

Michigan Law Review

Volume 68 | Issue 5

1970

Supplying Organs for Transplantation

Jesse Dukeminier Jr

University of California, Los Angeles

Follow this and additional works at: <https://repository.law.umich.edu/mlr>



Part of the [Health Law and Policy Commons](#)

Recommended Citation

Jesse Dukeminier Jr, *Supplying Organs for Transplantation*, 68 MICH. L. REV. 811 (1970).

Available at: <https://repository.law.umich.edu/mlr/vol68/iss5/2>

This Article is brought to you for free and open access by the Michigan Law Review at University of Michigan Law School Scholarship Repository. It has been accepted for inclusion in Michigan Law Review by an authorized editor of University of Michigan Law School Scholarship Repository. For more information, please contact mlaw.repository@umich.edu.

SUPPLYING ORGANS FOR TRANSPLANTATION

Jesse Dukeminier, Jr.*

The transplantation of organs will be assimilated into ordinary clinical practice . . . and there is no need to be philosophical about it. This will come about for the single and sufficient reason that people are so constituted that they would rather be alive than dead.

—Sir Peter Medawar†

SWIFT advances in organ transplantation are forcing us to think about what was once unthinkable: buying human organs. In the spring of 1968 the following item appeared in the classified columns of a Los Angeles suburban newspaper:

NEED A TRANSPLANT?

Man will sell any portion of body for financial remuneration to person needing an operation. Write Box 1211-630, Covina.¹

The advertiser did not indicate, nor would he answer a letter inquiring, whether he was offering for sale his body or the body of a close relative expected to die soon. In either case his offer raises fascinating and wholly new legal and ethical problems.² May a dying man sell his heart to benefit his family? May his family sell his kidneys after his death? May a healthy person sell one of his kidneys during his life?

* Professor of Law, University of California, Los Angeles. A.B. 1948, Harvard University; LL.B. 1951, Yale University.—Ed.

I am much indebted to Dr. David Sanders of Cedars-Sinai Medical Center, Los Angeles, who has explored with me many of the problems discussed in this Article.

† Second International Congress of the Transplantation Society, New York, Sept. 11, 1969, 1 *TRANSPLANTATION PROC.* 666 (1969).

1. San Gabriel (Cal.) Tribune, May 9, 1968, § D, at 8, col. 4. The classified section of the Los Angeles Times has several times featured eyes for sale. For example: "EYES for sale for transplant. \$50,000 each—Help someone you care for see and in return you'll be helping others. Only sincere parties call please. 344-7118." Los Angeles Times, Jan. 26, 1969, classified section at 1, col. 1. "Cornea transplant offered. Submit prop. to P.O.B. 127, Ontario, Calif." *Id.*, Feb. 9, 1969, classified section at 2, col. 4.

2. There is at least one other time in modern history when the medical need for bodies was far greater than the quantity supplied. In the late eighteenth century the advance of medical science made it essential for medical students and medical schools to obtain cadavers. Since there was no other legally acceptable way of filling the need, medical schools purchased cadavers. Professional grave robbers, called "resurrectionists," soon developed. Grave robbing and the nefarious activities of Burke and Hare, who murdered to supply bodies to Dr. Knox, the brilliant Edinburgh anatomist [*Burke and Hare*, in *NOTABLE BRITISH TRIAL SERIES* (W. Roughead ed. 1948)], led to the passage of the English Anatomy Act of 1832, 2 & 3 Will. 4, c. 75. That Act supplied medical schools with corpses of paupers and unclaimed dead; most American states followed suit with anatomy acts of their own. The acts are collected in Comment, *The Law of Dead Bodies*, 19 *OHIO ST. L.J.* 455 (1958).

Questions such as these will soon have to be answered. Professor R. Y. Calne, a pioneering kidney surgeon at Cambridge University, has observed that "[t]here have been cases, and there will be many more, in which families for one reason or another have not wanted to donate a kidney to their afflicted relatives and have sought out somebody in need of money to give a kidney and be paid for it."³ Similarly, a few months ago I was consulted by a member of an eminent kidney transplant team after a man, alone and going blind, had offered to sell one of his kidneys for 5,000 dollars. If the physicians could accept the offer they would have a rare opportunity to evaluate the current tissue typing system. They would be able to search throughout the country for the recipient with the best tissue match and give the kidney to him. In view of the uncertain state of the law, I advised them not to accept the offer. The need to determine the law applicable to the sale of organs has become even more important as a result of the wide publicity which has been given to transplantation. The existence of funds from this source makes it even more likely that donors will begin to demand payment for their organs.

The possibility that a market for organs will develop arises as a result of recent scientific successes in interchanging human parts and the consequent imbalance that has arisen between the quantity of organs supplied and the quantity demanded. Currently, and in the foreseeable future, unless our laws are changed, the quantity supplied will not equal the quantity demanded at a zero price. When useful items are in short supply in a market economy monetary inducements to increase the supply are commonly offered. The question then arises whether society should permit such inducements in order to ensure a satisfactory supply of human organs. That question does not have a short, easy answer.⁴

Unless effective means are found to increase the quantity of organs available for transplantation, buying organs to satisfy human need may prove difficult to prevent. A few years ago Joshua Lederberg, the Nobel Prize-winning physicist, warned that swift medical advances could bring "intolerable economic pressures on transplant

3. CIBA FOUNDATION SYMPOSIUM: ETHICS IN MEDICAL PROGRESS 37 (G. Wolstenholme & M. O'Connor ed. 1966) (remarks of R. Calne). See also R. CALNE, RENAL TRANSPLANTATION 148 (1967).

Crammond, Court, Higgins, Knight & Lawrence, *Psychological Screening of Potential Donors in a Renal Homotransplantation Programme*, 113 BRITISH J. PSYCHIATRY 1213, 1219 (1967), report: "one patient recently has produced the interesting attitude that he feels diffident and rather ashamed to ask someone to give a kidney, and for his peace of mind he would much rather be able to buy a kidney from a potential donor."

4. See pp. 847-66 *infra*.

sources.”⁵ If buying organs for transplantation is socially undesirable, ensuring the supply of an adequate quantity of organs at a zero price, and thus preventing the development of a market, is one of the most important challenges facing anyone who would draft legislation in this field. Each statute that is proposed as a means of making available organs for transplantation must be evaluated in terms of whether it will make available a quantity adequate to meet the demand at a zero price. If the statutes enacted will not accomplish that result, Lederberg’s warning may become grim reality.

I. THE FUTURE DEMAND FOR ORGANS

The future demand for organs will probably be far greater than most people today foresee. In the future, medicine will increasingly concentrate on two areas: disease prevention and organ transplantation. Diseases will be prevented, cured, or controlled by inoculations or drugs; when inoculation or chemotherapy does not work—or cannot be used in a particular case—a replacement organ will be sought. More surgeons will be trained in transplantation techniques, and, as the ability to control immunological responses advances, the percentage of successful transplants will increase. More dying persons and their relatives will be aware that death may be postponed with a transplant; hence more persons will seek transplant therapy. The initial stages of that trend can already be seen: within a year after the first human heart transplant, thirty-five persons were waiting for heart transplants in two hospitals in Houston, and dozens more were waiting in other hospitals in this country and abroad.⁶

As the rate of success in transplant operations increases, the demand for organs will also rise. At the present time the most serious scientific barrier to transplantation is the rejection of the foreign organ by the host. To avoid rejection, the antigenic relationship between donor and host tissues must be controlled, and appropriate methods of control are currently being widely explored. Intensive studies are being made of the serology and genetics of leukocyte and lymphocyte antigens with a view to developing tissue-typing tests to match donor and donee.⁷ Researchers are also working with the

5. BIOLOGICAL FUTURE OF MAN, in CIBA FOUNDATION SYMPOSIUM: MAN AND HIS FUTURE 263, 274 (G. Wolstenholme ed. 1963).

6. Los Angeles Times, Oct. 17, 1968, pt. 1, at 1, col. 1; N.Y. Times, Oct. 29, 1968, at 1, col. 1 (city ed.).

7. HISTOCOMPATIBILITY TESTING 1967 (E. Curtoni, P. Mattiuz & R. Tosi ed. 1968); ADVANCE IN TRANSPLANTATION 15-102, 195-350 (J. Dausset, J. Hamburger & G. Mathe ed. 1968); Conference on Transplantation, *Determination of Histocompatibility*, 5 TRANSPLANTATION 1015 (1967); Patel & Terasaki, *Significance of the Positive Cross-match Test in Kidney Transplantation*, 280 NEW ENGLAND J. MEDICINE 735 (1969).

use of immuno-suppressive drugs to control the antigenic relationship. At their present stage of development, such drugs act as a general depressant upon the recipient's responsiveness to any foreign tissue, but they will likely give way to drugs that alter the recipient's reaction to the specific antigens of the donor tissue.⁸ Although the antigenic patterns of human beings are extraordinarily complex, it is entirely possible that the immunological barrier will be breached so completely that organs can be transferred almost as easily as blood is now. The most visionary scientists even foresee the establishment of organ banks, similar to eye and blood banks, for the storage of hearts, lungs, kidneys, and livers.⁹ Such developments will greatly increase the demand for organs in the future. According to one estimate, a breach in the present immunological barrier would make it possible to perform 10,000 kidney transplants per year in this country at this time and about 1,500 kidney transplants per day by the end of the century.¹⁰

Although the demand for organs will be much greater in the future than it is now, the problem of an insufficient supply of organs cannot be shunted aside to await a future solution, for it is already true that the quantity of organs being supplied is inadequate to satisfy the existing need. The waiting list of potential kidney recipients, for example, is particularly long.¹¹ In the 1967 Burton report it is stated that "approximately 8,000 individuals of the 50,000 who die annually from end-stage uremia are ideally suited for transplantation. Of these, approximately 300 patients per year are now being treated by transplantation."¹² It is not necessary that this number of people

8. See ADVANCE IN TRANSPLANTATION, *supra* note 7, at 103-94; Conference on Transplantation, *supra* note 7, at 1215-45.

9. Conference on Transplantation, *Problems of Organ Preservation*, 5 TRANSPLANTATION 1138 (1967); Robertson & Jacob, *The Preservation of Intact Organs*, in 3 ADVANCES IN SURGERY 75 (C. Welch ed. 1968).

