult to locate, for example, the homeless, the displaced, and the rest of society's unfortunate.⁴⁴ While a pure presumed consent system would probably do a better job of increasing the number of donations,⁴⁵ even here, because of the practical difficulties discussed earlier, many families would learn about the organ removal anyway, either by direct observation or by awareness of the change in law regarding the need to ask for consent, and would be able to express any opposition they might have to the procedure, thereby reducing the number of organs made available for transplantation.

There are additional reasons for opposing adoption of the pure presumed consent system. First, it risks violating the basic rationale for presumed consent. The primary justification for any presumed consent system is that it effectuates the true

remove organs. The societal norm against ignoring the family viewpoint is just too strong. See Maxwell J. Mehlman, *Presumed Consent to Organ Donation: A Reevaluation*, 1 HEALTH MATRIX 31, 40-41 (1991); Jeffrey M. Prottas, *Organ Procurement in Europe and the United States*, 63 MILBANK MEMORIAL FUND Q. 94, 102 (1985).

44. Robert Veatch, *Routine Inquiry About Organ Donation — An Alternative to Presumed Consent*, 325 NEW ENG. J. MED. 1246, 1247 (1991).

45. This result is particularly likely in the case of corneas and pituitary glands, where removal can take place long after the patient has been declared dead and life support systems withdrawn. By that time, no one is around to object. Corneas, for example, are routinely removed up to six hours after the patient's death. See Council on Scientific Affairs, American Medical Ass'n, *Report of the Organ Transplant Panel: Corneal Transplantation*, 259 JAMA 719, 720 (1988). Over 40,000 corneal transplants were performed in 1990. See Francis W. Price et al., *Five Year Corneal Graft Survival: A Large Single Center Patient Cohort*, 111 ARCHIVES OPHTHALMOLOGY 799, 799 (1993). That number is four times the number of kidney transplants done during the same period. See 1994 ANNUAL REPORT, *supra* note 5, at ES-15. (Kidneys are the next most commonly transplanted organ.) Corneal transplants restore sight to people suffering from a variety of eye disorders. Their success rate is very high. See Price, *supra*, at 799.

desires of the parties. So, for example, when an unconscious patient is brought into the emergency room, treatment is begun on the assumption that this is what the patient and/or the patient's family would have wanted if they had been able to choose.⁴⁶ Few would debate this point. Yet our experience to date clearly shows that many individuals and their families do not wish to consent to organ removal.⁴⁷ Accordingly, it is not reasonable to presume their consent.

Widespread opposition to a presumed consent system is also a distinct possibility. Several public opinion polls have shown the American public to be decidedly cool to presumed consent.⁴⁸ Moreover, families have already challenged the validity of presumed consent laws in a number of court cases⁴⁹ related to corneal transplants, the only transplant type for which presumed consent has been used to generate significant numbers of organs.⁵⁰ While most courts have generally upheld the constitutionality of such programs, in the most recent case, *Brotherton v. Cleveland*,⁵¹ the court held that the practice of removing corneas from the deceased's eyes without even exam-

46. See Veatch, *supra* note 44, at 1247.

47. See text at note 33 *supra*.

48. See, e.g., Dilip S. Kittur et al., *Incentives for Organ Donation?*, 338 THE LANCET 1441, 1443 (1991) (52% opposed, 39% in favor, 8% undecided); Manninen, *supra* note 34, at 3114 (86.5% opposed). Moreover, when organs or tissues have been removed without getting required consents under existing laws, the next-of-kin have been very upset. In one recent case, for example, the Philadelphia medical examiner removed the brains from 26 patients without getting consents from the families. The brains were sent to the University of Pennsylvania Medical School, apparently for use in anatomy classes. When the story leaked out, a number of lawsuits were filed against the city, and a number of families were very upset. See Walter F. Roche, Jr., *Relatives Learn the City Removed the Brains of Their Dead*, PHIL. INQ., June 16, 1994, at A1.

49. See, e.g., *Brotherton v. Cleveland*, 923 F.2d 477 (6th Cir. 1991); *State v. Powell*, 497 So.2d 1188 (Fla. 1986), *cert. denied*, 481 U.S. 1059 (1987); *Georgia Lions Bank, Inc. v. Lavant*, 335 S.E.2d 127 (Ga. 1985), *cert. denied*, 475 U.S. 1084 (1986); *Tillman v. Detroit Receiving Hosp.*, 360 N.W.2d 275 (Mich. Ct. App. 1984).

50. See Sipes, *supra* note 36, at 524-26. Presumed consent laws also have been used to remove pituitary glands from dead bodies, not to transplant them but to collect human growth hormone from them for treatment purposes and for scientific study. *Id.* at 524. In 1985, however, the Food and Drug Administration determined that several patients had contracted a fatal disease known as Creutzfeldt-Jakob syndrome from growth hormone shots. Since that time, the naturally derived product has not been used to treat people. Drug companies have since learned to create the hormone synthetically and have been able to produce more than enough of the hormone to meet demand. See Kristin E. Holmes, *Jumping at the Chance to Be Taller*, PHIL. INQ., June 28, 1992, at H1. The laws allowing removal of pituitary glands without family consent also have generated significant public opposition. See Sipes, *supra* note 35, at 517 n.58.

51. 923 F.2d 477.

ining the patient's medical records (examination, in this case, would have revealed that the decedent's wife had expressly refused to authorize such a gift) was an unconstitutional deprivation of property interests without due process of law.⁵²

Even though these corneal removal programs require a relatively minor intrusion into the body of the deceased, an intrusion that is not easily detected, they have still generated a surprising amount of opposition. This opposition does not bode well for more generally applicable presumed consent laws which would require removal of organs and tissue while the patient was still on life-support equipment and would cause much greater violations of bodily integrity.

Pure presumed consent also could operate to undermine faith in the health care system. The secrecy of the system challenges the family's belief that all appropriate efforts were made to save the life of the organ donor. Even under the best of circumstances, where the family is fully informed about the patient's condition, treatment, and prognosis, when the patient dies and the family is asked to consent to organ donation, family members may wonder whether the patient was allowed to die in order to make organs available for others who could make "better" use of them. When organs are taken in secret, suspicions will intensify. Secrecy implies that there is a need to hide something, and the family could easily conclude that the something being hidden is less than adequate care for the deceased.

A final problem with pure presumed consent laws is that they ignore those interests from the donor side of the equation which deserve the most protection. The current system of organ procurement shows a great deal of respect for the wishes of the donor. But once the donor dies, she is not the one who is going to be affected by what we do to her body.⁵³ The people who *are*

52. *Id.* at 482.

53. Those who do not agree with this proposition generally have religious beliefs that stress the importance of bodily integrity for the deceased in connection with proper preparation for the afterlife. See the discussion at note 68 *infra*. People with these kinds of religious beliefs could present problems for a pure presumed consent system. In particular, pure presumed consent laws may run afoul of their rights under federal law. Under the Religious Freedom Restoration Act of 1993 (enacted by the Congress to reverse the Supreme Court's decision in *Employment Division, Department of Human Resources of Oregon v. Smith*, 496 U.S. 913 (1990)—see note 68 *infra* for further discussion), no governmental body may substantially burden a person's free exercise of religion unless it has a

going to be affected are the family members she leaves behind. They are the ones who must live with the decisions that are made. Unless we are ready to adopt a system that gives the state complete control over the body of the deceased at the in-

compelling interest in doing so that cannot be served by a less restrictive means. 42 U.S.C. § 2000bb-1 (Supp. V 1993). While there are questions as to whether the statute really means what it says here — the statute also says that its purpose is to restore the compelling interest test as it existed in previous cases, which is not the test spelled out in the statute itself — I assume for present purposes that the statute should be interpreted as stated in its operative language. For more on this interpretation issue, see David M. Smolin, *The Free Exercise Clause, the Religious Freedom Act, and the Rights to Active and Passive Euthanasia*, 10 ISSUES LAW & MED. 3, 39-40 (1994)). When applying this new statute to presumed consent laws, several questions must be addressed. First, whose interest in free exercise of religion is being protected? Probably not that of the deceased, because dead people are generally not thought of as having rights that extend beyond the grave. Cf. *Hodel v. Irving*, 481 U.S. 704 (1987) (finding a “taking” of a property owner’s interest under a federal statute which prevented the devise or descent of the property because the property right was taken from the owner while the owner was still alive, unlike the instant case of presumed consent law where the deceased could always make her opposition to organ donation known while she was still alive and the “taking” only occurs after the patient’s death and only if the patient has not previously expressed her opposition). The family’s interest in the deceased’s body is generally characterized as an exclusive right of control over the body for purposes of burial or other disposition. The family has a cause of action against anybody who interferes with this right. See RESTATEMENT (SECOND) OF TORTS § 868 cmt. a (1979). In this case, then, the interest being burdened by presumed consent laws would be the next-of-kin’s right to dispose of the body intact, without organ removal, according to their religious beliefs. Presumed consent laws could allow organs to be taken against the family’s wishes.

The key question then becomes whether the state’s interest in doing this can be characterized as compelling and as the least restrictive alternative available. It probably is compelling. Life saving measures are among the most favored in constitutional balancing tests. See, e.g., *Jacobson v. Mass.*, 197 U.S. 11, 26-28, 30 (1905) (upholding compulsory smallpox vaccination law); *Planned Parenthood of Southeastern Pa. v. Casey*, 112 S. Ct. 2791, 2821 (1992) (reaffirming *Roe v. Wade*’s holding that state’s compelling interest in protecting the life of a viable fetus justifies the prohibition of abortion after viability). However, presumed consent may not be the least restrictive alternative available for saving lives. The state could, for example, offer to pay donors (or their families if the donor is dead) for organs, and that approach might very well produce many more organs than a presumed consent system would. See the text at notes 157-82 *infra* for a discussion of the advisability of such an approach. Or it could engage in enhanced public education efforts to convince more people of the need to donate. In any event, the least restrictive alternative test would be a difficult hurdle to overcome for any presumed consent system.

For Orthodox Jews, organ donation also can present problems because of the Orthodox definition of death. For the Orthodox, death is determined by the irreversible cessation of breathing and cardiac activity. According to many rabbinic authorities, this definition means that a person being maintained on an artificial respirator, although meeting the legal definition of death, is still alive and that the removal of vital organs — heart, lung or liver — cannot be permitted, because it would constitute murder. Therefore, presumed consent for Orthodox Jews present serious ethical problems. See Abraham Twerski, *Jewish Perspectives*, in *NEW HARVEST: TRANSPLANTING BODY PARTS AND REAPING THE BENEFITS* 187, 190-93 (C. Don Keyes ed., 1991); Mehlman, *supra* note 43, at 50.

stant of death,⁵⁴ something that even presumed consent advocates are unwilling to do, we also should pay attention to the families of the departed and seek their active approval instead of doing our best to avoid their input.

The actual operation of the current system for procuring solid organs for donation recognizes the value of deferring to the wishes of the next of kin. Under the original (1967) version of the Uniform Anatomical Gift Act (currently in effect in thirty-six states), if an individual makes a decision during her lifetime to donate her organs, and that decision remains unrevoked at the time of her death, her decision does not also require the approval of her family.⁵⁵ Nevertheless, it has been the almost universal practice of medical personnel to seek the approval of the deceased's family even if the deceased has filled out an organ donor card or some other relevant document to indicate that she wishes to donate her organs.⁵⁶ If the family refuses or cannot be located, the organs are not taken. The reasons for not acting are many, including concerns about inflicting additional emotional distress on the grieving family and a fear of bad publicity.⁵⁷ The Uniform Act was amended in 1987, in part to make it even clearer that consent of next of kin was not required,⁵⁸ but there is as yet no evidence that prac-

54. An occasional voice has proposed doing just that. Under a system known as mandatory consent, the state would be allowed to remove all organs suitable for transplantation regardless of the wishes of the deceased or her family. *See, e.g.*, Silver, *supra* note 42, at 706. Needless to say, few have seconded this notion. It suggests a kind of totalitarianism with which most Americans have traditionally been very uncomfortable. If presumed consent is not acceptable, *a fortiori* mandatory consent would not be acceptable either.

55. UNIF. ANATOMICAL GIFT ACT § 2 (1968), 8A U.L.A. 99, 99-100 (1993). In the comments to this section, the drafters state that subsection (e) of this section "gives legal effect to the right of the individual to dispose of his own body without subsequent veto by others." *Id.* at 100.

56. *See* UNIF. ANATOMICAL GIFT ACT § 2 (1968) cmt., 8A U.L.A. 36-37 (1993); TASK FORCE ON ORGAN TRANSPLANTATION, U.S. DEP'T OF HEALTH & HUMAN SERVICES, ORGAN TRANSPLANTATION: ISSUES AND RECOMMENDATIONS 29 (1986) (stating that physicians almost always require consent of the next of kin); Thomas Overcast et al., *Problems in the Identification of Potential Organ Donors*, 251 JAMA 1559, 1561 (1984) (stating that most medical personnel seek approval from the deceased's family even if an organ donor card is completed).

57. *See* Overcast, *supra* note 56.

58. UNIF. ANATOMICAL GIFT ACT § 2(h) (1987), 8A U.L.A. 33, 36 (1993) (stating that once a donor has decided to make an anatomical gift, the decision cannot be vetoed after the donor's death).

tices have changed in the fifteen jurisdictions that have adopted the new version of the act.⁵⁹

Some may question the wisdom of a policy that does not automatically defer to the wishes of the deceased with respect to organ donation.⁶⁰ After all, the common law has long respected the wishes of the deceased regarding the disposition of real and personal property.⁶¹ Why not do the same regarding the disposition of the body?

Several factors argue against this solution. First, under the law of wills, there are limitations on the testator's ability to control the disposition of his real and personal property. For

59. See, e.g., Aaron Spital, *The Shortage of Organs for Transplantation: Where Do We Go From Here?*, 325 NEW ENG. J. MED. 1243, 1244 (1991) (noting the limited effectiveness of the Uniform Anatomical Gift Act despite intensive efforts); A. David Tammello, *Organ Donation: Whose Decision is it Anyway?*, REGISTERED NURSE, Nov. 1993, at 61, 63 (discussing health care providers liability concerns); *Health Watch: Clearing up Confusion About Donating Organs*, L.A. TIMES, May 3, 1994, at E7 (noting that organ procurement agencies will not take organ's without family consent).

60. One writer has even suggested a cause of action by potential organ recipients against those medical personnel who fail to honor a donor's request to donate organs because they are unable to obtain the consent of next of kin. See Daniel G. Jardine, Comment, *Liability Issues Arising Out of Hospitals' and Organ Procurement Organizations' Rejection of Valid Anatomical Gifts: The Truth and Consequences*, 1990 WISC. L. REV. 1655, 1667-78 (1990). Besides being questionable policy, the proposal also confronts difficulties in attempting to identify the appropriate defendants to sue, which the author acknowledges. *Id.* at 1680-86. How is one to know which of the hundreds of people who die each day left organ donor cards that were not honored by their hospital?

61. This respect is generally not, however, a question of constitutional right. The ability to devise one's property at death can be severely restricted by the state. See *Irving Trust Co. v. Day*, 314 U.S. 556, 562 (1942) (stating that the U.S. Constitution does not forbid states from limiting the power of testamentary disposition over property); WILLIAM J. BOWE & DOUGLAS H. PARKER, 1 PAGE ON THE LAW OF WILLS § 3.1, at 62-63 (3d ed. 1960); Daniel J. Kornstein, *Inheritance: A Constitutional Right?*, 36 RUTGERS L. REV. 741, 767-69 (1984). The Supreme Court has held, however, that a law which abolishes both devise and descent of property rights causes a taking of the owner's property right which must be compensated under the Fifth Amendment's Just Compensation Clause. *Hodel v. Irving*, 481 U.S. 704, 716-18 (1987).

There do not appear to be any problems with the constitutionality of the proposal to defer, in case of conflict, to family desires over those of the deceased regarding donation of organs. The limitation on control over the body is partial, not total. In addition, there is nothing being taken. In the *Irving* case, the property at issue went to the Native American tribe of which the decedent was a member. *Id.* at 718. Here, the organs stay with the deceased (who, under current law, could not be paid for them even if they were donated). Finally, there is no state action here. The hospital, generally a private party, is deferring to the wishes of another private party regarding disposition of the remains of a third. The state is not involved. Cf. *Bowen v. American Hosp. Ass'n*, 476 U.S. 610, 630 (1986) (plurality opinion) (finding that a hospital's refusal to operate on a newborn baby with Down's syndrome did not constitute violation of § 504 of the Rehabilitation Act prohibiting discrimination based on disability, when the refusal was based on the lack of parental consent).

example, the testator is not allowed to disinherit her spouse. If she attempts to do so, her spouse may typically elect to take one-third of the testator's estate as his own, against the testator's will.⁶² And although *children* in this country *can* be disinherited,⁶³ most other common law countries also allow the court to make necessary adjustments in a will to avoid injustice for otherwise disinherited children.⁶⁴ The analogy to our situation is clear: Just as the testator should not be able to dispose of her financial property so as to injure the important *financial* interests of her family, so should she not be able to dispose of her bodily parts so as to injure the important *emotional* interests of her family.⁶⁵

Some might argue that the family has no important emotional interests in the donation decision and that this proposal threatens a substantial impairment of the autonomy rights of the deceased merely to protect the squeamishness of family members. But there is much more than simple squeamishness at stake. The transplantation process unleashes very powerful emotions. The donor's family members often feel an intense interest in the organs that have been donated. They feel that a

62. See, e.g., 20 PA. CONS. STAT. § 2203 (1994); N.Y. EST. POWERS & TRUSTS LAW § 5-1.1(a)(1)(A) (McKinney 1981); UNIF. PROBATE CODE § 2-201(a), 8 U.L.A. 74 (1969) (currently adopted in 15 states).

63. See BOWE & PARKER, *supra* note 61, § 1.7, at 28.

64. See Deborah A. Batts, *I Didn't Ask to Be Born: The American Law of Disinheritance and a Proposal for Change to a System of Protected Inheritance*, 41 HASTINGS L.J. 1197, 1213-16 (1990) (stating that claimants left out of wills may seek court action to provide for their needs). In civil law countries, children may not be disinherited. They are generally entitled to a fixed share of the decedent's estate. *Id.* at 1211-13.

65. A few states already recognize that in a conflict between the expressed wishes of the deceased and her spouse as to proper disposition of the deceased's body, the spouse's interests may be allowed to prevail in appropriate circumstances. See, e.g., *Sacred Heart of Jesus Polish Nat'l Catholic Church v. Soklowski*, 199 N.W. 81, 82 (Minn. 1924); *Leschey v. Leschey*, 97 A.2d 784 (Pa. 1953); *Novelli v. Carroll*, 420 A.2d 469, 471-74 (Pa. Super. Ct. 1980). The general rule, however, appears to be that the desires of the deceased will control. See 25A C.J.S. *Dead Bodies* § 3 (1966). This general deference to the deceased's wishes can be explained by the importance attached by many to the manner of their own burial, for both religious and sentimental reasons. The surviving family also may have strong views, but in a conflict between the two, deference to the deceased makes sense, particularly when the decision is viewed by many as having serious repercussions regarding the next life. Deference is not as reasonable, however, when the interests of the deceased are not as strong, as when deciding whether to donate organs at one's death. Here, if the deceased's desire to donate her organs is countermanded by her family, it will not adversely affect her experiences with respect to the afterlife. Accordingly, deference to those still alive would seem to be more reasonable.

part of their loved one lives on in the organ recipient.⁶⁶ They want to know where the organs went and how the recipients are doing. In the early days of transplants, doctors often attempted to satisfy this curiosity and provided the families of cadaveric donors with the names of the people who had received the organs. But when the families began contacting the recipients and trying to become involved in their lives, the medical community decided to make transplantation anonymous.⁶⁷ We should not subject the families of potential cadaveric organ donors to this kind of emotional upheaval against their will. Instead, we should protect the emotional health of those who survive and not focus completely on the desires of those who no longer have emotions to experience.⁶⁸

66. The family of William Lucas, the organ donor for Governor Casey, follows this pattern. Frances Lucas, William's mother, met with the governor in the Spring of 1994. Ms. Lucas said that it was like meeting with her family and that she believes her son lives on in the governor. See Tim Reeves, *One Year Later: Casey Remembers Transplant Recovery Coming 'As Well As We Could Possibly Have Hoped and Prayed For,'* PITTSBURGH POST-GAZETTE, June 12, 1994, at A1. Donor families do not usually get to find out who the organ recipient is, let alone meet with him, see note 67 *infra* and accompanying text, but because of the tremendous publicity surrounding the case, the press discovered the donor's family and informed family members that the governor had received William's heart and liver. See Reeves, *supra*. The family still does not know who received William's kidneys. *Id.*

67. See RENEE C. FOX & JUDITH P. SWAZEY, SPARE PARTS: ORGAN REPLACEMENT IN AMERICAN SOCIETY 37 (1992) (stating that transplant units now have established policies of not revealing the donor identity).

68. Autopsy practices in this country also reflect an understanding of the importance of deferring to the wishes of the decedent's family respecting the treatment of her body. Autopsies are performed to determine the cause of death or to confirm the accuracy of a diagnosis already made regarding the cause of death. They are an important tool in educating the medical community in the proper diagnosis and treatment of illness. See generally ROLLA B. HILL & ROBERT E. ANDERSON, THE AUTOPSY—MEDICAL PRACTICE AND PUBLIC POLICY 43-122 (1988) (describing the historical evolution of autopsy goals and purposes). A typical autopsy is very disruptive to the physical integrity of the corpse. The main body cavities are opened, the main organs are removed and examined, and their tissues are sampled for further analysis. The general practice after organs have been examined, however, is to replace them within the body cavities and to neatly restitch the incisions. *Id.* at 10. See also KENNETH V. ISESON, DEATH TO DUST: WHAT HAPPENS TO DEAD BODIES? 152 (1994).

An autopsy is generally not performed without the family's consent. HILL & ANDERSON, *supra*, at 168-73. However, if the death was sudden or unexpected or occurred under suspicious circumstances, state statutes typically empower the medical examiner or coroner to order an autopsy without consent. Even here, though, the state exercises restraint, requiring autopsies only half the time for non-homicidal traumatic deaths (the type that often produce potential organ donors), but 97% of the time for suspected homicides. See Daniel A. Pollock et al., *Temporal and Geographic Trends in the Autopsy Frequency of Blunt and Penetrating Trauma Deaths in the United States*, 269 JAMA 1525, 1525-26 (1993). The overall incidence of postmortem autopsy in this country has been on the de-

Second, refusing to defer completely to the desires of the decedent will not always result in frustrating those desires. In the vast majority of cases, the circumstances of a person's death are such that her major organs are not suitable for transplantation. Moreover, in those situations where a person's organs *are* suitable for transplantation, if family members know that the deceased wanted to donate her organs, they will proba-

cline, from a peak of around 50% in the late '40s to 15% in 1980 and 11.5% in 1989. *Id.* at 1527-28.

Many states also have statutory provisions which provide that autopsies shall not be ordered over the religious objections of the family of the deceased, unless the state's interest in performing the autopsy is particularly strong. *See, e.g.*, N.J. REV. STAT. § 52:17B-88.2 (West 1986) (religious objections respected unless there is "compelling public necessity"); N.Y. PUB. HEALTH LAW § 4210-c (McKinney 1985) (overruling religious objections requires "compelling public necessity" or "demonstrable need . . . under circumstances of case"); OHIO REV. CODE ANN. § 313.13.1 (Anderson 1992) (override only if necessary for criminal investigation or to protect against a substantial threat to public health). Although the religious objections are supposed to be those of the deceased, the statutes look to the families to discover those objections, so it is really the beliefs of the family that control. The teachings of several major religions, including Orthodox Judaism and Islam, *see* LERSON, *supra*, at 157, as well as a number of lesser-known sects, such as Navajo Indians and the Hmong of Laos, prohibit autopsies. Douglas Laycock, *The Religious Freedom Restoration Act*, 1993 B.Y.U. L. REV. 221, 226 (1993).

Such deference to religious beliefs is not required by federal constitutional law. In *Employment Division, Department of Human Resources of Oregon v. Smith*, 494 U.S. 872 (1990), the United States Supreme Court held that "generally applicable, religion-neutral laws that have the effect of burdening a particular religious practice need not be justified by a compelling state interest." *Id.* at 887 n.3. Prior to the decision in *Smith*, a trial judge in the federal district of Rhode Island had ruled that the state medical examiner violated the religious free exercise rights of the parents of a young Hmong man when the examiner performed an autopsy on the man without a compelling need and against the parents' wishes. *See Yang v. Sturner*, 728 F. Supp. 845 (D.R.I. 1990). Before the court could hold a hearing on damages, however, the decision in *Smith* was handed down. Based on *Smith*, the trial judge in *Yang* felt compelled to reverse himself and held that the parents no longer had a valid claim because the autopsy was performed under a generally applicable, religion-neutral statute. *See Yang v. Sturner*, 750 F. Supp. 558 (D.R.I. 1990).

Congress recently reversed the *Smith* decision statutorily with the Religious Freedom Restoration Act of 1993, Pub. L. 103-141 § 5, 107 Stat. 14-89 (1993) (codified at 42 U.S.C. § 2000bb-1 (Supp. V 1994)). Under the act, no governmental entity (at any level) may substantially burden a person's exercise of religion unless it demonstrates that the burden furthers a compelling state interest and is the least restrictive means of doing so. *Id.* § 2000bb-1(b). The legislative history shows, among other things, that the Congress believed the act would reverse the results in *Yang* and other wrongful autopsy cases. *See, e.g.*, S. REP. NO. 111, 103d Cong., 1st Sess. 8, reprinted in 1993 U.S. CODE CONG. & ADMIN. NEWS 1892, 1897 (citing the second decision in *Yang* as an example of how the *Smith* case had "created a climate in which the free exercise of religion is jeopardized"); 139 CONG. REC. S14353 (daily ed. Oct. 26, 1993) (statement of Senator Hatch, co-sponsor of bill, emphasizing the importance of § 2000bb in preventing unnecessary autopsies). Accordingly, it would appear that the new federal law requires all states to adopt religious exemptions to autopsy rules like those already in existence in New York and New Jersey, which only permit autopsies against the wishes of the deceased's family when done pursuant to a "compelling public necessity."

bly honor her wish in most cases. Thus, the actual number of cases where the deceased's wishes respecting her organ donation are contravened will be small.

Finally, while this proposal gives the family veto authority, it does not empower the family to treat the deceased in a less respectful way upon her death, only in a more respectful one. If the deceased has said that she wants no organ donations, the family will not be empowered to override that directive. In short, it is not essential to the potential donor's peace of mind that she know that her organs will be donated on her death, and therefore we can properly show more consideration for the peace of mind of those who survive her.⁶⁹

Instead of playing games with donors and their families, laws regulating organ transplantation should be structured to encourage the highest level of voluntary, informed organ donation with the full cooperation of all concerned. Certainly much can be done to improve the current system. The main reason family approval is often such an issue is that the deceased herself has not previously expressed her own views on the subject, either formally through an organ donor card or informally in conversations with family and friends. One way to deal with this problem would be through a system of mandated choice. Individuals could be required to answer questions about organ donation in order to get a driver's license or to file their tax returns. A central registry for these responses could be maintained and consulted whenever an organ donation situation arose. If the position of the deceased in favor of organ donation were clear, the family would be much more likely to consent as

69. A related, and equally misguided, use of presumed consent is for a technique called preconsent perfusion. Immediately after a patient dies, doctors inject a cold preserving fluid into her kidneys and her abdominal cavity to arrest the deterioration of those organs which normally occurs following interruption of the patient's blood supply. Medical personnel can then seek at their leisure to gain permission of the next of kin to transplant the kidneys. Presumed consent is a part of the program because the preserving fluid is injected into the patient without asking consent (consent being presumed). One of the transplant centers that developed this technique adopted it only after families refused to grant permission in 35 consecutive cases. See Youngner et al., *supra* note 24, at 2770.

The problem with this approach, of course, is that procedures are performed on the deceased patient's body which have no therapeutic value for the patient but which are intended solely to make organs available for someone else. While this kind of treatment of the deceased is perfectly acceptable when the family has authorized it, without authorization it is simply disrespectful to the family and their emotional concerns. It also makes it appear as though the medical staff was interested less in doing what it could to save the deceased's life than it was in salvaging some organs from her body.

well.⁷⁰ We might even add a procedure in which family members would have the opportunity to concur in advance with the donor's decision to donate, a concurrence which would be binding on the family should donation become a possibility. The key is to encourage donation decisions to be made in calm contemplation before the fact, and not in the emotionally charged atmosphere following a tragic death.

2. Changing the Requirements for Cadaveric Donors

Assuming for the moment that we are able by means already discussed, or by some other, more draconian technique (such as mandatory conscription), to increase the number of brain-dead, heart-beating cadavers whose organs are made available for transplantation to 100% of potential donors. As was previously mentioned, this might yield as many as 11,000 donors per year, or an additional 6500. An initial look at the current waiting lists for organ donations might suggest that this would be enough to satisfy the need for many, if not all, organ types. For example, there are only about 3000 people waiting for a new heart, 4500 for a new liver, and only a little more than 1500 waiting for new lungs.⁷¹ And 6500 additional donors (yielding 13,000 kidneys) would cut the 28,000 person waiting list for new kidneys almost in half.⁷²

Of course, assuming a 100% yield for any organ procurement program is not realistic, but there is a more fundamental problem here. The organ waiting lists have been kept artificially low because the referring physicians know that current supplies are so limited.⁷³ Recall, for example, that one-third of those waiting for hearts and livers die before an organ becomes

70. For further discussion of this concept, see Aaron Spital, *Mandated Choice: The Preferred Solution to the Organ Shortage?*, 152 ARCHIVES INTERNAL MED. 2421 (1992); Veatch, *supra* note 44, at 1248-49.

71. UNOS 1995 Facts, *supra* note 12.

72. The analysis here exaggerates the number of organs that would be produced. It assumes that each donor would be able to donate all of her solid organs, that is, that 6500 new donors would yield 6500 hearts, 6500 livers, 13,000 kidneys, and so forth. This assumption is not true. For various reasons, including the overall health of the decedent prior to her death and the actual cause of death, one or more organs are often not suitable for donation. In 1993, for example, there were 4845 cadaveric donors overall, but these donors produced only 2299 hearts, 3442 livers, and 8173 kidneys (out of a possible 9690). See 1994 ANNUAL REPORT, *supra* note 5, app. at B-3, D-8, D-16, D-22.

73. See, e.g., Joe Holleman, *Organ Recipients Try to Boost Awareness: Parade Brings out the Lucky and the Hopeful*, ST. LOUIS POST-DISPATCH, Sept. 20, 1993, at 1B.

available. Accordingly, only the best candidates are referred for transplant. If the supply of organs increases, so will the demand, until the system is again overloaded. One recent study found that the real annual need for transplanted organs is 40,000 hearts, 18,000 kidneys, 14,000 livers, and 11,000 lungs,⁷⁴ well beyond the number of organs that could be provided even if all the brain-dead donated their organs. If the goal is to find a new organ for everyone who needs one, we clearly need to look elsewhere.

a. The Pittsburgh Protocol

What might be done to expand the pool of cadaveric donors? As we have already discussed, today's typical cadaveric donor is a brain-dead patient with artificially maintained cardiac and respiratory functions. There are, however, other possibilities. The University of Pittsburgh Medical Center adopted a new protocol two years ago (the "Pittsburgh Protocol") designed to allow patients who choose to forgo life-sustaining treatment to donate their organs.⁷⁵ Under current law, a patient dependent on a respirator who decides she does not want to spend the rest of her life that way can insist that the respirator be turned off.⁷⁶ Ordinarily, she would not be an acceptable organ donor, because surgeons would have to turn the respirator off long enough so that circulation to her brain cells would stop and her brain would die. The same lack of oxygen would cause sufficient deterioration to the rest of her organs that they would no longer be suitable for transplantation. Under the Pittsburgh Protocol, however, death would be declared once the patient had experienced two minutes of cardiac arrest. The protocol seeks to rely on the alternative definition of death, which

74. Evans, *supra* note 28, at 240 (citing Roger Evans, *The Need for Transplantation in the United States*, in ROGER EVANS, *THE NATIONAL COOPERATIVE TRANSPLANTATION STUDY: FINAL REPORT* (1991)).