10. MUITAY, *Organ Transplantation: The Practical Possibilities*, in CIBA FOUNDATION SYMPOSIUM, *supra* note 3, at 61; Leach, *Discussion of de Wardener, Some Ethical and Economic Problems Associated with Intermittent Haemodialysis*, in CIBA FOUNDATION SYMPOSIUM, *supra* note 3, at 104, 123.

11. In recent years there has been increasing success with kidney transplants. It was reported in 1968 that

[o]ver 2,000 transplantations have been performed, and at least 1,100 people who would have died without continuing dialysis are now living with kidney transplants Thirty percent of patients with kidneys from cadaver donors operated on over four years ago continue to survive, while 65 percent of such recipients of transplants one to three years ago continue to survive.

American College of Cardiology, *Bethesda Conference Report, Cardiac and Other Organ Transplantation*, 22 AM. J. CARDIOLOGY 896, 901 (1968).

12. U.S. PUBLIC HEALTH SERVICE, U.S. DEPT. OF HEALTH, EDUCATION & WELFARE, KIDNEY DISEASE PROGRAM ANALYSIS: A REPORT TO THE SURGEON GENERAL 171 (1967) (B.T. Burton, chairman). The Gottschalk report contains an estimate for fiscal year 1968 which suggests that of an anticipated 7,000 new patients medically suitable for

die for want of a transplantable kidney; statistics indicate that about seven per cent of all cadavers have healthy kidneys usable in transplantation,¹³ and hence the quantity that could possibly be supplied in this country currently approximates 10,600 cadaver kidneys annually.¹⁴ Furthermore, it has been estimated that 6,000 satisfactory cadaver livers could be salvaged for 4,000 potential liver recipients.¹⁵ With respect to persons who might be saved by a heart or lung transplant, there are no very reliable statistics, but according to one rough estimate, each year there are between 10,000 and 50,000 persons who require total cardiac replacement, and the total pool of suitable donors is about 63,700 persons.¹⁶ If efficient tissue-matching systems could be developed and logistical problems overcome, the supply of cadaver kidneys and hearts could be adequate, and the number of people who die for want of a transplant could be greatly reduced. In any event, it is time to re-examine the considerations that have led to the present situation, in which individuals are dying because suitable—and available—organs are not being supplied for transplantation.

II. METHODS OF SUPPLY OTHER THAN PURCHASING

Since the need for organs for transplantation is already great and will increase markedly, different methods of increasing organ supply must be evaluated. Purchasing organs is, of course, possible and must be examined; but if there is a satisfactory alternative, it would be far less distasteful.

A. Nonhuman Sources

1. Artificial Organs

Medical science might obviate the need for human organs by developing artificial organs. An artificial heart, which is basically a pump, is not beyond the realm of possibility. However, an artificial kidney small enough to be implanted in the body is not now thought feasible, and large kidney machines, to which persons undergoing

kidney transplantation, transplantation will be available for approximately 450. U.S. BUREAU OF THE BUDGET, REPORT OF THE COMMITTEE ON CHRONIC KIDNEY DISEASE 5 (1967) (C.W. Gottschalk, chairman).

13. Couch, Curtan & Moore, *The Use of Cadaver Tissues in Transplantation*, 271 NEW ENGLAND J. MEDICINE 691, 693 (1964).

14. Couch, *Supply and Demand in Kidney and Liver Transplantation: A Statistical Survey*, 4 TRANSPLANTATION 587, 595 (1966).

15. *Id.*

16. American College of Cardiology, *supra* note 11, at 910.

hemodialysis are usually attached for eight hours a day three times a week, will never be sufficient, both because they are extraordinarily costly¹⁷ and because there is a shortage of trained medical personnel to operate them.¹⁸ Similarly, artificial livers and lungs are extremely remote possibilities as substitutes for human organs. Although history teaches that impossible things happen sooner than we think, it would be unsound to rely upon the development in the foreseeable future of useful artificial substitutes for internal organs other than the heart.

2. *Animal Organs*

The possibility of using organs from subhuman primates cannot be dismissed, but at the present time heterotransplantation has met with practically no success.¹⁹ That lack of success is caused largely by the immunogenetic barrier, which is greater between man and primates than between man and man. Nonetheless, in view of the difficulties involved in collecting organs from human beings, the use of healthy animal organs will appeal to many transplant surgeons; and once the rejection of transplanted human organs is overcome, scientists may try to overcome the immunogenetic differences between animal and man. Extraordinary developments must take place, however, before animals can be considered a useful source of transplantable organs.

B. *Human Sources*

Since the nonhuman supply of substitute organs is not likely to be adequate, any increase in the supply of substitute organs will almost surely have to come from human beings. Nonetheless, it may not be necessary to permit the practice of buying and selling organs. There are several other methods through which the supply of human organs may be increased, and each of those methods must be examined before a decision is reached concerning the propriety of allowing the sale of organs.

17. The Burton Report contains an estimate that a dialysis program for all vulnerable patients would cost \$1-1.5 billion annually after five years. U.S. PUBLIC HEALTH SERVICE, *supra* note 12, at 205.

18. Sanders & Dukeminier, *Medical Advance and Legal Lag: Hemodialysis and Kidney Transplantation*, 15 UCLA L. REV. 357, 360-73 (1968); Note, *Scarce Medical Resources*, 69 COLUM. L. REV. 620, 670-92 (1969).

19. The greatest feat to date is the transplantation of a chimpanzee kidney into a man; he survived for eight months before he died of pneumonia. Reemtsma, *Heterotransplantation*, in HUMAN TRANSPLANTATION 357 (F. Rapaport & J. Dausset ed. 1968).

1. Organ Donation Statutes

One way of attempting to increase the supply of organs is to pass laws permitting a person to give his organs for transplantation upon his death. In the summer of 1968 the Uniform Anatomical Gift Act was approved and recommended for enactment by the National Conference of Commissioners on Uniform State Laws. The Uniform Act was widely publicized by officials of the National Institutes of Health as the optimum solution to the problem of organ shortage, and in the short period of eighteen months, forty-one states²⁰ adopted the Uniform Act or some statute substantially similar. In addition, nine states²¹ and the District of Columbia²² have statutes which were enacted prior to 1968, authorizing bequests of bodies, or parts thereof, to medical science. Although these statutes were useful in the past in satisfying the limited demand for cadavers for dissection and for corneas for transplantation, these statutes do not provide an adequate means of securing the number of organs needed for transplantation in the near future. Existing donation statutes, including the Uniform Anatomical Gift Act, contain fundamental defects, both in conception and design, which must be avoided if organ procurement legislation is to be satisfactory.

a. *Formulation of the problem.* Current donation statutes are based on an overly narrow, anachronistic formulation of the prob-

20. ALA. CODE tit. 22, §§ 184(4)-(11) (Supp. 1969); No. 4, 2 [1969] Ark. Acts 1; CAL. HEALTH & SAFETY CODE §§ 7150-58 (West. Supp. 1969); ch. 239, [1969] Colo. Acts; No. 425, [1969] Conn. Acts 458; DEL. CODE ch. 24, §§ 1780-88 (Supp. 1969); ch. 69-88 [1969] Fla. Acts; GA. CODE ANN. §§ 48-401 to -409 (Supp. 1969); IDAHO CODE ANN. §§ 39-3401 to -3411 (Supp. 1969); ILL. ANN. STAT. ch. 3, §§ 551-61 (Smith-Hurd Supp. 1970); ch. 166, [1969] Ind. Acts 343; ch. 137, [1969] Iowa Acts 171; ch. 301, [1969] Kan. Acts 832; LA. REV. STAT. §§ 17:2351-59 (Supp. 1969); ME. REV. STAT. ANN. tit. 22, §§ 2201-09 (Supp. 1970); ch. 490, 2 [1969] Md. Acts 1192; No. 189, [1969] Mich. Acts 347-51; ch. 79, [1969] Minn. Acts 132; MO. ANN. STAT. §§ 194.210-290 (Supp. 1969); MONT. REV. CODE §§ 69-2315 to -2323 (Supp. 1969); ch. 119, 1 [1969] Nev. Acts 158; N.H. REV. STAT. ANN. ch. 291-A (Supp. 1969); ch. 161, [1969] N.J. Acts; N.M. STAT. §§ 12-11-6 to -14 (Supp. 1969); N.C. GEN. STAT. §§ 90-220.1 to -220.9 (Supp. 1969); N.D. CENT. CODE §§ 23.06.1-01 to -09 (1969); OHIO REV. CODE ch. 2108 (Supp. 1969); OKLA. STAT. ch. 63, §§ 2201-09 (Supp. 1969); ch. 175, [1969] Ore. Acts 295, ch. 161 [1969] Pa. Acts; R.I. GEN. LAWS §§ 23-47-1 to -7 (Supp. 1969); S.C. CODE §§ 32-711 to -720 (Supp. 1969); S.D. COMP. LAWS §§ 34-26-20 to -41 (Supp. 1969); TENN. CODE ANN. §§ 53-4201 to -4209 (Supp. 1969); ch. 375, 1 [1969] Tex. Acts 1176; UTAH CODE ANN. §§ 26-26-1 to -8 (Supp. 1969); VT. STAT. ANN. tit. 18, §§ 5231-37 (Supp. 1969); WASH. REV. CODE §§ 68.08.500-610 (1969); H.B. 537, [1970] W. Va. Acts; ch. 90, [1969] Wis. Acts 266; WYO. STAT. ANN. §§ 35-221.1 to -221.9 (Supp. 1969).

21. ALAS. STAT. § 13.05.035 (Supp. 1969) (eyes only); ARIZ. REV. STAT. § 36-841 to -845 (1967); HAWAII REV. LAWS §§ 327-1 to -24 (1968); KY. REV. STAT. §§ 311.352-.356 (1962); MASS. GEN. LAWS ANN. ch. 113, §§ 7-10 (Supp. 1969); MISS. CODE § 278.5 (Supp. 1966); NEB. REV. STAT. §§ 71-1339 to -1341 (1966); N.Y. PUB. HEALTH LAW §§ 4201(1)-(4) (McKinney Supp. 1969); VA. CODE ANN. § 32-364.1 (1969).