75. See Youngner, *supra* note 24, at 2770-71 (discussing the Pittsburgh Protocol).

76. This practice is part of the generally recognized right of patients to refuse unwanted medical treatment, even if such refusal results in death. See, e.g., *Thor v. Superior Court*, 855 P.2d 375, 382 (Cal. 1993) (discussing a number of state law decisions to this effect); *Satz v. Perlmuter*, 362 So.2d 160, 163 (Fla. App.), *aff'd* 379 So.2d 359 (Fla. Dist. Ct. 1978) (holding that a competent adult patient with no minor dependents who suffers from terminal illness may refuse extraordinary medical treatment); *McKay v. Bergstedt*, 801 P.2d 617, 622-23 (Nev. 1990) (finding that a quadriplegic state prisoner had a right to discontinue artificial life support).

states that death can occur not only when the brain is dead but also when there has been "irreversible cessation of circulatory and respiratory functions."⁷⁷ Removal of organs begins immediately after death is declared.

There are at least two problems with this new approach. First, it violates both the spirit and the letter of the Uniform Determination of Death Act. Brain death was added to the traditional definition of death in recognition of the fact that the traditional definition, namely a cessation of breathing and heartbeat, is simply a proxy for the real thing, which is death of the brain, the organ that coordinates the processes which sustain human life and which create human consciousness. Brain death inevitably follows shortly after all heart activity stops. A new definition was necessary because medical technology had advanced to the point where heartbeat and respiration could be maintained indefinitely even when the patient's brain had stopped functioning forever. The new definition was adopted to recognize this reality and allow useless therapy to be discontinued. Under the Pittsburgh Protocol, however, doctors start to remove the patient's organs before her brain is dead, in other words, before she has really died.

Second, even if we rely on the old-fashioned cardiovascular definition of death, that definition requires *irreversible* cessation of circulatory function. Heart function, however, can often be restored well after the two-minute stoppage called for in the Pittsburgh Protocol. In this case, the only reason cessation of circulatory function is irreversible is that the patient has indicated she wants to die and so does not want her heart resuscitated. That is her right. But she still is not really dead until much later in the process, until her heart has stopped beating for much more than two minutes. Removing her organs at this point, before brain death and before her circulatory system has irreversibly stopped, could subject the transplant team to prosecution for murder because the removal of the organs, not the turning off of the respirator, would be the actual cause of death. The cases decided to date relieve medical personnel from criminal liability if they simply stop providing treatment at the request of the patient or her family and the patient subse-

77. UNIF. DETERMINATION OF DEATH ACT § 1, 12 U.L.A. 386 (1993) (defining legally recognized death).

quently dies.⁷⁸ They do not, however, provide immunity for medical personnel who undertake affirmative actions, such as providing a lethal injection, to end a patient's life. That is still considered to be murder.⁷⁹

We could change the law so that people no longer need to be dead before they can donate their organs. Such a change, however, would contravene the conventional wisdom in the transplantation field, namely that only people who are already dead should be able to donate life-sustaining organs.⁸⁰ The primary purpose of such a rule is to protect the interests of incompetent patients who may be brain-damaged but are not brain-dead.⁸¹ It is easy to imagine good-intentioned medical personnel pressuring the next of kin of such patients into deciding that their loved one's organs could be better put to use by someone else. These are the very pressures that *must* be avoided in order to protect the autonomy interests of all patients and in order to prevent using some patients simply as a means to provide another's cure. If the patient indicated before her incompetency that she wanted life support removed and her organs donated should she reach her current medical condition, then we would not need to be so concerned about following this kind of protocol. But as we have already seen, most people while they are still alive do not get around to giving consent for their organs to be donated *after* their deaths, let alone before.

Some might argue that these concerns could be avoided by limiting the reach of the Pittsburgh Protocol to these people who are competent when they decide to stop treatment and donate their organs. I think not. People who are contemplating a decision to remove life-sustaining treatment are already subject to a great many outside pressures that may have too much in-

78. See, e.g., *Barber v. Superior Court*, 195 Cal. Rptr. 484, 491-92 (Cal. Ct. App. 1983); *In re Quinlan*, 355 A.2d 647, 669-70 (N.J. 1976), *cert. denied* 429 U.S. 922 (1976); *In re Colyer*, 660 P.2d 738, 751 (Wash. 1983).

79. In Michigan, Dr. Jack Kevorkian is currently on trial for murder for making his suicide machine available to several patients and assisting them to take their own lives. The Michigan appeals court has recently upheld the applicability of the Michigan murder statute to his conduct. See *Hobbins v. Attorney Gen.*, 518 N.W.2d 487, 493 (Mich. Ct. App. 1994).

80. See Robert M. Arnold & Stuart J. Younger, *The Dead Donor Rule: Should We Stretch It, Bend It, or Abandon It?*, 3 KENNEDY INST. ETHICS J. 263, 264 (1993) (discussing the origin of the "dead donor" rule requiring that donors be brain dead before their organs are taken).

81. *Id.*

fluence on whether *their* life continues to be worth living. Am I being too much of a burden to my children, to my spouse? Am I using up too much of the family's money in medical bills, or too much of society's money? Because we place such a high value on the autonomous decisionmaking of the individual patient, however, we have accepted these imperfections in the process and have approved the patient's decision to withhold treatment so long as she appears competent and it is not obvious that her will is being overborne.⁸² Nevertheless, we are not obligated to allow additional factors into the decision-making equation which have the potential to produce results even further removed from the desires and needs of the patient herself. The possibility of organ donation is one such factor. Now the patient who debates whether to refuse medical treatment must worry not only about the effects of her decision on the emotional and financial health of her family, but also about its effects on the actual survival of another person (or persons, there being multiple organs at stake). Am I using up organs that could be more valuably employed by someone else?⁸³ This question is not one we should force sick people to answer.

The temptation to extend the protocol beyond competent patients to incompetent patients also may prove irresistible. That, after all, is where the real potential for increased donors lies. Most respirator-dependent patients are not competent, so if significant numbers of new organs are to be obtained, incompetent patients will have to provide them.⁸⁴ But as we have already noted, the pressures on next of kin to help other patients

82. Competency is the Achilles heel of autonomous decision making. No agreement exists on exactly what the word means. The temptation, of course, is to define a competent person as someone who makes the kind of decisions that I, the evaluator, would make were I in her shoes. In an oft-cited article on the subject, Drs. Roth, Meisel, and Lidz offer five possible approaches to determining competency based on whether the patient can (1) make a choice, (2) make a reasonable choice, (3) make a choice based on "rational" reasons, (4) show the ability to understand the choices, or (5) actually understand the choices. Loren H. Roth et al., *Tests of Competency to Consent to Treatment*, 134 AM. J. PSYCHIATRY 279, 280-82 (1977). Although option number one cannot be sufficient to assure the patients' understanding of what they have consented to, the farther we wander from this standard, the harder it is to preserve the autonomy principle. *Id.* at 280.

83. If, in truth, the patient decides to stop medical treatment and die because she wants to give her organs to others and not because her own existence has become intolerable, she would be killing herself to benefit others. This runs afoul of the societal prohibition on suicide discussed further in the text at notes 145-54 *infra*.

84. According to one estimate, using severely brain-damaged patients would increase potential donations as much as 25%. Youngner et al., *supra* note 24, at 2771.

in need could easily result in treatment decisions that ignore the best interests of the incompetent in favor of the person who needs a transplant.

There are other reasons to be careful about tinkering with the definition of death to better accommodate organ transplantation. Public acceptance of the current "brain death" definition of death is already problematic. A "dead" patient who breathes and whose heart beats is hard to distinguish from a living patient who merely sleeps.⁸⁵ This difficulty in accepting the diagnosis of death can be exacerbated by the knowledge that the newly dead patient is also highly valued as a source of organs for other patients at death's door.⁸⁶ In fact, concerns about premature declaration of death and undertreatment are the primary reasons people give for not filling out organ donor cards.⁸⁷ To prevent those fears from further interfering with organ donation goals, every effort must be made to avoid the implication that we are toying with the definition of death, not because our understanding of what death truly is has changed, but because we have some other goal in mind.

In this regard, the current legal definition of death as death of the entire brain, including the brain stem, is defensible in a way that should make sense to the non-medical public. Even though the "brain dead" patient on life support may still look alive, the patient neither has, nor ever again will have, the capacity for those traits like consciousness or responsiveness that are the essence of what makes us human beings. Given

85. A recent Florida case demonstrates the problem. In January 1994, Teresa Hamilton, a thirteen-year-old with diabetes, was admitted to a hospital and soon fell into a coma. After brain scans showed no brain activity and no circulation to the brain, the doctors informed Teresa's parents that Teresa was legally dead and that the ventilator supporting her breathing should be withdrawn. Even though their health insurance had expired, the parents refused to give their permission to stopping treatment. After briefly threatening to go to court, the hospital finally agreed to send Teresa home with her parents while continuing to provide her with treatment at hospital expense. See *Hospital Brain-Dead Florida Girl Will Be Sent Home on Life Support*, N.Y. TIMES, Feb. 19, 1994, § 1, at 9; *Hospital Fights Parents' Wish to Keep Life Support for a Brain Dead Child*, N.Y. TIMES, Feb. 12, 1994, § 1, at 6.

86. The connection can be quite direct. In 1980, for example, a BBC television documentary that questioned whether kidney donors declared brain-dead were really dead caused a sudden, although temporary, drop in the number of kidney donations. See Robert J. Joynt, *A New Look at Death*, 252 JAMA 680, 681 (1984) (examining in historical context the concept of death).

87. See Rosemary Robbins, *Signing an Organ Donor Card: Psychological Factors*, 14 DEATH STUDIES 219, 220 (1990).

that assurance, most people can see the futility of trying to keep vegetative existence alive, and, perhaps more importantly, can see that the definition of death is not being manipulated to obtain more organs for transplantation. The same cannot be said for the Pittsburgh Protocol. The sole reason for declaring patients dead *before* circulatory function has irreversibly ceased and *before* brain death has occurred is to procure more organs.

b. Higher-Brain Death

Similar problems exist for yet another possible method of procuring additional transplant organs. For a number of years, commentators have proposed a new definition of death, the so-called "neocortical death," or higher-brain death. The current definition relies on cessation of functions in the entire brain, including the brain stem. The brain stem is that portion of the brain responsible for controlling the vegetative functions of the human body, for example, respiration, heart rate, body temperature, blood pressure, electrolyte balance, and the like. It is these functions that must be artificially supplied by the intensive care unit when the brain stem, along with the rest of the brain, has stopped functioning.⁸⁸ However, it is the neocortex of the brain, the cerebrum, which is responsible for conscious thought, self-awareness, and interaction with the environment. If that part of the brain no longer functions, goes the argument, but the brain stem still does, why should we consider the patient to be any more alive than when the brain stem is not working? All that the patient is doing for herself is supplying the same vegetative coordination that hospital machines and medications can provide. This kind of existence is not life as we know it. If a higher-brain definition of death is adopted, it would have great significance for the availability of transplantable organs. From 15,000 to 25,000 people currently exist in a persistent vegetative state, meaning they have a functioning brain stem but little, if any, higher-brain function.⁸⁹ If these

88. See, e.g., Joseph M. Darby, *Approach to Management of the Heartbeating "Brain Dead" Organ Donor*, 261 JAMA 2222, 2224-27 (1989) (providing a detailed description of the complexities of care for brain-dead patients).

89. Council on Scientific Affairs & Council on Ethical and Judicial Affairs, American Medical Ass'n, *Persistent Vegetative State and the Decision to Withdraw or Withhold Life Support*, 263 JAMA 426, 427 (1990) [hereinafter *Council Report*].

individuals were declared dead, the supply of potential organ donors could increase significantly.⁹⁰

The major difficulties with this argument are twofold. First, diagnosing neocortical death is not easy to do. Brain scans for patients in a persistent vegetative state show severely depressed, but not absent, energy metabolism in their cortex.⁹¹ They can have near normal electroencephalograms.⁹² They sleep, they awaken, they make sounds, they react to sounds, they smile, they cry.⁹³ While all of these reactions are considered to be reflexive and not indicative of any conscious decision making, it is difficult to believe that these people are truly dead.⁹⁴ Given the trouble many people have with accepting the death of those whose entire brains have ceased to function,⁹⁵ and given the wide variety of life-like behaviors people in a persistent vegetative state are still capable of, declaring that those whose cerebrums no longer function are dead will be very hard to justify.⁹⁶ People who do not really believe that a family member is dead will not be willing to compound this perceived error by donating her organs before life support is ended.

Moreover, deciding where to make the cutoff between the dead and non-dead will be exceedingly difficult. When the definition of death requires no brain function whatsoever, making the distinction between dead and not dead is fairly easy.⁹⁷

90. Not all of those in a persistent vegetative state will be acceptable donors. Age and other medical problems often cause too much damage for their organs to be used.

91. *Council Report*, *supra* note 89, at 428.

92. *Id.* at 428.

93. *Id.* at 427.

94. Ethicist David Lamb raises additional concerns about how to treat this newly dead person:

The notion of a still-breathing corpse is morally repugnant. How, for example, does one dispose of such a being? Should burial or cremation take place whilst respiration continues? Or should someone take responsibility for suffocating the "corpse" first? And what would be the outcome if a distraught family member suffocated a relative who had been vegetative for months? Would it be homicide? Or would it be seen as unacceptable treatment of a corpse?

DAVID LAMB, *ORGAN TRANSPLANTS AND ETHICS* 65 (1990).

95. *See supra* notes 85 and 88.

96. It is important to maintain the distinction between *allowing* people to die by withholding treatment because their lives are no longer worth living and *declaring* people to be dead so that their life-support systems must be withheld.

97. Physicians employ a number of clinical tests to establish brain death. They include testing for brain stem reflexes (pupil sensitivity to light, spontaneous respiratory effort when ventilator is withdrawn), testing for brain metabolic activity (electroencephalogram, or EEG, four-vessel intracranial angiography to measure for blood circulation in the brain), and testing for the presence of drugs, such as barbiturates, that can cause tempo-

However, once we accept that a dead person can still have some brain function, how do we decide how much brain function she can have? How do we know if there really is no higher-brain function if brain scans still show some level of energy metabolism in their cortex, and if they can still exhibit many of the same emotional states as normal human beings? We think that they have no conscious awareness, but how can we know for sure?

Even if we can separate those with absolutely no higher-brain function from those who have only the tiniest amount, how can we say that those with only the tiniest amount of higher-brain function are any more human, any more alive, than those with none? So begins our slide down the slippery slope. As we slide along, utilitarian concerns will continue to contaminate the process of deciding who is really dead. As with competent persons who are on life support, the pressure to think not of the welfare of the incompetent person but of the other patients who could make better use of these organs will be overwhelming. In close cases, it will be far too easy to declare the incompetent patient dead and get on with the business of putting her organs to work elsewhere.

3. Future Trends in Cadaveric Donations

The trend for eligible cadaveric donors does not look good. The public health system in this country is currently expending a great deal of effort and money to reduce the incidence of preventable death, particularly death by injury. These efforts have met with a certain degree of success. Highway traffic fatalities, for example, have fallen in the last decade from a peak of 51,000 in 1980 to the current level of 40,000.⁹⁸ It is precisely these kinds of preventable deaths that produce the greatest number of cadaveric donors.⁹⁹ So, as we save one group of citi-

rary cessation of brain activity. Only when all of these tests are negative is the patient declared dead. *See* President's Commission for the Study of Ethical Problems in Medicine and Biomedical and Behavioral Research, *Guidelines for the Determination of Death*, 246 JAMA 2184, 2185-86 (1981).

98. BUREAU OF THE CENSUS, U.S. DEP'T OF COMMERCE, *STATISTICAL ABSTRACT OF THE UNITED STATES: 1993*, at 621 (113th ed. 1993); NATIONAL HIGHWAY TRAFFIC SAFETY ADMIN., *1993 TRAFFIC SAFETY FACTS 2* (1994). Actual fatalities for 1993 were 40,115, a slight increase from the 1992 total of 39,250.

99. Of the 4845 cadaveric organ donors in 1993, at least 54% (2619) died of traumatic injuries such as motor vehicle accidents, gunshot or stab wounds, head trauma, as-

zens, we doom another. This state of affairs highlights the underlying tragedy of reliance on cadaveric donors: it requires death to produce life.

The only category of death by injury that has shown significant growth in recent years is death by firearm. Between 1968 and 1991, firearm deaths increased by 60%, to an annual total of more than 38,000.¹⁰⁰ Relying on firearm fatalities as a major new source of organ donors,¹⁰¹ however, has its disadvantages. One would certainly hope that future efforts to control violent crime would be more successful than those of the past. Furthermore, the victims of violent crime do not come equally from all racial groups in this country. Unlike traffic fatalities, for example, in which the races are equally at risk for death, black males are more than three times more likely than white males to die by gun.¹⁰² The net effect is that continued reliance on cadaveric donors could mean more and more white patients relying on an increasingly violent society to produce the increasingly black donors that the patients need to survive.¹⁰³ For the time being, Whites continue to donate more organs than they receive (mainly because African-Americans suffer from much higher rates of kidney disease than do Whites).¹⁰⁴ However, perceptions are already growing in some parts of the African-American community that Blacks are valued primarily as spare parts.¹⁰⁵ If this perception ever becomes a reality, it will be a cause of tremendous social tension in our society.

phyxiation, and drownings, and the cause of death for an additional 7% was listed as "other." See 1994 ANNUAL REPORT, *supra* note 5, app. at B-4.

100. To be precise, annual firearms fatalities increased from 23,875 to 38,317. U.S. Dep't of Health and Human Services, *Deaths Resulting From Firearm- and Motor-Vehicle-related Injuries, United States, 1968-1991*, 43 MORBIDITY & MORTALITY WKLY. REP. 37 (Jan. 28, 1994) [hereinafter *Firearm Deaths*].

101. Between 1988 and 1993, the number of cadaveric donors who died from gunshot or stab wounds did increase 38%, from 625 to 863. See 1994 ANNUAL REPORT, *supra* note 5, app. at B-4.

102. See *Firearm Deaths*, *supra* note 100.

103. Not surprisingly, William Michael Lucas, the man who supplied the organs for Governor Casey, was a 34 year-old African-American man who was pistol-whipped to death on the front steps of his mother's home. Belkin, *supra* note 2, at A16.

104. 1994 ANNUAL REPORT, *supra* note 5, app. at B-4, D-6, D-15, D-22 (showing that in 1993, whites comprised 78.5% of all cadaveric donors, but only 64.1% of all cadaveric kidney recipients, 76.5% of liver recipients and 81.7% of all heart recipients).

105. Voices of concern have already been raised in the African-American community about this problem. In a speech in Toledo, Ohio, for example, Louis Farrakhan, leader of the Nation of Islam, charged that one reason White Americans were not concerned about stemming the tide of Black-on-Black violence is because such violence provided new

B. Living Donors

1. Kidneys

Dead people are not, however, the only possible source of lifesaving organs for people with end-stage organ disease. In some circumstances, living donors also can supply the necessary spare parts. Traditionally, living donors have played their largest role in supplying replacement kidneys. For years, family members have been donating kidneys to their brothers and sisters, their children, and their parents. Last year, 25% of the 11,000 kidneys transplanted in this country were obtained from living donors.¹⁰⁸ Despite their large numbers, living donors have always been a controversial subject within the medical profession, primarily because using them violates one of medicine's basic tenets — do no harm.¹⁰⁷ The removal of a kidney is a major surgical operation, and can bring with it all of the usual complications, some serious, such as infection, blood clots in the lungs, or injury to other organs, and some not so serious, such as incisional pain or excessive scarring.¹⁰⁸ Fortunately, serious surgical complications happen in only 2.5% of all kidney removals.¹⁰⁹ The ultimate complication, of course, is

sources of organs for donation. See *Farrakhan Says Blacks Just "Parts,"* CLEV. PLAIN DEALER, May 2, 1994, at A1 (referring to Black-on-Black violence, Farrakhan states "[w]hen you're killing each other, [White Americans] can't wait for you to die, . . . [y]ou've become good for parts.")

106. UNOS 1995 Facts, *supra* note 12.

107. Irwin Kleinman & Frederick H. Lowy, *Ethical Considerations in Living Organ Donation and a New Approach: An Advance-Directive Organ Registry*, 152 ARCHIVES INTERNAL MED. 1484, 1484 (1992) (stating "[n]owhere else in medicine is a part of a healthy person removed without the procedure being of direct physical benefit to that individual.").

[Surgeons] have always been profoundly uneasy about the fact that transplanting an organ from a living donor requires them to aggressively violate the basic moral tenet of their profession to do no harm by seriously wounding an individual who is neither sick nor a conventional patient — albeit on behalf of someone who is mortally ill and has sought their help.

Fox & Swazey, *supra* note 67, at 39.

108. See Kleinman & Lowy, *supra* note 107, at 1485. The somewhat limited information available suggests that long-term renal function for people with only one kidney remains good. The donor's remaining kidney enlarges until it can perform the necessary blood filtering function on its own. See Leon G. Fine, *How Little Kidney Tissue Is Enough?*, 325 NEW ENG. J. MED. 1097, 1097 (1991). There may be a mild tendency toward increased levels of protein (microalbuminuria) and other contaminants (creatinine, for example) in the urine, but none of these changes appears to pose any significant threat to the health of the donor. See Lantos & Siegler, *supra* note 9, at 273.

109. See Kleinman & Lowy, *supra* note 107, at 1485.

death. About twenty people are thought to have died as a direct consequence of donating a kidney.¹¹⁰

The harm that can result from donating a kidney, however, must be viewed in the context of the potential recipient's situation. At one time, a patient suffering from end-stage renal disease would die without a transplant. Today, however, many people with failed kidneys can be maintained for long periods on dialysis, and they are eligible to receive a transplant organ from a cadaveric donor. Nevertheless, dialysis is not a perfect substitute. The quality of life for patients on dialysis is often seriously compromised.¹¹¹ Moreover, patients cannot live forever on dialysis. The annual death rate exceeds 20%.¹¹²

Some commentators are also troubled by the extreme generosity of living organ donations. Donating a solid organ is often called "the gift of life." Social scientists generally agree that most gifts are not a one-way transaction between donor and donee. Even as a gift is received it creates an obligation on the part of the recipient, at some undetermined time and in some as yet undefined way, to repay the gift.¹¹³ Not an exact equivalent, necessarily, but a repayment nonetheless. There are many examples of this to which we can all testify from personal experience — the dinner invitation to a neighbor's house, the unexpected Christmas present, two weeks of cat-sitting during vacation, that last-minute cup of flour for your child's birthday cake. All must be remembered, all must be repaid.

110. Lance Morrow, *When One Body Can Save Another*, TIME, June 17, 1991, at 54, 57 (citing Thomas Starzl, a leader in the transplantation field). In a 1986 survey, four out of 89 responding kidney transplant centers reported at least one death resulting from donation. Aaron Spital et al., *The Living Kidney Donor: Alive and Well*, 146 ARCHIVES INTERNAL MED. 993, 994 (1986). No central registry for this kind of information appears to exist. Nevertheless, it seems inevitable that occasional donor fatalities will continue to occur. Alan F. Ross & John H. Tinker, *Anesthesia Risk*, in ANESTHESIA 721 (3d ed. 1990). For instance, the risk of death associated with general anesthesia, a necessary part of any organ removal, is currently estimated at about 1 in 10,000. *Id.* There are also the additional risks associated with major surgery, such as infection and hemorrhage. As a general matter, one can reduce but not eliminate the risks of organ donation.

111. For a description of the dialysis process, and its limitations, see *supra* note 20.

112. See William Owen, Jr. et al., *The Urea Reduction Ratio and Serum Albumin Concentration as Predictors of Mortality in Patients Undergoing Hemodialysis*, 329 NEW ENG. J. MED. 1001, 1001 (1993). See also Port et al., *supra* note 20, at 1340.

113. See, e.g., PETER M. BLAU, EXCHANGE AND POWER IN SOCIAL LIFE 89-93 (1964) (discussing the notion of implied reciprocity in the giving process); MARCEL MAUSS, THE GIFT 1, 3 (Ian Cunnison trans., 1967). For an overview of the gift-giving literature on this point from a law professor's perspective, see Jane B. Baron, *Gifts, Bargains, and Form*, 64 IND. L.J. 155, 194-98 (1989).

The unrequited gift creates an imbalance in the social fabric. It makes the recipient lose face and withdraw from interaction with the community.

According to the critics an organ donation is a "gift" with a difference. It is a gift so generous that it can never be repaid. The typical organ recipient will never be able to save the life of her donor. Any other kinds of gifts that the recipient tries to substitute pale to insignificance when measured against the generosity of the donor's initial present. Given this imbalance, the donor may make continual demands for the recipient to acknowledge the magnitude of the donor's gift, demands that can make the recipient feel forever in the donor's debt. The social balance cannot be regained. Psychologists Renee Fox and Judith Swazey have dubbed this phenomenon "the tyranny of the gift."¹¹⁴ On rare occasions, kidney recipients can feel such guilt over their inability to repay this gift of life that they may have to sever relationships with the donor.¹¹⁵ This disruption of relationships cannot happen with a cadaveric donor, because there is no preexisting relationship to disrupt and because the identity of the donor and her family is generally not disclosed to the recipient.¹¹⁶

I have doubts, however, about the accuracy of this characterization of the gift-giving process as it relates to organ transplants. There are thousands of people, mostly bone marrow and blood donors, who have made lifesaving donations of their tissues to others anonymously and without expectation of any reciprocation or payback. Similar patterns of behavior are evident in the outpouring of financial and material support for people suffering from hurricane, famine, or other natural disaster. For donors in these situations, their only reward is the satisfaction of knowing they have helped others in time of need.¹¹⁷ From the recipient's point of view, to the extent that they feel burdened by the enormity of the gift, they can repay by making similar anonymous donations to others in need.

114. See FOX & SWAZEY, *supra* note 67, at 40.

115. *Id.* at 40-41.

116. The recipient can, however, experience the same feelings of guilt over his inability to repay the gift. *Id.* at 41.

117. Or, perhaps, donors receive the approbation of their peers for having performed in a socially desirable fashion. See, e.g., BLAU, *supra* note 113, at 259-61.

Living kidney donations, of course, are not made anonymously, but that does not mean that living kidney donors cannot be motivated by the same feelings of generosity as those whose gifts are made without knowing the recipient. While there certainly have been cases where recipients felt uncomfortable about their ability to repay the organ donation or where donor-recipient relationships are less than ideal post-transplant, these cases are a distinct minority.¹¹⁸ In a large majority of cases, the transplant has a positive effect, with both recipients and donors reporting greater closeness after the transplant than before.¹¹⁹ For most participants, this is not a traumatic event.

Moreover, even if we assume that living donation has negative psychological implications for many patients, we must still ask this question: negative as opposed to what? The options for people who need a transplant are not that great. Those with kidney disease face years on dialysis with significantly reduced quality of life and possible death as they await a cadaveric organ. For those needing other organs,¹²⁰ the only option is death. Sacrificing a relationship to save their own life makes sense for these patients. Even for the donor, there ought to be no long-term regrets over the ultimate wisdom of the decision. If she cared enough to donate the organ in the first place, it should still be worth it, even if her relationship with the recipient has suffered.

Finally, living donors may experience depression and resentment if, as happens about 10% of the time within the first year alone,¹²¹ the donated kidney is rejected and the recipient is forced back onto dialysis.¹²² They are left wondering why they bothered to expose themselves to such personal risk and

118. See ROBERTA G. SIMMONS ET AL., GIFT OF LIFE: THE SOCIAL AND PSYCHOLOGICAL IMPACT OF ORGAN TRANSPLANTATION 172 (1977) (reporting that approximately 20% of recipients feel uncomfortable that they cannot pay the donor back and that roughly 7% of recipients and 6% of donors feel their relationship has become more difficult after the transplant).

119. *Id.* at 183 (reporting that there is an increased closeness between recipients and donors after organ transplantation).

120. Kidneys are not the only organ which can be given by living donors. See *infra* part II.B.2 for a discussion of the potential for living liver and lung donations.

121. See 1994 ANNUAL REPORT, *supra* note 5, app. at E-5. Rejection rates rise to 12% after 2 years and 16% after 3 years. *Id.* at E-16.

122. See, e.g., John R. Marshall & Carl H. Fellner, *Kidney Donors Revisited*, 134 AM. J. PSYCHIATRY 575, 576 (1977) (suggesting that when the recipient of an organ donation dies, the donor may have negative feelings or ambivalence about having donated).

discomfort. Such problems do not arise if cadaver organs are rejected. The deceased donors have not been exposed to enhanced risk. They have no second thoughts, and their families are not likely to be upset. They tried to bring about something positive from their tragedy, but it just did not work.

There are, on the other hand, a number of advantages to living kidney donations. Living donors often provide a better tissue match between donor and recipient. The proteins determining tissue compatibility are inherited and are more likely to be the same or nearly so when donor and donee are related. A better tissue match means a reduced risk of rejection and a much greater likelihood that the transplanted kidney will last a long time in its new home.¹²³

There are also substantial psychological benefits flowing to kidney donors. While recipients may sometimes feel distress at their inability to adequately repay the donor's generosity, donors are almost universally overjoyed at the opportunity to make such a big difference in the life of someone they care deeply about.¹²⁴ Individuals do not often have the chance to do something that means so much to another human being. Unlike the family of the cadaveric donor, which, when it decides to donate, is struggling to find meaning in what otherwise seems a senseless tragedy, the living donor can directly experience the happiness that her donation brings unencumbered by tragedy. The decision to donate is usually a very easy one for family members to make. As one commentator explains, it is "a decision so 'instantaneous' that it is often taken before the transplant team has had time to launch a process of informed con-

123. See 1994 ANNUAL REPORT, *supra* note 5, app. at E-11, E-19 (noting that the one-year graft survival for closely matched, living kidney transplants is 95.2% compared with the one-year survival of 80.3% for the average unrelated cadaveric transplant). Long-term survival for transplanted organs is also much better when donor and recipient have identical tissue types. The average transplanted kidney between siblings with the same tissue type will last 25 years. The average unmatched cadaver kidney transplant will last only seven years. See Terasaki, *supra* note 18. Cadaveric kidneys are now routinely tissue-typed and are given automatically to a patient on the waiting list who has the same tissue type. See 1990 ANNUAL REPORT, *supra* note 27, app. at L-2, L-3. Such "matched" transplants also have shown significantly better short- and long-term survival. See Steve Takemoto et al., *Survival of Nationally Shared, HLA-Matched Kidney Transplants from Cadaveric Donors*, 327 NEW ENG. J. MED. 834, 834-35 (1992) (concluding that "the collaborative renal-transplantation program for HLA matching of donors and recipients yielded an increased rate of one-year graft survival and an estimated half-life for matched grafts twice that for mismatched grafts.").