22. D.C. CODE §§ 2-251 to -260 (1967).

lem. Until the nineteenth century a person had no power to direct disposition of his body at death; the right of disposal was in the next of kin. In time many individuals expressed a desire to be cremated or to be buried in a certain spot; others wished to give their bodies to medical schools for dissection. To give effect to the wishes of the decedent over any objection of the next of kin, statutes permitting a person to direct disposition of his body were passed.

Organ transplantation radically changed the nature of the problem by bringing into the picture for the first time the highest principle of law, medicine, ethics, and religion: saving human life. This principle was not previously relevant in the disposition of corpses. Because our most cherished ethical commitment is to preserve human life, successful organ transplantation has changed the problem from merely ensuring that the wishes of the decedent are followed to ensuring the supply of sufficient cadaver organs to save human life. The basic question today is whether a dead person or his next of kin should have power to withhold life from another. A decision that a dead man or his next of kin should have such power should be reached only after the competing interests are examined and the alternatives evaluated. By beginning with the assumption that the legislative problem is simply to make it possible for a person to transfer "rights" to his cadaver organs, the legislative draftsman begs the fundamental question of what "rights" to cadavers ought to be recognized.

b. *Analysis of policies and evaluation of conflicting interests.* Because cadaver organs can now be used to save human life, the donation statutes which were drafted without a true awareness of the implications of that fact have the effect of reversing the policy priorities traditionally recognized by western civilization. Saving human life is the first policy priority, but donation statutes give it last priority. This reversal of priorities can best be illustrated by the draftsman's commentary accompanying the Uniform Anatomical Gift Act. The prefatory note to the Uniform Act contains the following cryptic description of the principles for policy guidance:

Tissues and organs from the dead can also be used to bring health and years of life to the living. From this source the potential supply is very great. But, if utilization of bodies and parts of bodies is to be effectuated, a number of competing interests in a dead body must be harmonized, and several troublesome legal questions must be answered.

The principal competing interests are: (1) the wishes of the deceased during his lifetime concerning the disposition of his body; (2) the desires of the surviving spouse or next of kin; (3) the interest

of the state in determining by autopsy, the cause of death in cases involving crime or violence; (4) the need of autopsy to determine the cause of death when private legal rights are dependent upon such cause; and (5) the need of society for bodies, tissues, and organs for medical education, research, therapy, and transplantation. These interests compete with one another to a greater or less extent and this creates problems.²³

This listing of applicable policies does not explicitly rank them in order of importance. Such a ranking, however, is made, either explicitly or implicitly, in the Act itself. First priority is given to autopsying the body for detection of crime and for other purposes prescribed by state statutes.²⁴ Second priority is given the wishes of the deceased.²⁵ Third priority is given the wishes of the next of kin.²⁶ Last priority is given to saving the life of a human being, an interest which is disguised in the quotation above as "the need of society for bodies, tissues, and organs for medical education, research, therapy, and transplantation." This analysis of the interests involved is most curious. The demands for bodies for classroom dissection, for organs for established transplantation operations, such as kidney transplants, and for organs for experimental transplantations are placed together as one interest. Such a grouping implies that the various uses all involve the same moral principle and the same amount of demand, but that implication is inaccurate. Anatomical dissection aids human life only indirectly—through disclosing scientific information. The demand for bodies for complete dissection is limited to, at most, the number of enrolled first year medical students, and medical schools have little difficulty acquiring the necessary number. The transplantation of a kidney or the temporary grafting of skin onto a person suffering from third-degree burns directly saves the life of a person, and the needs are very great. Transplantations of livers and lungs are still in the experimental stages, but they too are undertaken in a direct attempt to save life. It is surprising that the draftsmen of the Uniform Act do not even discuss the distinction between indirect and direct means of saving life, for such a distinction is an ancient one in theology, medicine, and law. But even more remarkable than the failure to separate disparate demands of different ethical ranking is the Aesopian ploy of describing this

23. NATIONAL CONFERENCE OF COMMRS. ON UNIFORM STATE LAWS, HANDBOOK AND PROCEEDINGS 182 (1968). Professor E. Blythe Stason of Vanderbilt Professor Emeritus and former Dean of the University of Michigan Law School, was the chief draftsman of the Uniform Act.

24. UNIFORM ANATOMICAL GIFT ACT § 7(d).

25. UNIFORM ANATOMICAL GIFT ACT § 2(a).

26. UNIFORM ANATOMICAL GIFT ACT § 2(b).

last interest as "the need of society for . . . organs." Organs are not transplanted into society; organs are transplanted into people! It is human need, and not the need of some amorphous, distant "society," that is at issue. If this last interest is rewritten as "the need of human beings for organs and tissue to save their lives," it becomes clear that the Uniform Act has reversed traditional humanist values and has given last priority to saving human lives.

Even though the saving of human life is involved, however, it does not necessarily follow that this interest should be given first priority, for society sometimes approves a course of action that results in the sacrifice of human life. War is an example. Another is the annual killing of fifty thousand persons on American highways—a number that could be reduced by using safer and slower, but less convenient and more costly, modes of transportation. Another example is society's unwillingness to pay the cost of keeping alive all persons who need artificial kidney machines. Hence, the major objection to the Uniform Act is not that last priority was given to the first rule of human existence but rather that insufficient thought was given to the establishment of priorities.²⁷

Apart from the interest of the coroner, the most significant interests to be evaluated in determining priorities for cadaver organs are the interests of the recipient, those of the decedent, and those of the next of kin. In resolving any conflict among these interests it is useful to determine whether they can be valued in any quantitative way; after that determination is made the immeasurable can be considered. To the extent that those principles to which we traditionally give a first priority also make economic sense, it is that much more important that they be given a first priority. Indeed, economic costs have frequently been the determining factor in society's decision as to

27. For commentary on the Act by the draftsman and his consultants, see Sadler & Sadler, *Transplantation and the Law: The Need for Organized Sensitivity*, 57 GEO. L.J. 5 (1968); Sadler, Sadler & Stason, *The Uniform Anatomical Gift Act: A Model for Reform*, 206 J.A.M.A. 2501 (1968); Stason, *The Uniform Anatomical Gift Act*, 23 BUS. LAW. 919 (1968); Stason, *The Role of Law in Medical Progress*, 32 LAW & CONTEMP. PROB. 563 (1967). When taken to task for failing to make a policy analysis, the draftsman and his consultants responded:

[T]he Uniform Anatomical Gift Act represents a balanced approach that recognizes the many and conflicting interests and concerns relevant to the transplant setting. The needs of medical science are not relegated to second place. Instead, responsible legal measures have been taken to encourage the successful progress of transplantation and thereby to save human life. Future advances in medical science will raise many issues to be considered by other disciplines. The challenge for the law will be, as it has been here, to respond in a manner that will permit legitimate accomplishments without compromising the sensitivities and rights of other affected parties.

Sadler, Sadler, Stason & Stickel, *Transplantation—A Case for Consent*, 280 NEW ENGLAND J. MEDICINE 862, 867 (1967). The question remains as to what economic and policy assumptions underlie the use of conclusory words such as "balanced," "responsible," "legitimate," and "rights."

whether life shall be saved. The relevant economic comparison is one between the economic cost of not removing cadaver organs because of lack of consent and the economic cost of removing such organs without consent. The first of those costs represents society's economic valuation of permitting a potential recipient to die; the second represents the economic valuation of the interest of the next of kin and, assuming the next of kin represents the decedent, the interest of the decedent himself.

The economic cost of permitting useful cadaver organs to be destroyed is the economic value of the lost opportunity to use them. That cost can be calculated either by measuring the economic cost of maintaining persons on artificial machines when that procedure is feasible, or alternatively, by measuring the economic cost of permitting the persons to die.

The cost of maintaining persons on artificial machines because of lack of an organ for transplant can be measured for end-stage kidney disease. It has been estimated that in 1967 the cost of dialysis was 20,000 dollars per year per patient and that the total expenditure for chronic dialysis was thirteen million dollars, which saved the lives of approximately 600 persons.²⁸ In addition, there are indirect costs such as loss of productivity due to the confining nature of the treatment.²⁹ The cost of maintaining a potential recipient on a machine cannot be used to measure the cost of not removing and transplanting a cadaver heart, liver, or lung, because there is currently no alternative therapy for a person dying of a disease of the heart, liver, or lung. However, the cost of not transplanting these organs can be measured by the cost of permitting such individuals to die. Economists say the value of life can be measured by viewing death as a loss of livelihood rather than as a loss of life.³⁰ If that view is adhered to, the cost of a death to society can be measured by projecting an individual's lifetime earnings, discounted to the present. Assuming the current two-year survival rate of sixty per cent, an av-

28. U.S. PUBLIC HEALTH SERVICE, *supra* note 12, at 171.

29. In U.S. PUBLIC HEALTH SERVICE, U.S. DEPT. OF HEALTH, EDUCATION & WELFARE, *THE ECONOMIC COST OF KIDNEY DISEASE AND RELATED DISEASES OF THE URINARY SYSTEM* 17 (1968), it is estimated that loss of productivity due to kidney disease cost \$984 million in 1964. That figure, however, includes both patients in end-stage treatment and patients whose condition has not yet deteriorated to that extent.

30. Schelling, *The Life You Save May Be Your Own*, in *PROBLEMS IN PUBLIC EXPENDITURES ANALYSIS* 127 (S. Chase ed. 1966); U.S. PUBLIC HEALTH SERVICE, U.S. DEPT. OF HEALTH, EDUCATION & WELFARE, *BENEFIT/COST ANALYSIS OF KIDNEY DISEASE PROGRAMS* 8-11 (1968).

In making these economic comparisons I have greatly benefited from conversations with Dean Leland S. Burns of the UCLA School of Architecture and Urban Planning and Professor Robert Heller of the UCLA Economics Department. The economic analysis presented here does not purport to be comprehensive; it indicates only the kind of studies that should be made as a basis for legislation in the field.

erage age of forty-five, and an average annual wage of 6,075 dollars, it has recently been estimated that it costs an average amount of 13,000 dollars to let a person die for lack of a kidney transplant.³¹ If the two-year survival rate is assumed to be ninety per cent, which it is expected to become within the next five years, the average amount of the discounted earnings of each person who dies for lack of a kidney transplant is estimated to be 21,960 dollars.³² As medical advances reduce further the attrition rate of transplant recipients, these calculations will yield much higher estimates. Of course, surgical and medical costs of transplants must be deducted from these figures to obtain the net economic cost. It has been estimated that by the time the two-year survival rate has reached ninety per cent, the medical costs per transplant will vary between 14,730 dollars and 20,720 dollars, depending upon the number of transplants performed at the particular hospital and upon the allocation of research costs to transplants.³³ As an alternative to estimates such as these—which appear to be quite reliable—the cost of permitting a person to die might be measured by reference to the award of discounted future earnings in wrongful death actions. Although there is great disparity in judgments, awards over 100,000 dollars are not unusual in such cases.³⁴

The costs with which those noted above must be compared are the economic costs of an unauthorized dissection. Although there is no precise measure of the cost of an unauthorized dissection, the amounts which have been recovered in cases involving such activities will provide a rough estimate of how much society has valued both the interest of the next of kin for his mental suffering and possibly the interest of the decedent as represented by the next of kin. Professor E. Blythe Stason, after studying the cases, reports that “[t]he monetary damages may not be great. \$3,000–\$5,000 seems to be about

31. U.S. PUBLIC HEALTH SERVICE, *supra* note 30, at 91.

32. *Id.*

33. *Id.* at 92.

34. M. BELL, MODERN TRIALS § 279 (1963). According to one report, the average award of discounted future earnings granted as damages in fatal automobile accident suits in the District of Columbia is \$62,918. Drake & Kraft, Motor Vehicle Accident Costs in the Washington Metropolitan Area (Highway Research Record, No. 188, Highway Research Board, Washington, D.C., 1967).

One recent case, *Legare v. United States*, 195 F. Supp. 557 (S.D. Fla. 1961), provides a good illustration of recovery in a wrongful death action. That case involved the death of a thirty-six-year-old mother of six, who, if she had kidney failure, would be a prime candidate for hemodialysis and transplantation. She died as a result of negligent transfusion of incompatible blood. Her husband was awarded \$98,838 for the loss of her services as a housekeeper and \$25,000 for the loss of consortium; the wife's estate was awarded \$25,000 for her pain and suffering.

enough to assuage the usual plaintiff's grief, although some verdicts are larger."³⁵ These figures suggest that the economic cost of not taking a cadaver kidney and therefore maintaining a patient on hemodialysis—20,000 dollars per year—is in the first year alone several times that of taking a cadaver kidney without consent. When jury awards in wrongful death cases are compared with jury awards in wrongful autopsy cases it is seen that juries value human life far more highly than they value the inviolability of a corpse. Thus, despite the difficulties in comparing cost statistics from these very different contexts, such as comparing real economic loss with loss from psychological trauma, it is reasonable to infer from these figures that society puts a considerably higher economic value on saving human life than it does on the inviolability of the corpse.

In addition to comparing costs at the individual level, it is useful to examine the total economic cost of not salvaging usable cadaver organs. To take kidneys as an example—because there are fairly reliable statistics dealing with kidney transplants—the Burton report states that approximately 6,700 of the 50,000 persons who die annually of kidney disease are ideal candidates for a transplant.³⁶ Approximately 300 more persons receive transplants each year and another 1,000 are treated by hemodialysis.³⁷ Assuming a transplant success rate of sixty per cent, an average age of forty-five, with a twenty-year earning capacity, and an annual average wage of 7,000 dollars, it costs more than twenty million dollars to let those 6,700 ideal candidates for a kidney transplant die. Of course, this is the gross economic cost; the cost of the kidney transplant operation would have to be deducted in arriving at the net economic cost.

In considering economic costs, the impact that the current approach to organ supply has upon the allocation of medical resources must also be considered. When the alternative therapy to transplantation is a particularly expensive one, such as hemodialysis, any method of procuring cadaver organs that results in an undersupply of organs will lead to inefficient use of resources. Hemodialysis costs 20,000 dollars per patient per year; each kidney transplant costs from 18,500 dollars to 20,720 dollars. In a hospital with fifty patients in end-stage kidney disease, hemodialysis will cost one million dollars annually if all patients are given that form of treatment; for the same amount of money, all fifty patients could be given transplants

35. *The Role of Law in Medical Progress*, 32 LAW & CONTEMP. PROB. 563, 569 n.20 (1967).

36. U.S. PUBLIC HEALTH SERVICE, *supra* note 12.

37. *Id.*

and the cost of treating those patients would be terminated. For the treatment of kidney disease, relying on donations of cadaver kidneys will prove very costly because donation statutes will produce fewer organs at zero cost than will other approaches and so patients will have to be treated with hemodialysis. Furthermore, if a costly method of treatment of kidney disease is used, fewer dollars will be available for allocation to other medical services.

There may be some skepticism that, in a problem such as this, economic considerations can weigh heavily in determining a socially acceptable solution. Removing cadaver organs has a deep emotional and psychological impact on some people. Traditionally we identify the corpse with the living person; it is the focus of all the relationships one had with the person. And just as the body of the living person was inviolate, so too is his corpse. Friends and relatives have an I-Thou relationship with a corpse, not an I-It relationship. Yet the view of the corpse as inviolate does admit some socially conditioned exceptions. Many violations occur, for example, in preparing the body for burial; arteries are cut, blood is removed, and formaldehyde is pumped into the blood vessels. Similarly, eyelids may be sewn closed, and faces may be restored. Practices such as these are accepted largely because people do not think about them; they are routinely performed behind the closed doors of the undertaking establishment and do not interfere with the relatives' I-Thou relationship with the corpse. The acceptance of these practices indicates that other practices which do not disfigure the corpse, such as routine autopsy, might well become acceptable to the public. In any case, remedial legislation should not be based upon some paralyzing supposition as to the popular will. The process of decision can be sharpened significantly by comparing measurable economic costs, establishing policy priorities, and then isolating the emotional and psychological problem and dealing with it separately.

It is not necessary to conclude that either the primacy of human life or the emotional attachment to a cadaver should be given greater weight under all circumstances. At one extreme are the donation statutes, including the Uniform Anatomical Gift Act, which protect emotional feelings respecting a cadaver and give little weight to the primacy of human life. At the other extreme are proposals, such as one made recently, which are based on the premise that the primacy of human life requires compulsory removal of all useful cadaver organs:

The point must be made that a death resulting from the unavailability of an organ is neither inevitable nor must it be viewed simply

as a statistical occurrence. It must be seen for what it is in fact: a senseless tragedy which could be avoided by overcoming needlessly restrictive taboos.³⁸

A realistic, sensitive solution which falls between these two extremes could accommodate both interests by continuing our primary ethical commitment to saving human life and at the same time permitting certain interested parties to make an objection which would prevent the removal of cadaver organs.³⁹

c. *Ritual and evidentiary problems in a gift ceremony.* Not only have the proponents of donation statutes failed to analyze thoroughly the policy issues involved in providing organs for transplantation, but they have also introduced counterproductive procedures in the application of this life-saving treatment. By giving the process of making an organ available the characterization of a "gift," the legislative draftsmen have built into the problem not only the necessity of prescribing by statute the kind of ritual and the kind of evidence required to accomplish the gift, but also the necessity for the transplant team to be able to establish quickly and conclusively that the gift ceremony has been properly performed. In some states the formalities are so cumbersome as to discourage any gift at all.⁴⁰ In Delaware, for example, the donor must sign in the presence of two witnesses and must acknowledge his signature before a notary public.⁴¹ In Massachusetts the donation must be by written instrument witnessed by three persons, none of whom may be an agent, servant, or employee of the donee hospital; and there must be attached to the instrument a certificate by a registered physician that at the time of execution of the instrument of gift the donor was of sound mind, and not under the influence of narcotics.⁴² The Uniform Anatomical Gift Act attempts to simplify the ritual by providing that the document of gift may be a document or a card signed by the donor in the presence of two witnesses, who must sign the document in his presence.⁴³

All lawyers familiar with the law of wills know that when a ceremony is required, extensive litigation over whether the ceremony was properly carried out is possible. Similarly, litigation may arise

38. Note, *Compulsory Removal of Cadaver Organs*, 69 COLUM. L. REV. 693, 705 (1969).

39. See text accompanying notes 106-15 *infra*.

40. Louisell, *The Procurement of Organs for Transplantation*, 64 NW. U. L. REV. 607 (1969).

41. DEL. CODE ANN. ch. 24, § 1781 (Supp. 1969).

42. MASS. GEN. LAWS ANN. ch. 113, §§ 7-10 (1967).

43. UNIFORM ANATOMICAL GIFT ACT § 4(b). D. LONGMORE, SPARE-PART SURGERY 185 (1968), foresees the situation in which an individual's organ donation is indicated by a tattoo under his arm.

over the question whether the instrument of gift has been revoked. The standard provision in many wills, "I hereby revoke all prior wills," may unintentionally revoke an earlier instrument authorizing transplantation. A similar problem is caused by the decisions in which it has been held that written gifts of organs at death may be revoked orally.⁴⁴ Relying upon a written instrument is therefore perilous, since there is no practical way to find out if the donor ever told anyone that he had changed his mind. The Uniform Anatomical Gift Act seeks to solve this problem by providing that a written document of gift may be revoked orally only if the oral statement is "communicated to the donee";⁴⁵ but the Act does not make clear what acts come within the words, "communicated to the donee." If the donee is a hospital, for example, will nodding to a nurse or telling the patient's physician suffice? The ways of communicating with a hospital range from a registered letter to the president to a whisper to an orderly, but which of these are legal communications will have to be established by litigation. The Uniform Act also permits revocation by "destruction, cancellation, or mutilation"⁴⁶ of the document of gift but again it is not at all clear what acts come within that language.⁴⁷ Suppose that a donation card has been carried folded in a wallet for several years and at death it is found that the card has been separated at the fold into two pieces. Is the card revoked by mutilation? If the dead donor separated the card with the intention to revoke, it is revoked; if the separation occurred without his knowledge or with his knowledge but without the intention to revoke, it is not revoked. But when liability of the surgeons turns on the intention of a dead man, it would be wise not to forego the jury. Thus, donation statutes, by characterizing the problem of organ procurement as one of gift, have placed transplant surgeons in a maze of legal problems that have no quick and conclusive answers.⁴⁸ The Uniform Act provides that a surgeon "who acts in good faith in accord with the terms of this Act"⁴⁹ is not civilly or criminally liable, but that provision is not fully protective. The question in each case is whether under the particular circumstances

44. *Nelson v. Schoonover*, 89 Kan. 779, 132 P. 1183 (1913); *Fidelity Union Trust Co. v. Heller*, 16 N.J. Super. 285, 84 A.2d 485 (1951); *In re Scheck's Estate*, 172 Misc. 236, 14 N.Y.S.2d 946 (Sur. Ct. 1939).