124. See Marshall & Fellner, *supra* note 122, at 575.

sent.”¹²⁵ After the transplant is over, most donors report that the donation was one of the high points of their lives and that they feel better about themselves for having done it.¹²⁶

Traditionally, living donors have been restricted to “blood relatives” of the patient. As has been discussed above, blood relatives are more likely to be a better tissue match and therefore to provide a kidney for transplantation that is less likely to be rejected by its host. This policy also reflects a longstanding suspicion in the medical profession for the motives of anyone not related to the patient who wants to donate an organ.¹²⁷ Such donors, healthcare workers believe, cannot be acting out of altruism. Perhaps they suffer from mental illness. Perhaps they are being paid.¹²⁸

Unfortunately, not every kidney patient has a family member who is both able and willing to donate. As the average waiting time for people on the kidney organ list exceeds 600 days,¹²⁹ and as some groups of recipients are waiting as long as five years,¹³⁰ the push to find new donors has grown more intense. Hence, in the last few years, small but significant numbers of unrelated living kidney donations have begun to occur.¹³¹ The greatest number of these have come from the patient’s spouse, and most of the rest have also been “emotionally related,” that is, in-laws, close friends and the like. Nevertheless, there have been donors who are simply co-workers, business associates, or acquaintances of the recipient.¹³² While these extraordinary acts of generosity ought to be applauded,

125. See FOX & SWAZEY, *supra* note 67, at 33.

126. See, e.g., SIMMONS ET AL., *supra* note 118, at 178 (finding that one year after the transplant operation, roughly 70% of donors felt that donating an organ made their lives “more meaningful,” while less than 5% had significant negative feelings about donation).

127. See FOX & SWAZEY, *supra* note 67, at 39, 47.

128. *Id.* at 47.

129. See 1994 ANNUAL REPORT, *supra* note 5, app. at G-7.

130. UNITED NETWORK FOR ORGAN SHARING, 1993 ANNUAL REPORT OF THE U.S. SCIENTIFIC REGISTRY OF TRANSPLANT RECIPIENTS AND THE ORGAN PROCUREMENT AND TRANSPLANTATION NETWORK, at III-26 (1993) [hereinafter 1993 ANNUAL REPORT].

131. In 1991, for example, 86 of the 2382 kidneys donated by living persons came from unrelated donors. Gina Kolata, *Unrelated Kidney Donors Win Growing Hospital Acceptance*, N. Y. TIMES, June 30, 1993, at C14. That number represents a 50% increase over 1988, and the upward trend continues. In a July 1993 survey, kidney transplant centers reported having performed 195 unrelated living kidney transplants during the past year. See Aaron Spital, *Unrelated Living Kidney Donors*, 57 TRANSPLANTATION 1722, 1723-24 (1994).

132. See Kolata, *supra* note 131, at C14.

even encouraged, we might want to erect some barriers to ensure that the decision to donate is determined freely. That could mean, for example, banning donations by employees to their employers, or debtors to their creditors.

We also should be aware that these kinds of donations create a greater risk of generating monetary payments for the organs involved than do more traditional donations.¹³³ Federal law forbids the sale of organs and most body tissues for transplantation.¹³⁴ Current organ donation practices make compliance with this law easier. Cadaver organs are distributed on a strictly anonymous basis (meaning that the donor's family and the recipient cannot get together to make a deal).¹³⁵ Live donations, though directed toward a particular recipient, are usually made from one family member to another (a situation that one would ordinarily not expect to generate cash payments). If we allow more directed donations by living donors to unrelated persons, there will be greater opportunities for money to change hands under the table. We could attempt to police this by requiring evidence of a prior relationship between donor and donee (such as at the office or in the neighborhood) and by requiring the parties to sign papers certifying under pain of prosecution that no money had been paid for the organ. But there are limits to what one can do.¹³⁶ The bottom line, however, is that unrelated kidney donation by the living is the kind

133. For many in the transplantation field, use of living donors is only acceptable if every effort is made to ensure that organs being made available are truly donated and not purchased. See, e.g., Arthur Caplan, *Must I Be My Brother's Keeper?*, 25 *TRANSPLANTATION PROCEEDINGS* 1997, 1999 (1993) (stating that "the transplant community [must] make it clear that [financial] motives are not acceptable and that liver and other transplant specialists will not knowingly utilize someone as a source if money is known to be involved.") For further discussion of the issue of paying for organ donation, see *infra* part II.B.4.

134. 42 U.S.C. § 274e(a), (b) (1988) (stating it is a felony "for any person to knowingly acquire, receive, or otherwise transfer any human organ for valuable consideration for use in human transplantation").

135. See Patricia Edmonds, *As Casey Recovers, A Family's Tragedy Exposed*, USA TODAY, June 17, 1993, at 3A; Russell E. Eshleman, Jr. & Susan Fitzgerald, *Transplant Made Public Figures of Donor's Family When Casey's Life Was Saved*, PHIL. INQ., June 16, 1993, at A12.

136. Unrelated donors also can avoid the guilt pressures sometimes found in intra-familial donation situations. Since unrelated donors do not feel they have to give, when they do, the gift is truly voluntary. See Spital, *supra* note 131, at 1725.

of altruistic behavior that a society obsessed by the cult of individualism would be wise to encourage.¹³⁷

2. Other Living Donors

There have also been recent developments in other kinds of living donor transplantation. The primary obstacle to most live organ donations is that they kill the donor. Kidneys are an exception to the usual rule because everyone has two of them, and one can be sacrificed without serious adverse effects to the donor. Not so with livers and hearts. However, the hydraulic pressure to find new sources of organs has produced creative ways around even these limitations. It started with the liver. Even though people only have one, the liver has amazing powers of regeneration. If damaged in an accident, for example, and surgically reduced to remove dead tissue, if at least one-fifth of the liver remains intact, it will eventually grow back to its original form and function.¹³⁸ Faced with ever increasing waits for liver transplants, especially for children, and patients who were dying while waiting, physicians at the University of

137. The creation of a registry of people who would be willing to donate a kidney anonymously to someone in need should even be considered. A similar system has been adopted for patients needing a bone marrow transplant. See Anderson, *supra* note 13, at 485-86. To date almost one and a half million people have registered to give marrow donations to people they do not know, and thousands of marrow transplants have been performed. See Howard Wolinsky, *Registry Links Patients, Bone-Marrow Donor's Family Friend Donates Part of Liver to Boy*, 9, CHI. SUN-TIMES, Feb. 5, 1995, at 5455. A registry for kidney donations would make the most sense if transplants were limited to recipients whose tissues closely matched those of the donor. These transplants have a significantly higher success rate. See *supra* note 123. The prospect of providing a kidney with a much longer useful life that requires lower doses of immunosuppressive drugs (and their often hazardous side effects) might provide a sufficient incentive to convince someone to undertake the perils of donation on behalf of someone who was a stranger to her. Requiring a close tissue match also would prevent every member who joined the registry from automatically being required to give a kidney. Given the current shortage of cadaver kidneys for transplant, there would be an immediate demand for kidneys from everyone who joined the registry. Given that kidney donation poses significantly greater risks for the donor than bone marrow donation and requires a much longer recovery period, it would seem appropriate to give greater protections to (and provide greater assurances of transplant success for) those willing to donate to people they do not know. Even with these protections, however, most people may not be willing to make this kind of a physical sacrifice for a stranger without some kind of compensation. For discussion on the desirability of paying for these kinds of donations, see the text *infra* part II.B.4.

138. See, e.g., E. L. MacIntosh & G.Y. Minak, *Hepatic Resection in Patients with Cirrhosis and Hepatocellular Carcinoma*, 174 SURGERY, GYNECOLOGY AND OBSTETRICS 245, 246 (1992) (citing George T. Pack et al., *Regeneration of Human Liver after Major Hepatectomy*, 52 SURGERY 617, 617 (1962)).

Chicago decided to embark on a program of transplanting portions of adult livers into the bodies of children.¹³⁹ The donors are typically parents of the sick children, although other relatives have sometimes been called on to donate. Eighty-five parent-child living liver transplants have since been performed at the hospital, with very favorable results.¹⁴⁰ The University of Chicago hospital is planning to expand the program to include transplants to adults.¹⁴¹ The worldwide total of living parent-child liver transplants has now exceeded 350, with only one donor fatality.¹⁴²

A similar pattern developed for lung transplantation. Numerous patients were waiting in vain for organs, many of them children. Desperate families and physicians were looking for some way out of their dilemma. Living donation was the only option. Lungs are a kind of middle case between livers and kidneys. They do not regenerate like the liver when a portion is removed. On the other hand, like kidneys, every person does have two of them, and we can live with only one. However, unlike the person with only one kidney, a person with only one lung does suffer significant activity restrictions. So, for living lung transplants, physicians have compromised: instead of removing an entire lung for transplantation, they only take a portion (or lobe) of one lung, thereby minimizing the effect of the procedure on the donor's pulmonary function.¹⁴³ But this creates its own problem. One lobe is often not enough lung tissue to provide adequate function for the patient. The solution?

139. Peter A. Singer et al., *Ethics of Liver Transplantation with Living Donors*, 321 NEW ENG. J. MED. 620, 620 (1989). The hospital undertook a year-long ethical evaluation of the proposal before beginning any operations. Based on previous partial liver removals during cancer surgery, the risk of death for the donor was estimated at "close to zero" with the risk of major postoperative complications at "less than 5 percent." *Id.* at 620-21. Like their kidney counterparts, liver transplants from living donors also have higher success rates than those from dead donors. See Amanda Husted, *Relations Often Come to Rescue as Organ Donors*, ATLANTA CONST., Aug. 2, 1994, at C4.

140. See Wolinsky, *supra* note 137, at 5455; *Transplant Team Branches Out*, ORLANDO SENTINEL, Sept. 5, 1993, at G7 (reporting that the one year recipient survival rate for living-donor transplants to children is 88%).

141. *Id.* No adult to adult transplants have been performed in Chicago to date. See Anne Fahy-Morris, *Living Donor's Liver Enhances Survival*, L.A. TIMES, Feb. 19, 1995, at A30.

142. *Id.*

143. The first such operation was performed in December 1990. See Marsha F. Goldsmith, *Mother to Child: First Living Donor Lung Transplant*, 264 JAMA 2724 (1990).

Take one lobe from each parent. While this provides enough lung capacity for the patient, it simultaneously raises the stakes on the donor side of the equation. As one commentator put it, "[T]his was probably the first surgery that had a potential mortality rate of 300 percent."¹⁴⁴ It is important, however, not to exaggerate the risks involved. The surgery is not inherently more dangerous than the surgery for livers or kidneys. While the odds of complications may be doubled with two donors, the overall risk is still low. Although only a handful of such surgeries have been performed to date,¹⁴⁵ primarily for patients with end-stage cystic fibrosis, the results have been promising. With over 30,000 cystic fibrosis sufferers nationwide, the possibility of widespread use for this "two-donor" procedure cannot be ignored.

3. Assumption of Risk

Is the assumption by living donors of greater and greater risks for the sake of organ recipients something we should be worried about? To take an extreme situation, would we allow living organ donations that kill the donor? Consider, for example, the case of the teenage son with a terminal heart condition and the fifty-year-old father who wants to save his son's life. Unfortunately, there is not, nor probably ever will be, a way to give just a part of your heart to someone else and have it do any good. You must give the whole heart, and in so doing, sacrifice your own life. So why should we not let the father give his heart to his son?¹⁴⁶ How is this different from a host of

144. Sheryl Stolberg, *Historic Lung Transplant Draws a Mixed Reaction*, L.A. TIMES, Feb. 11, 1993, at A1 (statement of Mark Siegler).

145. Cheryl Clark, *Transplant Patient, 16, is Eager to Go Home: Doctors Optimistic Following a Rarely Tried Procedure*, SAN DIEGO UNION-TRIB., Aug. 21, 1993, at B2 (examining the fifth such procedure to date).

146. Most commentators seem to accept that removing organs for transplantation that cause the inevitable death of the donor is not permissible, even if they are not exactly sure why:

To date, at least in Western centers, living individuals have not been regarded as an appropriate source of unpaired, entire vital organs whose removal would result in their death. . . . But what about the autonomy interests of the willing, perhaps eager donor, or the great good that might be done for the otherwise doomed patient? We—at least those of us not yet properly resocialized to the soothing, highly professionalized and de-emotionalized jargon of our post-1984 world—tend to recoil. Whatever our commitment to donor autonomy, . . . this cuts it a bit too close, for some of us, for now.

other situations where self-sacrificing behavior is tolerated, even encouraged — the soldier who falls on the grenade to save his buddies, the sailor who slips into the freezing water so the overloaded lifeboat will not sink, the search team member who dies in an avalanche trying to rescue survivors in a mountain-side plane crash?

There are two crucial distinctions to recognize here. The first has to do with the relative risk faced by rescuer and rescuee. When both are threatened with the same fate, basic utilitarian principles sanction the sacrifice of one so the other might live. But the father who asks to give his heart to his son initially faces no risk of harm. If the father is allowed to sacrifice his life, there is no net gain to society, only one life traded for another.¹⁴⁷ The only rescue behavior that makes sense is one which endangers him less than it promises to benefit his son. So, for instance, a blood transfusion that could save his son's life would make utilitarian sense.

A second difference resides in the level of societal involvement. In many rescue situations, such as that of the soldier jumping on the grenade, there is no time to plan, no time to think through the options. People act on impulse, on emotion, and there is little that others can do to affect their behavior. Even if there were time, it also might not be possible to affect suicidal behavior. Even if we did not approve of the rescuer's intentions, we might not be able to affect her actions, especially if she was able to carry out her plan alone. But when there is time to think and plan, and when the rescuer needs the support of others to carry out her plans, society can insist that the risk undertaken be a reasonable one. The father who wants to give

Alan J. Weisbard, *A Polemic on Principles*, 3 KENNEDY INST. ETHICS J. 217, 220 (1993). But see Eric Rakowski, *Taking and Saving Lives*, 93 COLUM. L. REV. 1063, 1107-09 (1993) (suggesting that respect for the principle of autonomy requires accepting a person's decision to die so that she may give her organs to others).

147. One might argue that a heart transplant from father to son does produce an overall benefit to society because it results in a greater number of years lived. As in our example, a heart goes from a man who could be expected to live only 25 more years to a son who has 50 years of additional life expectancy. Such a net gain in years of life, however, is not likely. Even if the transplant is initially successful, it is likely to fail well before 50 years. The three-year survival rate for heart transplants is only 74.6%, see 1994 ANNUAL REPORT, *supra* note 5, app. at E-38, and the trend over time continues downward. See Terasaki, *supra* note 18, at 252 (noting that the average life of a transplanted heart is seven years). Moreover, the heart itself may have only a fixed number of years of useful life regardless of the body it happens to inhabit.

his heart needs the support of an extensive medical establishment to fulfill his death wish. That medical establishment need not cooperate.¹⁴⁸

Underlying the second point is a presumption that suicidal behavior is wrong and that society should do what it can to prevent the occurrence of suicide. The case law on refusing medical treatment is very clear in recognizing that the state does have a strong interest in preventing suicide, particularly when the person who wants to kill herself is healthy.¹⁴⁹ But why is that? What justifies interfering with individual auton-

148. Many have argued that the state *should* allow assistance to those who wish to take their own lives, particularly when they are suffering from a terminal illness. See, e.g., Elizabeth Gleicher, *Legalized Physician-Assisted Suicide*, 73 MICH. B.J. 184, 186-87 (1994); Cheryl K. Smith, *What About Legalized Assisted Suicide?*, 8 ISSUES L. & MED. 503 (1993). For the time being, however, it would appear that the state is not *required* to allow such assistance no matter what reason the patient has for wanting to die, whether to end her suffering from a terminal illness or to provide organs for someone else. In *Cruzan v. Director, Missouri Department of Health*, 497 U.S. 261 (1990), the United States Supreme Court acknowledged a patient's liberty interest in refusing lifesaving medical treatment under the Due Process Clause of the Fourteenth Amendment. *Id.* at 278-79. However, the Court also noted that a state has an important interest in preserving human life, noting with apparent approval the fact that a majority of states have enacted statutes making assisted suicide a crime. *Id.* at 280-81. Thus, while a state may be prohibited from interfering with the natural dying process, it does not follow that a patient may insist on receiving assistance to accelerate death. See Yale Kamisar, *Are Laws Against Assisted Suicide Unconstitutional?*, HASTINGS CENTER REP., May/June 1993, at 32, 34. But see Tom Stacy, *Euthanasia and the Supreme Court's Competing Conceptions of Religious Liberty*, 10 ISSUES L. & MED. 55, 63-64 (1994) (suggesting that the Supreme Court's plurality opinion in *Planned Parenthood of Southeastern Pennsylvania v. Casey*, 112 S.Ct. 2791 (1992), where the Court described the heart of the liberty interest as "the right to define one's own concept of existence, of meaning . . . and of the mystery of life," provides a basis for concluding that decisions regarding how a person wishes to end her life are constitutionally protected). In the only appellate cases directly addressing the issue, two courts have held that there is no constitutional right to assisted suicide. See *Compassion in Dying v. Washington*, 49 F.3d 586, 590-94 (9th Cir. 1995) (holding that a state of Washington statute which criminalized the act of providing assistance to suicide did not violate either the Due Process or Equal Protection Clauses of the Fourteenth Amendment); *Donaldson v. Lungren*, 4 Cal Rptr. 2d 59, 63-64 (Cal. Ct. App. 1992) (holding that a patient suffering from an inoperable brain tumor had no constitutional right to assisted death from a premortem cryogenic suspension undertaken to preserve his body until an effective treatment for his condition could be developed). See also *Hobbins v. Attorney Gen.*, 518 N.W.2d 487, 492-93 (Mich. Ct. App. 1994) (holding that there is no constitutional right to commit suicide, "much less the right to assisted suicide"). A claim also could be made that, to the extent it is religiously motivated, assisted suicide is protected by the Religious Freedom Restoration Act of 1993, see *supra* note 53, but such claims would probably fail as against the state's compelling interests in preventing homicide and suicide and preserving the integrity of the medical profession. Accord Smolin, *supra* note 53, at 49-50.

149. See *McKay v. Bergstedt*, 801 P.2d 617, 627 (Nev. 1990) (holding that a competent, adult quadriplegic's right to withdraw artificial life support outweighed the state interest in preserving life). See also *Thor v. Superior Court*, 855 P.2d 375, 382 (Cal. 1993); *In re Conroy*, 486 A.2d 1209, 1223-23 (N.J. 1985).

omy in this way? Is it because we believe that most suicide decisions are not rational, that people who take their own lives are not competent to make such a decision, either because of mental illness or the influence of mind-altering substances, and that without such infirmity, they would not choose this course?¹⁵⁰ If so, then such a rationale might not justify preventing suicide by potential organ donors, particularly in this hypothetical. The desire to protect one's children is not irrational. Parents are responsible for their children's welfare and are encouraged by society to make many sacrifices in their personal and professional lives to promote their children's interests.¹⁵¹ While most parents might not be willing to give their lives for their children, some would. In an era of increased concern about parents who do not care enough, we might not necessarily want to discourage such self-sacrificing behavior.¹⁵²

Perhaps a better rationale for discouraging this type of suicide is that a strong stance opposing suicide is necessary to prevent suicide from becoming ever more prevalent, particularly among those not suffering from mental illness or substance abuse. A suicide-permissive society sends the message that suicide may be the reasonable thing to do in certain circumstances, particularly when the person receiving the message is no longer a "productive" member of society, whether because

150. The two most common causes of suicide in America are depression and chronic alcoholism. See George P. Smith, II, *All's Well That Ends Well: Toward a Policy of Assisted Rational Suicide or Merely Enlightened Self-Determination?*, 22 U.C. DAVIS L. REV. 275, 296 (1988) (citing Richard W. Hudgens, *Preventing Suicide*, 308 NEW ENG. J. MED. 897 (1983)).

151. In certain cases, parents (mothers) have been required to undergo physical risks comparable to those experienced by living kidney donors in order to protect the health of their unborn children. See, e.g., *Jefferson v. Griffin Spalding County Hosp. Auth.*, 274 S.E.2d 457, 460 (Ga. 1981) (ordering a Caesarean section for a mother after doctors testified it was necessary to protect the health of the mother and the unborn baby). The modern trend, however, has been to defer to the choice of the mother as with all other medical procedures. See *In re A.C.*, 573 A.2d 1235, 1237 (D.C. Cir. 1990). This result seems required by the United States Supreme Court's decision in *Thornburgh v. American College of Obstetricians and Gynecologists*, 476 U.S. 747 (1986), where the Court held that a state could not require a woman to undergo any medical procedures exposing her to any increased risk in order to protect an unborn fetus. *Id.* at 768-69.

152. Of course, if the person who wants to sacrifice her life to save another with an organ transplant is not related to the recipient, one might be more concerned about her rationality. She could be suffering from mental or emotional illness and could simply be seeking a socially acceptable, "meaningful" end to her own existence.

of age, illness, or unemployment.¹⁵³ It is important for a society concerned with the welfare of all of its members not to send messages that encourage some to feel they are not worth having around. The question then becomes whether allowing parents or other relatives of a dying patient to sacrifice their lives to save the patient will encourage those at society's margin to consider ending their own lives as well. I believe it probably will. The message of such a policy would be clear — pre-meditated suicide is an appropriate option and citizens should do their duty, however defined. Such a message would tend to encourage people who believe that they do not have much to offer, because of age or health or economic status, to do their duty, namely to stop being a drain on society and to take their own life.

For these reasons, we may wish to prohibit organ donations resulting in the inevitable death of the donor. How much of a lesser risk should we be willing to accept? Here, we can legitimately prohibit those transplant procedures having a substantial likelihood of causing death or significant impairment in the donor. Death, after all, is not the only adverse result to be concerned about. If a donor kills herself, at least society does not have to worry about taking care of that person anymore. But if a donor only succeeds in significantly impairing her bodily functions, then society must bear the burden of that person's medical care and reduced productivity. For example, a particular lung transplant procedure might so impair respiratory function for the donor that she could no longer work and would need frequent hospitalizations to treat respiratory infections and other complications. If such an outcome were reasonably predictable, the state would be within its rights to prohibit that procedure.¹⁵⁴

153. See Kamisar, *supra* note 148, at 39 (suggesting that suicide could come to be perceived as reasonable, even noble, in a society that permits the taking of one's own life).

154. One commentator suggests that this is the standard that the courts would indeed adopt as the appropriate balancing between the individual donor and state interests, although without much explanation for his rationale. See Rodney K. Adams, *Live Organ Donors and Informed Consent*, 8 J. LEGAL MED. 555, 560 (1987) ("In view of the public policy favoring organ donation, it is reasonable to conclude that the courts would find a personal right to donate organs absent substantial risk of permanent impairment."). Another writer argues that potentially disabling transplant procedures should be disallowed because of "society's deplorable track record in caring for the disabled." Apparently assuming that additional resources will not be made available in the foreseeable future, the

Under this standard, the living kidney, liver, and lung transplant procedures already described would all pass muster. The serious complication rate for kidney donations is very low, deaths from donations are rare, and long-term renal function for persons with one kidney is essentially normal.¹⁵⁵ Preliminary results from live liver and lung procedures indicate generally favorable outcomes for donors.¹⁵⁶ As for future living transplant procedures, their acceptability would have to be determined on a case-by-case basis.

When deciding whether to allow a particular living donor procedure, we need to remember the many advantages that living donors offer over cadaveric ones. First, with living donors we know we have the consent of the proper parties. We need not resort to artificial strategies such as presumed consent to obtain organs when neither the deceased nor the next of kin are particularly enthusiastic about making those organs available. Second, with living donors the rewards of organ donation are experienced by people who can really appreciate them, the donors themselves, and not by people, the next of kin, whose joys of giving are seriously constrained by the tragedy of coping with the unexpected loss of someone close to them. Third, living donors are plentiful enough that they can meet the need for many types of organs. Cadaveric donors will probably never suffice to meet the need, no matter what strategies to increase donations are employed. Finally, increased reliance on living donors will reduce the pressures to find other sorts of cadaveric donors, such as the terminally ill or the incompetent. By showing greater respect for the living, all are enriched.

4. Paying for Organs

If a decision is made to increase the use of living organ donors, the question will arise whether any restrictions should be placed on the means of recruiting such donors. Many may be reluctant to provide organs, particularly to people they

writer argues that creating more disabled people would be "immoral." Lori B. Andrews, *My Body, My Property*, HASTINGS CENTER REP., Oct. 1986, at 28, 32.

155. See *supra* notes 108-10 and accompanying text.

156. In a Japanese study of 34 living liver donors, 59% reported no side effects at least six months after the donation, 20% reported fatigue, 12% reported wound pain, and 10% reported other symptoms. See Taisuke Morimoto et al., *Quality of Life Among Donors of Liver Transplants to Relatives*, 329 NEW ENG. J. MED. 363, 363 (1993).

neither know nor are related to, because of the risks associated with donating. If this reluctance is not overcome, many of the potential advantages of using living donors will not be realized. One way to do it would be to pay the donors for their organs. While this approach is currently illegal under federal¹⁵⁷ and many state¹⁵⁸ laws, these laws can obviously be changed. But should they be?

A preliminary objection that can be made to organ sales focuses on their potential to create market abuses. We begin by assuming an unregulated market for organ sales, one in which organ owners can sell their organs to the highest bidder. Only the rich organ buyers could play this game. The poor ones would be priced out of the market and into an early grave. Moreover, because knowledge of who wants to sell and who wants to buy might be difficult to come by, organ brokers would no doubt enter the picture. In an unregulated market, with desperate buyers and unsophisticated sellers, these brokers would probably buy very low and sell very high, keeping most of the profit from this transaction to themselves.¹⁵⁹

Ordinarily, we accept these kinds of results in a capitalistic economy. The market determines who buys and who sells and who falls by the wayside. However, when issues of life and death are involved, we no longer rely solely on the market. Food stamps are given to those who cannot afford to buy their own food, emergency shelter given to the homeless when the temperature becomes dangerously cold, emergency medical care provided to the poor when they have no insurance. More-

157. National Organ Transplant Act, 42 U.S.C. § 274e(a) (1988) (banning the sale of organs for transplantation).

158. See, e.g., UNIF. ANATOMICAL GIFT ACT § 10 (1987), 8A U.L.A. 58 (1993) (now adopted in 15 states but applicable only to sale of organs and tissues from dead donors). See also CONN. GEN. STAT. § 19a-280a(b) (Supp. 1994) (prohibiting payment for any "human organ" used in transplantation); 35 PA. CONS. STAT. § 10025(a) (1993 & Supp. 1994) (prohibiting human organ and nonregenerative tissue purchases); VA. CODE ANN. § 32.1-289.1 (Michie 1994) (prohibiting the sale of any "natural body part").

159. A West German organ broker, for example, is alleged to have purchased kidneys from poverty-stricken Turks for \$3500 and then resold them to people outside Turkey for between \$26,000 and \$52,000. J. Harvey, *Paying Organ Donors*, 16 J. MED. ETHICS 117, 117 (1990). The federal statute prohibiting organ sales was enacted in response to the announced plans of a Virginia physician, H. Barry Jacobs, to operate an international kidney brokerage firm in this country. Dr. Jacobs planned to charge between \$2000 and \$5000 for each healthy kidney and to recruit donors from developing countries. See Margaret Engel, *Virginia Doctor Plans Company to Arrange Sale of Human Kidneys*, WASH. POST, Sept. 19, 1983, at A9.

over, a free market in the healthcare field has not existed for a long time. Most Americans do not pay directly for their health care, but instead have it provided for them by their health insurance, either from the public (Medicare or Medicaid) or the private sector (usually through their employer).¹⁶⁰ In addition, there have been recent efforts at both federal and state levels to provide health insurance to those who are still without it.¹⁶¹ Most health insurance programs, whether public or private, currently cover the cost of most solid organ transplants.¹⁶² However, these insurers are not about to accept a system in which large, unregulated amounts of money are being paid for, and large, unregulated profits being made from, organ sales when the insurance companies would be expected to reimburse the payments. Accordingly, any system of payment for organs will be administered by the insurers and will be tightly regulated to eliminate middleperson profits and to pay the minimum amounts necessary to generate the needed organs. Transactions outside the system will not be tolerated.

Should such a system be acceptable? Most proposals for organ sales made in recent years have been limited to sales of cadaver organs.¹⁶³ This limit reflects, I believe, a concern that organ sales by the living may result in unacceptable exploita-

160. As of 1991, 150.5 million Americans were covered by health insurance through their employment, four million purchased their own primary health insurance, 27 million were covered by Medicaid (for the poor), and 34 million were covered by Medicare (for the elderly), meaning that 86.6% of the entire population was covered by some form of insurance. BUREAU OF THE CENSUS, *supra* note 98, at 112, 115. The number of uninsured has grown in the last three years.

161. See, e.g., Robin Toner, *The Health Care Debate: News Analysis*, N.Y. TIMES, Sept. 27, 1994, at A1; Robert Pear, *States Again Try Health Changes as Congress Fails*, N.Y. TIMES, Sept. 15, 1994, at A1.

162. See 1990 ANNUAL REPORT, *supra* note 27, at IV-8 to IV-10; CONGRESSIONAL RESOURCE SERVICE, MEDICAID SOURCE BOOK: BACKGROUND DATA AND ANALYSIS 292-94 (1993).

163. See, e.g., A.H. Barnett & David L. Kaserman, *The Shortage of Organs for Transplantation: Exploring the Alternatives*, 9 ISSUES L. & MED. 117, 125 (1993); Roger D. Blair & David L. Kaserman, *The Economics and Ethics of Alternative Cadaveric Organ Procurement Policies*, 8 YALE J. ON REG. 403, 407 (1991); James F. Blumstein, *The Use of Financial Incentives in Medical Care: The Case of Commerce in Transplantable Organs*, 3 HEALTH MATRIX 1, 24, 29 (1993); Lloyd R. Cohen, *Increasing the Supply of Transplant Organs: The Virtues of a Futures Market*, 58 GEO. WASH. L. REV. 1, 30 (1989); Henry Hansmann, *The Economics and Ethics of Markets for Human Organs*, 14 J. HEALTH POL., POL'Y & LAW 57 (1989); Richard Schwindt & Ardan R. Vining, *Proposal for a Future Delivery Market for Transplant Organs*, 11 J. HEALTH POL., POL'Y & LAW 483 (1986); Stephen J. Spurr, *The Shortage of Transplantable Organs: An Analysis and a Proposal*, 15 LAW & POLICY 355, 373 (1993).

tion of the poor.¹⁶⁴ Even those who advocate sales by living donors¹⁶⁵ sometimes express concerns about the need to avoid exploitation, such as by preventing sales by those who are "financially vulnerable," that is, persons who want to sell their organs only because they need the money.¹⁶⁶ Is exploitation a legitimate reason to prohibit living organ sales?

It is, of course, a truism that many of us engage in what are otherwise objectionable activities simply because we need the money: collecting garbage, making chemicals, working on an assembly line, flipping burgers, selling insurance, fixing roofs, doing secretarial work. These occupations can be alternately unpleasant and/or dangerous, yet they are an established part of our economic life and not generally considered beyond the pale in terms of worker exploitation (assuming they comply with minimum wage, safety, and other employee welfare regulations).¹⁶⁷ So how is selling body parts to make money any different?