45. UNIFORM ANATOMICAL GIFT ACT §§ 6(a)-(b).

46. UNIFORM ANATOMICAL GIFT ACT § 6(b).

47. See T. ATKINSON, *WILLS* 436-45 (2d ed. 1953).

48. Cf. Note, *Wills—Executor's Dilemma in Bequest of Human Organs*, 14 OKLA. L. REV. 113 (1961).

49. UNIFORM ANATOMICAL GIFT ACT § 7(c).

the surgeon acted in good faith. Good faith may require appropriate inquiry into the circumstances surrounding the execution of the document and into the possibility of its revocation and it may also require that the surgeon obtain legal advice as to the meaning of the legal concepts.

Another difficulty with requiring a prior instrument of gift is that it then becomes necessary to have that instrument in a readily available place at death. Usually, however, that requirement will not be satisfied since most people leave their wills in safe deposit boxes or in locked drawers. By the time the will is discovered it is too late to remove the vital organs, which must be removed very soon after death. A person may carry the instrument of gift in his wallet, so that it is readily available,⁵⁰ but for most people, carrying a little card saying "on my death my organs to go to so-and-so" is psychologically impossible. Such a constant reminder of one's own death may raise fearful anxieties.

An appraisal of the donation statutes must also take into account that the ceremony of gift is usually presided over by a third person, who is liable if the ceremony is negligently performed. A person who draws a will for another is liable to the bereft intended beneficiaries if the will is invalid because of failure to comply with the requisite formalities.⁵¹ Such a case might arise in a transplant context if, for example, a lawyer in Massachusetts were to have his client execute a will bequeathing his organs to a hospital, organ bank, or a specific person for transplantation, and were to fail to attach a certificate by a physician indicating that the client was of sound mind.⁵² In such a case, the gift will fail, and presumably the donee will have a cause of action against the lawyer for damages, although the method of recovery is far from clear.⁵³ Furthermore, the lawyer's responsibility

50. An organization called Medic Alert, with headquarters in Turlock, California, has been organized in an attempt to make instruments of gift readily available. Members wear an identity bracelet labeled "Organ Donor," which also carries the Medic Alert telephone number. If a member is killed in an accident, a doctor can call Medic Alert for information and instructions as provided by the member. Letter from Alfred A. Hodder, Executive Director of Medic Alert Foundation, to Jesse Dukeminier, Jr., Nov. 4, 1969. Surely there is something macabre about a society in which people go around wearing organ donor bracelets.

51. *Heyer v. Flaig*, 70 Cal. 2d 223, 449 P.2d 161, 74 Cal. Rptr. 225 (1969); *Price v. Holmes*, 198 Kan. 100, 422 P.2d 976 (1967); *Licata v. Spector*, 26 Conn. Supp. 378, 225 A.2d 28 (C.P. 1966).

52. Such a certificate is required under Massachusetts law. See note 42 *supra* and accompanying text.

53. Two major difficulties are encountered. First, who has standing to sue the negligent draftsman? Second, what is the measure of damages? The complexities involved can only be hinted at here.

The legal position of a hospital named in a will as donee of the testator's body

is not limited to knowing the law of his own state; if he can reasonably foresee that his client will move to another state and die domiciled there, he should have his client execute a will valid in both states. Indeed, in a highly mobile society, a lawyer or other draftsman does not draft a will properly unless it can be admitted to probate in all states, regardless of where the donor dies. Rather than risking a cadaver bequest which may be invalid in some state and thus lead to liability for the lawyer, an attorney may discourage clients from bequeathing their bodies.

These ceremonial problems cannot be avoided by having doctors or hospital personnel officiate at the ceremony. If patients are asked to sign a donation form upon admission to a hospital, it is doubtful that any agent, servant, or employee of a donee hospital can properly serve as a witness,⁵⁴ since such a person may have an interest in the bequest and may therefore be disqualified. Because of the difficulty of producing wholly disinterested witnesses, and because of the possible liability of the officiant if the ceremony is not properly performed, the requirement of a ceremony of gift will inhibit the donation of organs.

d. *Psychological difficulties in giving one's own organs.* Current

can be characterized in at least four ways. First, it can be argued that the testator's body is not property, that the hospital has no enforceable right to receive it, and that the only legal effect of a gift is to bar the next of kin from suing for unauthorized autopsy if the hospital does in fact receive the body. Under this theory the hospital will suffer damage only if the organs are removed and the will is thereafter held invalid, so that the hospital will be subjected to a suit for unauthorized autopsy. Under this approach, the measure of damages should be the amount the hospital is required to pay the next of kin. Second, the hospital might be considered to receive the body as trustee for the benefit of persons on the hospital's waiting list for organs. Under such a theory the hospital would be able to sue the negligent draftsman for damages. 4 A. SCOTT, TRUSTS § 280 (3d ed. 1967). If the hospital were not to sue for fear of scaring other draftsmen into discouraging anatomical gifts, a potential beneficiary might be able to bring suit to require the hospital to enforce the claim (2 *id.* § 177; 3 *id.* § 199), or might be able to sue the draftsman directly (4 *id.* § 282). Damages could be measured by the value of the opportunity for transplantation lost, or damages could be denied on the ground that damages are not calculable. Under a third view, the hospital receives the body in charitable trust. Again, the hospital would be able to sue the negligent draftsman for damages (4 *id.* § 393), and if the hospital were to decline to sue, a potential recipient on the hospital's waiting list could be thought to have a sufficient special interest to enforce a claim of damages (4 *id.* § 391). Finally, the hospital might be considered to have received a special power of appointment over the testator's body. 2 *id.* §§ 122-23. Under such an approach, the possible appointees could not sue the negligent draftsman, and it is doubtful that the hospital could sue the draftsman since the hospital does not benefit from the power and the hospital has no liability to a possible beneficiary.

54. The ability of agents of a hospital to serve as witnesses might turn on whether the hospital is a charitable or a private corporation. Employees of a charitable corporation to which a gift has been made have been held to be incompetent to serve as witnesses, while employees of a private corporation to which a gift has been made have been held to be competent witnesses. 2 W. PAGE, LAW OF WILLS § 19.100 (Bowe-Parker ed. 1960).

donation statutes are also based upon an inadequate understanding of the psychological problems involved in giving human organs. The overwhelming majority of persons in this country die without making a will. In a recent study Professor Allison Dunham found that in one year in Cook County, Illinois, only fifteen per cent of all deaths were followed by estate proceedings, and that in these estate proceedings only sixty per cent of the decedents had left wills.⁵⁵ Earlier studies also indicate that less than twenty per cent of all decedents leave wills.⁵⁶ Of these, many are too old to have organs usable for transplantation. It is true that a person may donate his organs on death and not leave a will disposing of his property; and to the extent that people do proceed in that manner the statistics as to the number of persons who die without wills are inapplicable. It seems reasonable to assume, however, that the psychological reasons which lead to persons dying intestate inhibit organ donations as well as, or even more than, wills of property. These psychological factors have been given inadequate consideration by legislative draftsmen.

As might be expected, younger persons do not think much about death. In one investigation of students, more than ninety per cent said they rarely thought about death in a personal way.⁵⁷ Older persons, on the other hand, may be apprehensive of death and may try to avoid the matter by thinking, "it won't happen to me this week," or by channeling their thoughts in other directions.⁵⁸ In analyzing the attitudes of persons toward death, Freud wrote:

Our own death is indeed unimaginable, and whenever we make the attempt to imagine it we can perceive that we really survive as spectators. Hence . . . at bottom no one believes in his own death, or to put the same thing in another way, in the unconscious every one of us is convinced of his own immortality.⁵⁹

The psychological barrier to thinking of one's own death affects the testamentary disposition both of property and of organs. In a recent study, Professor Thomas Shaffer explored the attitudes of persons toward death when they talked with their lawyers about their wills.⁶⁰ He reports evasion and denial of death by both the laywers

55. *The Method, Process and Frequency of Wealth Transmission at Death*, 30 U. CHI. L. REV. 241 (1962).

56. See R. POWELL, *CASES AND MATERIALS ON TRUSTS AND WILLS* 9-11 (1960).

57. Middleton, *Some Reactions Towards Death Among College Students*, 31 J. ABNORMAL & SOCIAL PSYCHOLOGY 165 (1936).

58. See Orlans, *Some Attitudes Toward Death*, 19 *DIOGENES* 73 (1957).

59. S. FREUD, *Our Attitude Towards Death*, in 4 *COLLECTED PAPERS* 304 (1925).

60. *Will Interviews, Young Family Clients and the Psychology of Testation*, 44 *NOTRE DAME LAW.* 345 (1969). See also Shaffer, *The Psychology of Testation*, 108 *TRUSTS & ESTATES* 11 (1969).

and their clients. If one of the primary reasons that people do not make wills of their property is that they cannot face death, they are even less likely to make wills donating their organs. Organs are so much a part of a person's conception of himself that signing a donation paper usually arouses the deepest and most fearful anxieties. A Gallup poll taken in December 1967 indicated that seven out of ten Americans are willing to donate their organs after death.⁶¹ Yet the waiting lists of sick persons needing organs grow longer. Since people tend to do a poor job of answering realistically hypothetical questions about remote, improbable, and awesome events, the Gallup poll may not be very reliable. But, for whatever the poll is worth, the only useful conclusion from it is that any organ donation statute should infer the consent of decedents to the removal of their organs because seven out of ten Americans favor organ removal, and because it is unrealistic to expect these people to take the steps currently needed for an organ donation when such a procedure causes fearful anxiety. Between expressing a wish to make a will some day and actually doing it lies an inner resistance that serves as a great obstacle to action.

Because of these psychological inhibitions, a highly publicized campaign for organ donations has little chance of easing the shortage of organs. The possibility of such a campaign was considered in the summer of 1968 at a conference convened by the British Ministry of Health to consider the transplantation of organs; the conference concluded that it would not be possible, however vigorous the campaign, to enroll enough donors to yield an adequate supply of organs.⁶² Unless drastic changes occur in the psychology of man and in testamentary practices, the quantity of useful organs donated under current donation statutes will not meet the demand for transplantation.

e. *The best donors: consent must come from next of kin at time of shock.* Another important fact that must be taken into account in any realistic scheme to salvage cadaver organs is that the best sources for organs are persons who die of cerebral tumors, cerebral injury, or sudden coronary attacks. These persons usually enter the hospital unconscious or with blunted consciousness and, in either case, are unable legally to sign any consent form. Thus any program to present consent forms routinely to all persons admitted to the hospital would

61. N.Y. TIMES, Jan. 17, 1968, § A, at 18, col. 3 (city ed.).

62. The Lancet, July 6, 1968, at 53. The draftsman of the Uniform Anatomical Gift Act and his consultants are extremely optimistic, however, and believe that most Americans will become card-carrying cadaver donors. Sadler, Sadler & Stason, *Transplantation and the Law: Progress Toward Uniformity*, 282 NEW ENGLAND J. MEDICINE 717 (1970).

have to exclude such individuals even though they make the best donors. Consent for such persons has to come from the next of kin if it is to come at all. In case of accidental death the next of kin may not be available on the spot, so that the request for organs may have to be made over the telephone by a physician not known to the next of kin. It is hard to imagine a physician reaching for a telephone and saying: "Mrs. Smith, I deeply regret having to inform you that your husband Thomas had a car accident on Interstate 5. He was admitted here in a dying condition and he died five minutes ago. We very much need his kidneys for transplantation. Will you give us permission to remove them?" This approach seems callous and uncivilized, but it comes within the language of the Uniform Anatomical Gift Act, which provides that a consent may be by "telegraphic, recorded telephonic, or other recorded message."⁶³ In many states not even this procedure is possible, for most statutes make no provision for telephonic consent.

f. *The destruction of hope.* A last consideration in the appraisal of donation statutes is the delicate problem of asking for consent before death. Dr. Irvine Page has written:

It should also not be forgotten in this age of scientific medicine that the physician himself has become to the patient an important medicine. Therefore, he dare not destroy lightly that most precious of human qualities, *hope*. When consent is asked of the donor, remember what it means to the patient and his family.⁶⁴

Methods other than prior consent may be less destructive of hope for continuing life.

2. *Removal of Cadaver Organs Regardless of Objection*

A recent analysis of the problem of supplying organs resulted in the suggestion that legislation be enacted to authorize the removal, with or without consent, of cadaver organs useful for transplantation.⁶⁵ The ethical basis for this solution to the problem of organ supply is that saving human life is paramount to all other policies and that no one has the right to deny another the chance to live.

Today, in disposing of the dead, the principle of protecting life requires that a coroner perform an autopsy on a body when homici-

63. UNIFORM ANATOMICAL GIFT ACT § 4(e). This provision raises the question whether Western Union is liable for the value of the usable organs if it fails to deliver the telegram giving consent. The answer may well be that it is. In *Martin v. Western Union*, 81 S.C. 432, 62 S.E. 833 (1908), Western Union failed to deliver a telegram announcing the death of the plaintiff's husband, and the unclaimed body was delivered to the state anatomical board. Western Union was held liable for damages.

64. *The Ethics of Heart Transplantation*, 207 J.A.M.A. 109 (1969).

65. Note, *Compulsory Removal of Cadaver Organs*, 69 COLUM. L. REV. 693 (1969).

dal behavior is suspected, even though the next of kin objects. Courts have uniformly held that the rights of the decedent and next of kin are subordinate to the paramount public interest in apprehending killers.⁶⁶ In these circumstances the autopsy may be held without the consent of the next of kin or even over his positive objection.⁶⁷ Catching a murderer both prevents further homicidal behavior by the man apprehended and deters homicidal behavior by others. The overriding principle is protecting the lives of the survivors.

There are many other instances in which the interest of the next of kin in controlling the body has been held subordinate to another interest, and some of these instances do not involve the primary principle of protecting human life. The competing interest deemed paramount may be public health or convenience, economic benefit to undertakers, or economic liability of employers or insurers. A captain of a ship, for example, may order burial at sea for a person who dies aboard, regardless of objection by the next of kin.⁶⁸ Similarly, a surviving spouse may wish to bury the deceased on the back part of the family farm, but will not be able to do so if a statute requires that the burial permit specify a particular cemetery.⁶⁹ It is also common for statutes to require burial or other disposition within a reasonable time.⁷⁰ Furthermore, although embalming might violate the religious beliefs of the deceased and be objectionable to the next of kin, many states require a body to be embalmed if it is shipped across state lines by a common carrier.⁷¹ How the law operates for the economic advantage of the funeral industry, despite the wishes of the next of kin, has been detailed elsewhere.⁷² In at least two other situations the interests of the next of kin are not deemed compelling. When a person dies during the course of his employment in circumstances that might lead to the liability of his employer under a workmen's compensation act, the employer or the compensation board has the right to require an autopsy even if the surviving spouse objects.⁷³ Similarly, accident insurance policies usually contain a pro-

66. *Gahn v. Leary*, 318 Mass. 425, 61 N.E.2d 844 (1945); *Kingsley v. Forsyth*, 192 Minn. 468, 257 N.W. 95 (1934); *Hirko v. Reese*, 351 Pa. 238, 40 A.2d 408 (1945).

67. *Young v. College of Physicians & Surgeons*, 81 Md. 358, 32 A. 177 (1895); *Sturgeon v. Crosby Mortuary, Inc.*, 140 Neb. 82, 299 N.W. 378 (1941).

68. *Brambir v. Cunard White Star Ltd.*, 37 F. Supp. 906 (S.D.N.Y. 1940), *affd. on opinion below*, 119 F.2d 419 (2d Cir. 1941).

69. *E.g.*, CAL. HEALTH & SAFETY CODE § 10376 (West 1969).

70. *E.g.*, CAL. HEALTH & SAFETY CODE § 7103 (West 1969).

71. *E.g.*, CAL. HEALTH & SAFETY CODE § 7355 (West 1969); N.J. STAT. ANN. § 26:6-24 (1966).

72. *Sher, Funeral Prearrangement: Mitigating the Undertaker's Bargaining Advantage*, 15 STAN. L. REV. 415, 427-36, 457-59 (1963).

73. S.C. CODE § 72-307 (1967); *Simpkins v. Lumbermen's Mut. Cas. Co.*, 200 S.C. 228, 20 S.E.2d 733 (1942).

vision granting the insurer a right to an autopsy. If the demand by the insurer is seasonably made to a beneficiary who has the right to control the body, and if the beneficiary refuses, the insurer is relieved of liability on the policy.⁷⁴ In this situation the next of kin may still prevent an autopsy, but economic pressure to consent is placed upon him.

If one accepts the view that saving human life requires the removal of useful cadaver organs regardless of the wishes of the decedent or next of kin the question arises whether a statute effectuating that policy would run afoul of any constitutional provisions prohibiting the taking of property without compensation. One recent study concludes that such a statute would constitute a taking of the property of the next of kin, who would have to be paid just compensation for the cadaver organs.⁷⁵ That conclusion, however, is erroneous. Even accepting the highly questionable assumption that it is appropriate to classify the next of kin's interest in a cadaver as a property right, the next of kin's claim does not become an "interest" in property until the death of the decedent. At any time prior to the occurrence of that event, the potential interest may be abolished without paying compensation, as may be seen by an analysis of the law relating to the closely analogous cases of a right of dower or an expectancy of an heir. While the decedent is alive, these rights are contingent upon surviving the decedent; in legal parlance, dower remains inchoate, and the expectancy of an heir is not recognized as an interest or right at all. Inchoate dower may be abolished without violating the Constitution.⁷⁶ Indeed almost a hundred years ago the Supreme Court declared:

[Dower] is wholly given by law and the power that gave it may increase, diminish, or otherwise alter it, or wholly take it away. It is upon the same footing with the expectancy of heirs, apparent or presumptive, before the death of the ancestor. Until that event occurs the law of descent and distribution may be moulded according to the will of the legislature.⁷⁷

Thus, by analogy to inchoate dower or to the expectancy of an heir, it may be concluded that the rights of the next of kin to control the cadavers of persons living can be changed or abolished without paying any compensation.

It might also be thought that the decedent has an interest in

74. *Hurley v. Metropolitan Life Ins. Co.*, 296 Mass. 130, 5 N.E.2d 16 (1936).

75. Note, *supra* note 65, at 697.

76. *Ferry v. Spokane, P. & S. Ry.*, 258 U.S. 314 (1922); *Opinion of the Justices*, 337 Mass. 786, 151 N.E.2d 475 (1958).

77. *Randall v. Kreiger*, 90 U.S. (23 Wall.) 137, 148 (1874).

what is done with his body, but the common-law rule is that there is no property in a dead body and that consequently a man cannot by will dispose of his body.⁷⁸ If, however, cadaver organs are deemed to be property,⁷⁹ compensation for their taking is not required, since succession to a man's property at death can be changed, and perhaps even abolished, by a legislature without violating the Constitution:

Rights of succession to the property of a deceased, whether by will or by intestacy, are of statutory creation, and the dead hand rules succession only by sufferance. Nothing in the Federal Constitution forbids the legislature of a state to limit, condition, or even abolish the power of testamentary disposition over property within its jurisdiction.⁸⁰

State supreme courts, with the exception of that of Wisconsin,⁸¹ agree that the power to dispose of property by will may be controlled by the legislature,⁸² subject only to the constitutional guarantees of equal protection and due process of law. These broad statements may not be wholly reliable, inasmuch as the power of the legislature to abolish testation has never been directly tested.⁸³ Yet if the state can take by taxation a percentage of a man's property at death in order to raise revenue and to break up great fortunes, it is difficult to find any reason why the state cannot constitutionally take a specific item, such as a kidney, to save a human life.

Moreover, if organs are treated as property of the decedent, the decedent may have no power to order destruction of his organs by burial or cremation so long as the organs have value. It has been held in a number of cases that a direction to destroy one's own property at death is against public policy and is therefore void.⁸⁴

78. *Williams v. Williams*, 20 Ch. D. 659 (1881).