The first difference is that in the normal employment situation, one's body (one's labor) is only for rent, not for sale. Of

164. As one advocate of cadaveric organ markets states, "[B]y only harvesting organs from the dead, exploitation of the poor is precluded. For in the cadaver market the vendors are neither rich nor poor, merely dead. No one will be forced by the desperation of poverty to sacrifice their dignity or health, or undergo great suffering." Cohen, *supra* note 163, at 30. Lori Andrews, an early advocate of living donor organ sales, see *supra* note 154, has since acknowledged this potential for exploitation and even has suggested that organ sales might appropriately be delayed until the donor's death. See Lori Andrews et al., *Sacred or for Sale?*, HARPER'S MAG., Oct. 1990, at 47, 50 ("I understand the potential for exploitation and I think you can circumvent it by allowing sale upon death so that nobody's paid during his or her life.") (statement by Ms. Andrews). See also *id.* at 51 (discussing the possibility of the poor being exploited for their organs).

165. See, e.g., Andrews, *supra* note 154, at 32; Harvey, *supra* note 159, at 118; Lantos & Siegler, *supra* note 9, at 271.

166. See Harvey, *supra* note 159, at 118 (arguing for limits on organ sales by the poor to prevent exploitation).

167. Economists even use wage differentials between jobs having similar skill requirements but different risk exposures to calculate the value of a human life. For example, assume that a welder on an automobile assembly line earns an annual salary of \$30,000 but has a 1 in 10,000 annual risk of being killed in an on-the-job accident, while a welder for a high-rise construction project earns \$35,000 but has an 11 in 10,000 chance of being killed. The high-rise welder earns an extra \$5000 but his chances of being killed in any given year are 1 in 1000 (10 in 10,000) greater. That means we have to pay him \$5000 to agree to accept this extra risk of death. If we multiply \$5000 times 1000, then we know what we would have to pay him if the job was definitely going to kill him that year (that is, if the chances were 1 in 1), or \$5,000,000. That is how much a life is worth. See generally W. Kip Viscusi, *Strategic and Ethical Issues in the Valuation of Life*, in RICHARD J. ZECKHAUSER, STRATEGY AND CHOICE (1991). Makes you wonder about economists, does it not?

course, it is neither uncommon nor illegal¹⁶⁸ for people to sell certain body parts already, such as blood, sperm, ova, and hair. These tissues, however, can be distinguished from solid organs because they are easily obtained from the donor¹⁶⁹ and are either easily replenished or (in the case of ova) easily done without. When the burden of donation is this light, perhaps we need not be concerned about exploitation.

Matters are somewhat more complicated for solid organ sales, however. The level of bodily intrusion of the donor is much greater, the recovery time much longer, the risk of long-term complications much higher. What kind of person would willingly, without coercion, agree to sell an organ under these circumstances? We have an intuitive sense that something must be wrong here. People who did not need the money badly would not bother to sell the organs. Either they would have a close enough personal attachment to the organ recipient that they would give the organ away, or they would not be interested in providing an organ under any circumstances, even if offered payment. If the only reason people are selling their organs is because they really need the money, are we not exploiting their financial distress to get them to mutilate their bodies?¹⁷⁰ And is that not what we are worried about?¹⁷¹

168. The National Organ Transplant Act defines those human tissues (actually "human organs") that cannot be sold as "human (including fetal) kidney, liver, heart, lung, pancreas, bone marrow, cornea, eye, bone and skin and any subpart thereof" as well as any tissues specified by the Secretary of Health and Human Services. 42 U.S.C. § 274e(c)(1) (1988). No additional tissues have been so specified by the Secretary. Accordingly, blood, sperm, ova, and hair are not covered. State law prohibitions have similar exceptions. *See, e.g.*, CONN. GEN. STAT. § 19a-280a(a)(2) (Supp. 1994) (excluding hair, blood, and blood components); 35 PA. CONS. STAT. § 10025(c) (1993 & Supp. 1994) (excluding blood, sperm, and other readily renewable tissues); VA. CODE ANN. § 32.1-289.1 (Michie 1994) (excluding hair, ova, blood, and "other self-replicating body fluids").

169. Ova may present a special case deserving of special treatment. Donating ova is significantly more difficult and potentially more hazardous than donating blood, sperm, or hair. Donors are injected with hormones to stimulate production of ova. These injections can cause ovarian cysts. The ova are then removed under anesthesia in a procedure that can cause bleeding, infection, and possible fertility problems. *See* ANDREW KIMBRELL, *THE HUMAN BODY SHOP* 83-84 (1993). Ova donors can receive \$2000 per donation compared with \$50 per donation for sperm donors. *Id.* at 77, 84. No doubt the difference reflects the relative difficulty of donation.

170. Realize, of course, that if we do not allow people to sell their organs just because they are desperate for money, we are not necessarily doing them any favors. As Margaret Radin has stated, "[I]f we think respect for persons warrants prohibiting a mother from selling something personal [like an organ] to obtain food for her starving children, we do not respect her personhood more by forcing her to let them starve instead." Margaret J. Radin, *Market Inalienability*, 100 HARV. L. REV. 1849, 1910-11 (1987). We

There is another reason to oppose organ sales. Changing to a paid system could have a devastating effect on an important altruistic institution in our society.¹⁷² Today's system of organ and tissue donation is primarily a voluntary one. As such, it plays an important role in the integration of a society increasingly estranged from itself. Most organ and tissue donation today is done anonymously, either in the form of blood and bone marrow from living donors, or in the form of organ donations from the deceased.¹⁷³ These donations allow individuals to show care and concern for fellow citizens who are unknown to them, and thereby strengthen the ties that bind our society together.¹⁷⁴ Organ donations are an important part of the voluntary contributions we make as citizens to help improve our community. If money enters the picture, the element of community is lost. We are no longer giving of ourselves to help those in need of the most basic of human resources.

Money also cheapens the value of donated tissue and organs. What once was a gift of immeasurable generosity becomes just one more transaction in today's overloaded marketplace. It loses its special nature and becomes just one more commodity. The presence of money can even act to diminish the worth of the donor. I am reminded of an incident in my high school chemistry class. I can still hear my teacher's voice

must assume (as we work for) a society which provides the basics — food, shelter, clothing — so that avoidance of certain market transactions does not have such stark consequences.

171. Surrogate motherhood provides another example of society's continuing difficulty with permitting potential exploitation of the physical human body. In surrogacy arrangements, a woman (the surrogate) agrees to gestate a fetus and give up the resulting baby for adoption to another couple. The genetic father of the baby is usually the adoptive father. The genetic mother is normally the surrogate (who is artificially inseminated) but also can be the adoptive mother or even an anonymous fourth party. Surrogates usually receive payment for their services. Even though surrogates only rent a body part, instead of selling it, and even though the rental is only for nine months, concerns about possible exploitation (as well as fears of baby selling and damage to the child's psyche) have caused 11 states to ban surrogacy arrangements, either by statute or court decision. See Keith J. Hey, *Assisted Conception and Surrogacy — Unfinished Business*, 26 J. MARSHALL L. REV. 775, 799-800 (1993). Only three states have expressly legalized surrogacy arrangements. *Id.* See also *Johnson v. Calvert*, 851 P.2d 776, 784-85 (Cal. 1993) (rejecting the notion that surrogacy contracts tend to exploit women).

172. For the original exposition of this argument, see Anderson, *supra* note 13, at 493-94.

173. Most of the arguments against organ sales that I have made to this point relate primarily to sales by living donors. This argument, however, regarding the adverse effects on altruism, applies with equal strength to both living and cadaveric sales.

174. See RICHARD M. TITMUSS, *THE GIFT RELATIONSHIP: FROM HUMAN BLOOD TO SOCIAL POLICY* 225-26 (1971) (describing the policies underlying blood donation).

as he announced that each member of the class was worth about \$2.00, or the current market value of the chemical elements that made up the molecules in our bodies. While we all pretended to laugh, I remember feeling very uncomfortable with the idea of somebody else putting a price on my body. Wholesale commodification of human body parts does much the same thing, and in the process comes a lot closer to making a more "realistic" market valuation — kidneys at \$5000 each, livers \$10,000, hearts \$15,000 and so forth. Add them all up, and you know the value of a person.¹⁷⁵

Furthermore, if money is introduced to the system, it may cause a domino effect¹⁷⁶ that does away with most altruistic transactions in organs. Economic theory suggests that, in the presence of complete information, only one price can exist for any product. This theory implies that a product, like organs, cannot simultaneously be available for free and for some higher amount.¹⁷⁷ Accordingly, once it becomes common knowledge that organs are for sale, it will probably drive altruistic donors out of the market, or, alternatively, turn them into organ sellers. Why should they give away for free that for which others are getting paid?¹⁷⁸ The only exception will be unpaid donors who have unusual "utility functions"¹⁷⁹ that would motivate them to provide their organs at less than market value. Such utility functions no doubt exist for donors in intrafamilial transactions, where the continued existence of a family member has a more intense value to the donor than if she did not know her recipient.

This consequence is a classic example of how the rules we adopt do not simply reflect the natural tendencies of people but can also be instrumental in directing their conduct toward the more desirable of several possible outcomes.¹⁸⁰ To the extent

175. As one author states, "[I]f we come to think about ourselves as pork bellies, pork bellies we will become." Leon R. Kass, *Organs for Sale?* 107 PUB. INTEREST 65, 83 (1992).

176. For a description of this domino effect, see Radin, *supra* note 170, at 1907-08.

177. See Reuben A. Kessel, *Transfused Blood, Serum Hepatitis and the Coase Theorem*, 17 J. L. & ECON. 265, 286 n.68 (1974) (explaining the underlying market theory against commercialization of organ harvesting).

178. Some critics suggest that this is indeed the fear of those espousing the altruistic approach. See, e.g., Blumstein, *supra* note 163, at 27.

179. See Kessel, *supra* note 177, at 286 n.68.

180. See, e.g., Baron, *supra* note 113, at 176-77.

that society believes altruism is important for a healthy community, it should encourage altruism by discouraging the phenomenon of paid donors.

The argument for paying donors is strongest when there are no other options for dying patients. In India, for example, there is no money to provide dialysis for patients with kidney failure, and there is no infrastructure to remove and preserve cadaveric kidneys and match them with potential recipients. In addition, potential donors live in grinding poverty with little hope for relief from their condition.¹⁸¹ Under these circumstances, the widespread practice of paying living donors for kidneys might be justifiable. However, when dialysis is available for all who need it, when a cadaveric transplant system is highly developed, and when the government has the resources to assure a minimally adequate standard of living for all of its people, the exploitative aspects of paying for donations are much harder to accept. Admittedly, dialysis-type options do not exist for those in need of liver or lung transplants, but we can do more to encourage other methods of donating. The downside of commodifying vital human organs is simply too much to accept without first exploring all other possible options.¹⁸²

181. See Charles P. Wallace, *For Sale: The Poor's Body Parts*, L.A. TIMES, Aug. 27, 1992, at A1 (describing the current situation in India but also noting that no permanent change appears to occur in the economic status of people who sell their organs).

182. Some advocates of organ sales point to the prominent role money plays in other aspects of the organ donation process — payments to doctors who perform the transplant operations, to hospitals where transplants are performed, to drug companies who provide anti-rejection medications — and ask why the donor should be the only one not to benefit financially from the transplant procedure. See, e.g., Blumstein, *supra* note 163, at 23. The short answer is that the organ donor's role is unique. Physicians, hospitals, and pharmaceutical companies provide transplant services and products to hundreds of different patients. This is their livelihood. If they did not get paid for their work, they could not survive. The solid organ donor only donates once. This is not her business, this is not her livelihood. Payment is neither necessary nor desirable.

Adoption is another area where we allow the peripheral players in the process to be paid but not the person who provides the essential product. When a mother decides to place her child for adoption, we fully expect the social workers, the lawyers, and the placement agencies who facilitate the process to be paid for their efforts. But the mother gets nothing as compensation for her child. The most she can recover is reimbursement for her medical expenses while pregnant, just as the organ donor's medical expenses are picked up by the organ recipient. Even in surrogate motherhood situations, see *supra* note 171, if the surrogate gets paid, her contract makes clear that the payment is for her services in carrying the baby and not for the baby itself.

III. THE ALLOCATION PROBLEM

No matter what kinds of changes we make to the organ procurement system to increase organ supply, an organ shortage will probably continue for some time. New programs will not be adopted overnight, and even when they are in place, for some organs, particularly hearts, sufficient replacement organs will likely never be available.¹⁸³ While a shortage persists, we must decide how to allocate those organs that are available. Under the current system of organ allocation, patients are placed on waiting lists for organ transplants according to criteria developed by local transplant teams.¹⁸⁴ Once on a waiting list, patients are selected to receive transplants according to criteria developed by the United Network for Organ Sharing (UNOS), the private organization selected by the federal government to coordinate organ transplantation decisions in this country.¹⁸⁵ Hospitals with transplant programs must abide by UNOS rules or lose their Medicare and Medicaid funding.¹⁸⁶

Changes in the criteria used either to place patients on the waiting list or to select them for transplants from that list are

183. Work continues on development of an artificial heart as well as transplants from animals. See *supra* notes 22 and 26.

184. See *Developments in the Law: Medical Technology and the Law*, 103 HARV. L. REV. 1519, 1630-31 (1990). Factors determining eligibility for placement on the list are age (usually no more than 55), whether the patient will comply with medical regime of therapy and medication (family support, education level, and occupation), patient's condition (bad, but not too bad), and availability of alternative treatments. See *supra* Spurr, note 163, at 358. Obviously a great deal of subjectivity exists in these judgments. This subjectivity creates the opportunity for abuse, favoritism, and unequal treatment based on class, race, or other prejudice. See, e.g., Ian Ayres et al., *Unequal Racial Access to Kidney Transplantation*, 46 VAND. L. REV. 805, 807 n.6 (1993). A recent study of people on dialysis indicates that, even after controlling for contraindicated medical conditions, women, non-Whites, and those with low incomes are much less likely to receive a kidney transplant. See Daniel S. Gaylin et al., *The Impact of Comorbid and Sociodemographic Factors on Access to Renal Transplantation*, 269 JAMA 603, 603 (1993). Because candidates for organ transplants are drawn from waiting lists according to uniform, non-discriminatory UNOS policies, see *infra* notes 185-86 and accompanying text, this disparity must be caused primarily by discrimination in the decision to place people on the waiting list in the first place. But see Ayres et al., *supra*, at 807 (demonstrating that even facially neutral selection criteria may result in fewer African-Americans being chosen from the waiting lists owing to incompatible tissue types). The discretionary nature of the wait listing process is the only way that Mr. Casey's status as governor of Pennsylvania helped him get favorable treatment in the transplant process. He was able to meet on short notice with the leading liver transplant surgeon in the world and be placed on a waiting list almost immediately. Most people do not receive that kind of service.

185. For a brief history of the UNOS program, see Ayres et al., *supra* note 184, at 813-14 (1993).

186. 42 U.S.C. § 1320b-8(a)(1)(B) (1988).

needed to avoid some of the undesirable results that occur under the current system. Considerations of utility should be paramount because the resource is limited. Assuming, as we must,¹⁸⁷ that all human beings are of equal value, we should be using the organs that are available to minimize the total number of deaths. When all cannot be saved (thousands currently die each year while waiting), we should still seek to lose as few as possible. As an initial matter, then, the logic of this argument requires an end to all multiple organ transplants. When a heart and liver become available from one donor for transplant, they should be used to save two lives (one needing only a heart, the other needing only a liver) and not just one. Accordingly, transplant operations like that which saved Governor Casey's life should no longer be performed. While it may seem callous to condemn someone in the governor's position to a certain death, it seems less so when we recognize that saving his life caused two others to die.