79. In *In re Johnson's Estate*, 169 Misc. 215, 7 N.Y.S.2d 81 (Sur. Ct. 1938), a will provided that the decedent's body was to be used for medical research; there were no other provisions. Nonetheless, the will was probated. Since an instrument that does not dispose of property or appoint an executor is not testamentary in character and is not entitled to probate, the body must have been treated as property.

80. *Irving Trust Co. v. Day*, 314 U.S. 556, 562 (1942).

81. *Nunnemacher v. State*, 129 Wis. 190, 108 N.W. 627 (1906).

82. See 1 W. PAGE, *LAW OF WILLS* § 3.1 (Bowe-Parker ed. 1960, Supp. 1967).

83. See J. SCURLOCK, *RETROACTIVE LEGISLATION AFFECTING INTERESTS IN LAND* 90-105 (1953).

84. *E.g.*, *Brown v. Burdett*, 21 Ch. D. 667 (1882), in which a devise of a house in trust to brick up the windows and doors for twenty years was held invalid. See also *Colonial Trust Co. v. Brown*, 105 Conn. 261, 135 A. 555 (1926), in which a trustee was directed not to erect a downtown building more than three stories in height—a directive which would have substantially decreased the value of the property. The provision was held invalid. In *M'Caig v. University of Glasgow*, [1907] Sess. Cas. 231, 242 (Scotland), Lord Kyllachy said a direction to lay waste the testator's estate or to turn the property into money and throw it into the sea is invalid. Similarly, in *Board of County Commrs. v. Scott*, 88 Minn. 386, 93 N.W. 109 (1903), the court assumed that a testator's direction to destroy all his money and evidence of credit was void.

Although these cases could provide the basis for an argument that permitting the destruction of valuable human organs to satisfy a decedent's wish is against public policy, courts today probably would not accept such an argument. Thinking of a cadaver as a valuable resource is still too startling; but as organ transplants become very successful courts may become more receptive to the argument.

It is, however, extremely troublesome to use property terms in the litany of justification for the taking of cadaver organs, for cadaver organs are not property in any conventional sense. Under modern law the next of kin is given a cause of action for unauthorized dissection, and courts have sometimes characterized this right in the next of kin as a property⁸⁵ or a quasi-property right.⁸⁶ But as Dean Prosser points out, "it is in reality the personal feelings of the survivors which are being protected under a fiction likely to deceive no one but a lawyer."⁸⁷ Even if the fiction is accepted for purposes of unauthorized dissection cases, the answer to the question whether the rights are property rights for purposes of the Constitution should not turn upon a characterization made by state courts in such an entirely different context. In determining the constitutionality of legislation authorizing the removal of cadaver organs regardless of objection it is inappropriate to begin the analysis by accepting a characterization of cadaver organs as property. As Justice Jackson said some years ago with reference to another claim of a constitutionally protected "property right": "We cannot start the process of decision by calling such a claim as we have here a 'property right'; whether it is a property right is really the question to be answered."⁸⁸

In striking a balance between the interests of the public and the desires of the decedent and the survivors, legislatures have already subordinated the interests of the decedent and survivors to the public interest in saving human life, to interests of public health and convenience, and to the economic welfare of undertakers, employers, and insurers.⁸⁹ In view of that background, it would surely be odd to find that the fourteenth amendment forbids subordinating the interest of the decedent and next of kin to the public interest in saving the life of a human being.

A more serious constitutional objection to removing usable or-

85. *Bogert v. Indianapolis*, 13 Ind. 134 (1859). See Note, *Property in Corpses*, 5 *St. Louis L.J.* 280 (1958).

86. *Pierce v. Proprietors of Swan Point Cemetery*, 10 R.I. 227 (1872); cf. *Cohen v. Groman Mortuary*, 231 Cal. App. 2d 1, 41 Cal. Rptr. 481 (1964).

87. W. PROSSER, *THE LAW OF TORTS* 51 (3d ed. 1964).

88. *United States v. Willow River Power Co.*, 324 U.S. 499, 502 (1945).

89. See notes 66-74 *supra*.

gans over the objection of the decedent or his next of kin is based upon the first amendment: "Congress shall make no law respecting an establishment of religion, or prohibiting the free exercise thereof . . ." A fundamentalist Christian might consider organ removal inconsistent with the principle of bodily resurrection. A Jehovah's Witness might object to the shedding of blood. Many orthodox rabbis have opposed autopsies, invoking a principle of Judaism that the body must not be violated. These religious concerns may form the basis of a valid objection and therefore must be taken into account.

The law in this area is unclear. In *Braunfeld v. Brown*,⁹⁰ the Supreme Court ruled that a statute regulating conduct to advance a secular goal is valid even though it indirectly burdens religious observance "unless the State may accommodate its purpose by means which do not impose such a burden."⁹¹ A statute authorizing compulsory removal of cadaver organs would not pass the *Braunfeld* test if the statute were found to impose an indirect infringement upon religion, and if it were also found that an adequate organ supply could be created by some other method.⁹² Moreover, if the statute were found to impose a direct burden upon religion, the state would be faced with the same test, but it might be more strictly applied—the state would have to show that it could not obtain an adequate organ supply by some other method which did not infringe upon religious practices.⁹³ Unless the state adopts an approach which allows the decedent or next of kin some degree of choice, and finds that it does not create an adequate organ supply, a statute permitting salvaging cadaver organs regardless of objection probably will not meet the requirements of the first amendment.⁹⁴

First amendment objections to salvaging cadaver organs can be overcome if the decedent or the next of kin is given the right to object and preclude removal. Although first amendment requirements might be satisfied if the only permissible basis for an objection to organ removal were religious belief, such an approach is not desirable. Determining what is a "religious belief" is clearly a matter that everyone would be wise to avoid. To obviate constitutional problems, then, a statute should permit the decedent or the next of kin

90. 366 U.S. 599 (1961).

91. 366 U.S. at 607 (emphasis added).

92. Cf. *Sherbert v. Verner*, 374 U.S. 398 (1963).

93. Note, *supra* note 65, at 703.

94. See generally Kurland, *Of Church and State and the Supreme Court*, 29 U. CHI. L. REV. 1 (1961); Dodge, *The Free Exercise of Religion: A Sociological Approach*, 67 MICH. L. REV. 679 (1969).

to forbid removal of the decedent's organs, and should place no limitation on the reasons therefor.

3. *Routine Salvaging of Cadaver Organs Unless There Is Objection*

A significant increase in the supply of organs for transplantation would result if usable organs were removed from cadavers routinely unless, before the time of removal, an objection had been entered, either by the decedent during his life or by his next of kin after the decedent's death. This approach is not as extreme as the proposal to salvage useful organs without regard to objection, since under this approach persons who do not wish to make their organs available may object and opt out.⁹⁵ Nor is this approach as radical a departure from traditional humanist values as the Uniform Anatomical Gift Act, for, by making the basic presumption one which favors life, and by thus putting the burden of objecting upon persons who would deny life to another, the policy of saving human life is given first priority and the wishes of persons to preserve a corpse inviolate are also accommodated. This method would produce far more organs for transplantation than are produced by statutes permitting organ donation by the decedent.

Some time ago Dr. David Sanders and the author proposed legislation to make removal of usable cadaver organs routine unless the decedent or his next of kin instructed otherwise.⁹⁶ In light of the 1967 Gallup poll results,⁹⁷ it appears that a carefully drawn statute embodying such an approach would be acceptable to a majority of people in this country. Indeed, in a recent questionnaire submitted to physicians, Dr. Robert Williams found that the Dukeminier-Sanders proposal was favored by seventy-one per cent of those responding.⁹⁸ Similar figures from Britain indicate that two-thirds of

95. Analogies to this approach may be found in the practice of routinely giving vaccinations to school children unless there is objection, and in the requiring of certain medical procedures upon birth unless there is objection. *E.g.*, MASS. GEN. LAWS ANN. ch. 111, § 110A (1967), which provides that every newborn child shall be subjected to a phenylketonuria test unless the parents object that the test conflicts with their religious tenets and practices.

96. Sanders & Dukeminier, *supra* note 18, at 410-13; Dukeminier & Sanders, *Organ Transplantation: A Proposal for Routine Salvaging of Cadaver Organs*, 279 NEW ENGLAND J. MEDICINE 413 (1968).

For similar proposals, see CIBA FOUNDATION SYMPOSIUM, *supra* note 3, at 213 (remarks of Lord Kilbrandon); *id.* at 191-92 (remarks of D. Daube). *See also* Kennedy, *Alive or Dead?*, in CURRENT LEGAL PROBLEMS 102, 120-22 (G. Keeton & G. Schwarzenburger ed. 1969).

97. *See* text accompanying note 61 *supra*.

98. *Our Role in the Generation, Modification and Termination of Life*, 124 ARCHIVES OF INTERNAL MEDICINE 215, 230, 233 (1969). The greatest approval came from

the British people favor routine removal of cadaver kidneys.⁹⁹ A leading kidney transplant surgeon from England, Professor Roy Calne, writes that in his experience most relatives would prefer not to be asked for the kidneys but would rather that the kidneys be removed routinely.¹⁰⁰

Perhaps the simplest way to provide for routine salvaging of cadaver organs would be to enact a statute permitting prompt autopsies for organ removal on all persons who die in authorized hospitals, unless objection is first entered. In many countries the public already accepts routine autopsies. In France, for example, cadaver organs may be removed without permission of the family if the person dies in a hospital approved by the Minister of Public Health.¹⁰¹ In several European countries, autopsies are performed on all persons who die in hospitals unless some objection is made.¹⁰² In Israel the Anatomy and Pathology Act, passed in 1953, permits an autopsy without consent so long as three physicians formally attest in writing that the autopsy may help the lives of other existing patients;¹⁰³ and ninety per cent of all persons who die in hospitals in Israel are subjected to

Roman Catholics (88%) and the lowest from those with no religion (60%). The Dukeminier-Sanders proposal is favored by Castel, *Some Legal Aspects of Human Organ Transplantation*, 46 CAN. B. REV. 345, 402 (1968); Randall & Randall, *The Developing Field of Human Organ Transplantation*, 5 GONZAGA L. REV. 20, 31 (1969); and Richards, *Medical-Legal Problems of Organ Transplantation*, 21 HASTINGS L.J. 77, 99 (1969).