Besides outlawing multiple organ transplants, utility considerations also would suggest a reversal of priorities with respect to the condition of the recipient at the time of transplant. For purposes of evaluating transplant success, patients awaiting transplants are classified according to the seriousness of their current condition, ranging from Class One (working or attending school full time) to Class Six (on life support). Generally speaking, patients who are the sickest have first priority for organs, based on the theory that the healthier patients can afford to wait longer for their turn.¹⁸⁸ The problem with this approach, however, is that the success rate for patients in Class Six is markedly worse than for those in higher categories. To give just one example: The one-year success rate for all liver transplants performed in the five-year period ending December 31, 1991 for patients in Class Six was 47.5%, compared with 79.1% for those in Class One.¹⁸⁹ Notwithstanding the lower

187. For a discussion of why making comparisons between the value of different people is inadvisable, see *infra* text accompanying notes 205-06.

188. See UNOS POLICIES, *supra* note 6, at 3-15 to 3-17 (livers) and 3-20 to 3-21 (hearts).

189. 1993 ANNUAL REPORT, *supra* note 130, app. at E-12. For heart transplants, 72% of the Class Six transplants lasted one year, compared with 93% of the Class One transplants. *Id.*, app. at E-20.

rate of success, 1971 liver transplants were done for Class Six patients, compared with only 463 for Class One.¹⁹⁰

There is a reason that the current system of favoring the sickest patients for transplantation was adopted. We find it exceedingly difficult to ignore the plight of the dying patient, and our instinct is to do whatever we can to save her. That is why we also allow multiple organ transplants (as well as repeat transplants for the same patient).¹⁹¹ In so doing, however, we are pursuing the classical fallacy of favoring the identified life at the expense of the statistical life.¹⁹² This tendency means investing resources to save a person whose plight has already been brought to our attention as opposed to saving the person whose problem is just as real but whose condition has not yet become known to us.

There is nothing wrong with following one's emotions and rescuing the person most obviously in need of help, provided that doing so produces overall results at least as beneficial as those which would have been produced had one chosen to help the other (statistical) life. But frequently it does not, wherein lies the fallacy. So, for example, we may expend tens of thousands of dollars and many days of labor to save the life of a little child trapped in a well, but we do not expend similar amounts of resources for vaccinations that would save five children (as yet unidentified) from death by contagious disease. The same unfortunate result seems to be happening in the liver transplant program, which spends several hundred thousand dollars on a liver transplant for a critically ill person. But in so doing, it may be sacrificing the life of some other person, not yet identified and not yet on death's door, who also needs a transplant, and who would have had a much better prognosis had she received this one. When this same person becomes deathly ill, the system may show the same level of concern for her as it did for her predecessor. But now it may not be able to find an organ in time, and even if it does, her chances for long-term survival will not be nearly as good as they would have been if she had received the transplant at the earlier date. In a

190. *Id.*, app. at E-12.

191. See text at notes 194-96 *infra*.

192. For a discussion of the difference between statistical lives and identifiable lives and society's willingness to protect each, see BARRY FURROW ET AL., *HEALTH LAW: CASES, MATERIALS AND PROBLEMS* 633 (2d ed. 1991).

period of shortage, it is inevitable that some will not receive organs. But society has an obligation to ensure that those organs transplanted will save as many lives as possible. That obligation means providing them not to the sickest people, but to the people who will be most likely to benefit.

Utilitarian concerns are not the only ones present, however. There is also a question of distributive justice. If each person is of equal value, then each person who needs a transplant should be able to make a claim for an equal chance at receiving one. However, if we were to adopt such an approach exclusively, it would not leave any room for the utilitarian concerns already discussed.¹⁹³ I believe that utilitarian concerns clearly should play a paramount role in order to assure the survival of the greatest number of people. Nevertheless, I also believe there is still a role for distributive justice to play once all other things are equal, that is, when the candidates for an organ transplant have similar chances for survival. When this is true, considerations of fairness require that repeat transplantations for the same person not be allowed. Repeat transplantations occur after an original transplant is rejected by the recipient. When rejection occurs, it is common practice to undertake a second (and sometimes third) transplant operation for the same patient.¹⁹⁴

Some have argued that retransplantation should not be done because retransplants have a higher failure rate than original transplants.¹⁹⁵ But I would argue that they should be prohibited even if the success rate were the same or better.¹⁹⁶ So long as there are not enough organs to go around, fundamental fairness requires that each person be given only one opportunity at an organ transplant.¹⁹⁷ This principle is particularly

193. As commentator Dan Brock has put it, "The fundamental ethical conflict in the distribution of scarce organs is between doing the most good with a scarce resource and ensuring that it is distributed fairly." Dan W. Brock, *Ethical Issues in Recipient Selection for Organ Transplantation*, in *ORGAN SUBSTITUTION TECHNOLOGY* 86, 87 (Deborah Mathieu ed., 1988).

194. Peter Ubel et al., *Rationing Failure: The Ethical Lessons of the Retransplantation of Scarce Vital Organs*, 270 *JAMA* 2469, 2469-70 (1993) (analyzing the efficacy and underlying rationale of retransplantation).

195. *Id.* at 2473.

196. For a similar argument, see Brock, *supra* note 193, at 99.

197. I would make an exception for retransplants when the organs are from family members. In the case of living donations, when a donated kidney from one family member fails, it is fairly common for someone else in the family to provide a second kidney. This

true for heart, liver, and lung transplants, when the only alternative to transplantation is death. For some to have second or third chances before others have had even one simply cannot be justified.¹⁹⁸

second donation would not be made if the organ could not be kept within the family. Any attempt to prevent this kind of familial preference would be cruel and counterproductive.

Directed donations raise interesting issues in other contexts as well. In the case of deceased donors, the current version of the Uniform Anatomical Gift Act allows the donor, or his family, to designate the recipient of the donor's organs. See UNIF. ANATOMICAL GIFT ACT, § 6 (1987), 8A U.L.A. 53 (1993). While most donors and their families are not aware of this right of directed donation, a few have attempted to use it to require that organs be used only for people of a certain race or ethnic ancestry. See, e.g., Jeff Testerman, *Should Donors Say Who Gets Organs?*, ST. PETERSBURG TIMES, Jan. 9, 1994, at 1A (describing the family of Ku Klux Klan sympathizer who successfully restricted the donation of their son's organs to Caucasians only). Organ procurement agencies are faced with a difficult decision in these cases. While not wanting to lend support to racist ideas, they know that refusing any organ donation, for whatever reason, will cause additional deaths. One can rationalize accepting racist restrictions on the grounds that the use of these organs will remove some people from the waiting list and thereby make it easier for members of non-favored groups to obtain the next organs becoming available. On the other hand, accepting racist restrictions may cause so much damage to the social fabric as to make the gains in lives saved not worth the cost.

A question also arises as to whether these restrictions violate the civil rights laws. Title VI of the Civil Rights Act of 1964 forbids discrimination on the basis of race, color, or place of origin in the provision of benefits from "any program or activity receiving federal financial assistance." 42 U.S.C. § 2000d (1988). While hospitals are generally subject to the requirements of Title VI because they receive Medicare and Medicaid funds, see, e.g., *United States v. Baylor Univ. Medical Ctr.*, 736 F.2d 1039, 1044-45 (5th Cir. 1984), there is some doubt whether the racial discrimination of the donor's family in limiting potential recipients can be attributed to the transplant hospital. Cf. *Bowen v. American Hosp. Ass'n*, 476 U.S. 610, 610 (1986) (plurality opinion) (holding that a hospital's refusal to operate on a newborn baby with Down's syndrome did not violate § 504 of the Rehabilitation Act prohibiting discrimination based on disability because the refusal was based on lack of parental consent).

198. But see Ubel et al., *supra* note 194, at 2471. Ubel, Arnold, and Caplan contend that fairness arguments should not give patients awaiting a first transplant priority over those seeking a retransplant (assuming that both operations offer similar chances for success). According to Ubel, these types of arguments may have "an intuitive appeal" but they focus too narrowly. Instead of considering access to transplant organs only, Ubel and company think we should look at access to the entire medical delivery system and even access to social goods that can affect health, like income and education, when deciding who most deserves the available organs. Because the patient who needs the initial transplant may have received preferential treatment with respect to other health care services in the past, it may be that the retransplant patient is still far enough behind in the overall health accounting that she deserves first crack at the second organ in order to redress the imbalance. Accordingly, fairness does not automatically require that retransplants have a secondary priority. *Id.*

I have two responses. First, as we have already seen, people who get on waiting lists for organs in the first place tend to be people who have greater access to power and resources. Among the criteria used to choose transplant patients are whether the patient has adequate family support, education, and occupational experience to comply with a demanding treatment regime. See *supra* note 184. Moreover, all of the criteria currently used for choosing transplant candidates result in disproportionate exclusion of non-White, female,

One could argue that patients who receive an initial transplanted organ have made an emotional and psychological commitment to the transplantation process entitling them to priority access to organs should a retransplant become necessary. In a sense, they have developed a kind of expectancy interest in not being abandoned by the medical system should they experience difficulty with their initial organ. Once on board, they should be able to remain for the whole voyage. A rescue begun, but cut short, is more cruel than no rescue at all.

I cannot agree. There is no logical stopping point for this argument. If a second transplant fails, why not a third and a fourth and so on. Can we really justify that lavish an expenditure of scarce lifesaving resources on one person? Moreover, this argument fails to recognize the equally powerful emotional commitment made to the transplantation process by those left on the waiting list. Often, this is their only chance at continued life. The simple act of placing them on the list has created a powerful expectancy for them that a replacement organ will be forthcoming. Each day without an organ, their condition weakens, their prospects dim. Why are their hopes for life extension any less intense, any less deserving of protection than those of the person who has already received a transplant? Why should they not have at least one chance of rescue, too? If some are still concerned about the potential for creation of a special expectancy interest in retransplantation, we could make it clear up front that each patient will receive only one organ while others are still waiting for their first.

Principles of fairness also can be used to assure that each transplant candidate has an equal opportunity to enjoy long life. This requires an explicit recognition of the importance of age. Where resource supply is not limited, it is appropriate to make technologies available to all patients who can benefit

and poor patients. *Id.* Accordingly, people who do get onto a waiting list are likely to be similar in socioeconomic characteristics, and, therefore, in previous access to health services.

Second, unlike other situations, the choices involved in organ allocation involve life and death, and as such, justify a separate decision-making process independent of other considerations. When someone's life is on the line, she deserves an equal opportunity to hit the jackpot of extended life with other similarly situated people, no matter what has gone before.

from them, regardless of age.¹⁹⁹ When dialysis machines were in scarce supply, only 7% of dialysis patients were age fifty-five or older.²⁰⁰ Six years after dialysis became universally available under the Social Security Amendments of 1972, the percentage of dialysis patients fifty-five and older had reached 46%.²⁰¹

Where supply cannot be increased to meet demand, as with organ transplants, decisions have to be made about who lives and who dies. Those who have lived longest should give way to those who have not. All other things being equal, someone who has already lived for sixty years would seem to have less claim to a new heart promising another ten years of life than a patient who is only thirty years old.²⁰² Current transplant practices would appear to reflect this reality. Fewer than 5% of all organ recipients are 65 or over.²⁰³ While UNOS does not consider age in its allocation decisions, the treating physicians who decide which of their patients will be placed on organ waiting lists obviously do.²⁰⁴ While some no doubt use age as a proxy for medical suitability, others no doubt use it as a measure of desert. This policy should be continued.

Finally, I would not, as a general matter, advocate allocating organs based on the social worth of potential recipients. I would not try to decide whether it is more appropriate to save the rocket scientist or the unemployed welder. While it might seem to make utilitarian sense to save the lives of only the most worthy citizens, others have already pointed out the difficulty

199. More and more medical resources are being made available to older Americans in situations where they had previously been denied. Coronary bypass surgery, for example, was once reserved for the younger patients. People over 80 almost never received the surgery. Today, at many hospitals, between 10 and 25% of bypass patients are over the age of 80. See *Heart Surgery Found to Help People Over 80*, CHI. TRIB., Mar. 17, 1994, at N4.

200. Roger Evans et al., *Implications for Health Care Policy: A Social and Demographic Profile of Hemodialysis Patients in the United States*, 245 JAMA 487, 489 (1981).

201. *Id.*

202. As to priorities between the older and the very young, some might argue that the very young have not earned, either by societal contribution or life experience, the right to claim an organ at the expense of older persons. However, a conflict between these two age groups will never develop for practical reasons. Adult-size organs that would be suitable for transplantation into a 60 year-old patient would never fit in a young child's body.

203. See 1994 ANNUAL REPORT, *supra* note 5, app. at D-6, D-10, D-15, D-22.

204. See Spurr, *supra* note 163, at 358. If physicians did not consider age when placing people on the waiting list, a higher percentage of older persons would receive transplants, particularly when their increased age makes them much more likely to experience major organ disease.

of making the necessary choices.²⁰⁵ What attributes should we (do we) value most highly — science or philosophy, art or economy, poetry or accountancy? Should we focus on past contributions, which are easier to measure, or future potential, which is more important to societal welfare? At the extremes (choosing to save the President of the United States, instead of a mass murderer), the decisions may appear relatively easy, but in the vast majority of cases, it would be impossible to reach consensus and impossible to justify whatever decisions were made.²⁰⁶

The only exception should be for those patients who, because of their conduct, have already been adjudged less worthy by the society at large. Accordingly, all those convicted of serious criminal offenses should automatically forfeit their ability to receive a transplant. There is room for debate on the nature of the offense that would be serious enough to warrant this penalty (all felonies, only violent felonies, only repeat felons) and the duration of the ban (lifetime, a fixed period, while the criminal is incarcerated). But the basic principle remains the same: when deciding eligibility for transplants, the relative worth of the various candidates will ordinarily neither be calculated nor considered. However, a conviction for committing certain criminal acts will remove a potential participant from consideration altogether for an appropriate period of time.

IV. CONCLUSION

Desperate times lead to desperate measures, but they are not always good ones. A review of the organ transplantation system in this country has shown an effort to change many of the rules of the transplant game, often in ways not for the better. Any changes that we make must continue to provide assurance to both prospective organ donor patients and their families that every effort is being made to manage the patients' care for their benefit and not for the benefit of other desperately ill pa-

205. See, e.g., Maxwell J. Mehlman, *Rationing Expensive Lifesaving Medical Treatments*, 1985 WISC. L. REV. 239, 257-58 (1985).

206. *Id.* Consider the example of the Seattle Artificial Kidney Center in the 1960s, which, in deciding which patients should be allowed to use the limited number of dialysis machines available, considered such factors as marital status, past performance, future potential, net worth, occupation, and references. See *id.* at 256 (citing Shana Alexander, *They Decide Who Lives, Who Dies*, 53 LIFE 102-04 (Nov. 9, 1962)).

tients who need new organs. When potential organ donors die, we also must continue to show at least as much respect for the families who are left behind as we did for the patients while they were still alive. This respect means that presumed consent laws and laws changing the requirements for cadaveric donations should not be supported.

Moreover, because the number of eligible cadaveric donors will continue (we hope) to decrease as a result of improved societal efforts to reduce accidental and violent deaths, we must look increasingly toward living donors to pick up the slack. The availability of living donors is an opportunity and not a problem. With living donors we can get real consent from the proper parties without resorting to devious stratagems. Living donors can experience all the joys of donation unmixed by the tragedy of unexpected death accompanying cadaveric donations. Enough potential living donors exist to meet much of the potential demand. In our efforts to produce more and more organs, however, we must not give in to temptation and begin paying organ donors. Payment brings into question the validity of consent and raises the specter of exploitation of the poor through self-mutilation to benefit the more well-to-do. It also threatens to undermine what has been an important altruistic institution that has helped to bring together an increasingly fragmented community. Not everything should be for sale.

Finally, we must make sensible decisions about allocating those organs that are available. Multiple organ transplants, repeat transplants, and transplants to critically ill patients who will probably die with or without a transplant must be avoided. With the possible exception of convicted felons, we must not attempt to allocate organs based on the social worth of the potential recipient. With these principles in mind, the organ transplantation system could be transformed into one that respects the dignity of all participants, produces more transplants, treats all candidates fairly, fosters a greater spirit of community, and saves more lives.