99. 762 Parl. Deb., H.C. (5th ser.) 826 (1968).

100. RENAL TRANSPLANTATION 154 (1967).

101. Decree No. 47-2057 of Oct. 20, 1947, 1 INTL. DIGEST OF HEALTH LEGISLATION 95 (1948). In such a case, death must be determined by two doctors applying procedures recognized by the Minister of Public Health. Victims of crimes or of accidents occurring at work, persons who commit suicide, and Moslems are excluded from the reach of the decree. See also French Minister of Social Affairs, Circular No. 62, April 24, 1968, 19 INTL. DIGEST OF HEALTH LEGISLATION 628 (1968).

102. Decree of Sept. 13, 1960, Bulletin du Service fédéral de l'hygiène publique, Supp. A, Nov. 12, 1960, at 58, 12 INTL. DIGEST OF HEALTH LEGISLATION 565 (1961) (Switzerland); Law No. 246 of June 9, 1967, 19 INTL. DIGEST OF HEALTH LEGISLATION 950 (1968) (Denmark); Law No. 260 of July 8, 1957, 9 INTL. DIGEST OF HEALTH LEGISLATION 485 (1958) (Finland). Law No. 104 of March 14, 1958, 10 INTL. DIGEST OF HEALTH LEGISLATION 541 (1959) (Sweden). The Swiss Canton of Vaud permits the removal of cadaver tissue for transplantation when two physicians authorize it. Order of Sept. 13, 1960, 12 INTL. DIGEST OF HEALTH LEGISLATION 565 (1961). Section 7 of Decree-Law No. 45,683 of April 25, 1964, 16 INTL. DIGEST OF HEALTH LEGISLATION 394 (1965) (Portugal), provides that if the decedent neither prohibited nor consented to removal of his cadaver organs, and if no objection by the family is made within four hours of death, the organs may be removed for transplantation. Ministry of Health Order No. 47, June 13, 1966, 18 INTL. DIGEST OF HEALTH LEGISLATION 370 (1967) (Czechoslovakia), provides for routine removal of cadaver organs unless the deceased declared his objection in writing during life. See also Ministry of Health Instruction No. 5, March 1, 1968, 20 INTL. DIGEST OF HEALTH LEGISLATION 427 (1969).

103. I. JAKOBOWITZ, JEWISH MEDICAL ETHICS 150 (1959).

autopsies.¹⁰⁴ In the United States, where consent for an autopsy must always be secured before such an operation may be performed, the autopsy rate in those hospitals approved for internships and residencies by the Council on Medical Education varies from twenty-five per cent to one hundred per cent of the persons who die within the hospital. The average autopsy rate is approximately fifty per cent.¹⁰⁵

If a broad autopsy statute is unacceptable, the best substitute is a statute dealing solely with removal of organs for transplantation. The details of such a statute need to be carefully considered. There are at least four major problems. First, what organs may be routinely removed? The legislative draftsman might conclude that only those organs with a high degree of transplantation success could be removed—at the present time, corneas and kidneys. In England a Renal Transplantation Bill was introduced in Parliament on November 27, 1968; section 2 of the bill provided:

It shall be lawful to remove from the body of a human person, duly certified as dead, any kidney or kidneys required for the direct purpose of saving the life of another sick human being, unless there is reason to believe that the deceased during his lifetime had instructed otherwise.¹⁰⁶

The bill failed on second reading because, among other things, the Minister of Health objected to legislation for a single organ.¹⁰⁷ Since each new successful development in transplantation would require an amendment to the statute, the legislature might appropriately conclude that the more useful statute would permit the removal of all organs usable in transplantation.

A middle position might be taken between permitting only specified organs to be removed and permitting all usable organs to be removed. For example, a medical board or the state director of public health could be empowered to promulgate administrative regulations specifying the organs that could be removed routinely; the statute could provide a general guideline, such as a provision that the list

104. *Id.* at 152. The removed organs cannot be transplanted, however. They must be delivered for burial in order to comply with the rule of Judaism that all parts of the deceased must be buried. See 3 TRADITION: A JOURNAL OF ORTHODOX THOUGHT 75 (1960); 4 *id.* 97 (1961). It might be argued that this rule is not violated by transplantation because the organ will eventually come to rest, even though it will be in a different body.

105. COUNCIL ON MEDICAL EDUCATION OF THE AMA & THE ASSN. OF AMERICAN MEDICAL COLLEGES, DIRECTORY OF APPROVED INTERNSHIPS AND RESIDENCIES 1967-68, CONSOLIDATED LIST OF HOSPITALS 31-76 (1967).

106. Renal Transplantation Bill, introduced in the House of Commons on Nov. 27, 1968, Bill 41; see 774 PARL. DEB., H.C. (5th ser.) 511 (1968).

107. 776 PARL. DEB., H.C. (5th ser.) 1797 (1969).

be limited to organs which can be transplanted with a good chance of success when transplantation is recognized by the medical profession as appropriate therapy. Such an approach, however, would prevent routine removal of organs for experimental purposes, including experiments to save life; and such a limitation on experimentation might be felt to be too restrictive.

The second problem to be solved in drafting an organ removal statute is the determination of which persons are to be authorized to remove organs routinely. This problem is probably best solved by administrative regulations that enumerate the capabilities and qualifications that are required of the medical staff, and the supporting equipment and facilities that must be available, before organs may be removed routinely. Again, these regulations could be drawn up by an authorized medical board or a state health official. In France, for example, the Minister of Public Health approves hospitals at which autopsies may be performed without permission of the family.¹⁰⁸ The regulations could license hospitals, qualified surgeons, or both.

The third problem which must be faced in drafting an appropriate statute is whether any bodies should be excluded from routine removal of organs. Section 3 of the British Renal Transplantation Bill provided an exclusion for any person who, at the time of his death, was

- (a) mentally insane, or
- (b) mentally handicapped, or
- (c) below the age of 18, or
- (d) 65 years old or more than that age, or
- (e) deprived of his liberty by the conviction and judgment of a court, or
- (f) a permanent resident of a hostel, home or institution for the aged, the disabled, or the handicapped.¹⁰⁹

The primary purpose of these exclusions was to ensure that only those who are free to object fall within the terms of the bill. A secondary purpose was to set at ease the minds of older persons, who might fear that doctors would hasten their demise in order to transplant their organs into a younger person.

The fourth drafting problem concerns the method of registering objections so that organs cannot be removed at death. There are various possible methods: a card could be carried by the person, a

108. See note 101 *supra*.

109. Renal Transplantation Bill, introduced in the House of Commons on Nov. 27, 1968, Bill 41.

statement could be made to the hospital upon entering, a statement could be made to the physician, or a central computer registry could be established. One of the problems discussed previously in connection with organ donation statutes reappears in another form here. That problem was how to provide a means to aid the surgeon in finding out quickly and conclusively that he has a valid consent.¹¹⁰ The problem under the approach being examined here is determining how the surgeon can find out quickly and conclusively that there is no objection. Fortunately, the latter is more readily soluble than the former and does not contain within it as many subsidiary problems. The presumption is that there is no objection, and thus the burden of proving that there was an objection which the surgeon knew or ought to have known is on the next of kin. Hence the problem is narrowed to the determination of what inquiry the surgeon ought to be required to make. The statute could provide that a valid objection must be entered in a specific way, such as through registration with a national computer system. For instance, section 7 of the British Renal Transplantation Bill provided for a central renal registry in the Ministry of Health in which any person might register his objection to the transplantation of his kidneys.¹¹¹ With such a provision, the only inquiry the surgeon would have to make would be to the computer, and it would be possible for surgeons to ascertain within minutes whether the donor had entered any objection. If a computer error occurs, the next of kin would have a cause of action against the organization responsible for the computer, not against the surgeon. Alternatively, a statute might contain a provision for a compensation fund for the next of kin in cases involving a decedent who had filed an objection but whose objection had been ignored by mistake. As a practical matter, few suits would probably be brought as a result of computer malfunction, because if organ removal becomes routine, the practice will become part of the expectations of the next of kin and of the public, just as routine autopsies are part of the expectations of persons in some European countries. If a surgeon removes an organ, not knowing that a valid objection has been filed, the damages would be measured by the mental pain and suffering of the next of kin; if the public accepts routine organ removal, the

110. See text accompanying notes 44-50 *supra*. If a choice must be made between the carrying of donation cards and the carrying of objection cards, it would be far more sensible to require that objection cards be carried. Such a requirement would lessen the psychological disincentives to donations and would aid significantly in attaining the goal of an adequate supply of organs.

111. For a discussion of how the registry would work, see Parliamentary Debates, House of Commons Official Report, Standing Comm. C, Renal Transplantation Bill, June 26, 1968, 34-39.

damages awarded by a jury for unauthorized removal are not likely to be great. Hence there would be little incentive to sue either a computer organization or a surgeon in case of an error.

A final question which pertains to the filing of objections is whether the next of kin, as well as the decedent, should have the power to object and thereby to prevent removal of organs. The British bill permitted only the decedent to object, but the next of kin could bring the decedent's objection to the attention of the surgeons. In any event, the question is not very important, because if the next of kin objects, either on the ground that the decedent instructed otherwise or for his own personal reasons, it is unlikely that a surgeon will remove the organs. A tug of war for organs with the next of kin would be most unseemly. Nonetheless, a statute in the United States should expressly permit the next of kin to object, since such a provision would help to avoid first amendment difficulties.¹¹²

4. *Removing Cadaver Organs with the Consent of the Medical Examiner*

South Africa is celebrated for its pioneering work in heart transplantation, but few know that in 1951 a South African law professor, T. W. Price, first suggested that cadaver organs might be obtained for medical or scientific purposes, including transplantation, whenever an autopsy is authorized by law.¹¹³ Although medical-examiner statutes differ in details in the various jurisdictions, a medical examiner is generally authorized to perform an autopsy without the consent of the next of kin when death has occurred as a result of violence or under suspicious circumstances.¹¹⁴ Professor Price suggested that, under South African law, organs could be removed for any medical or scientific purpose, including storage in an organ bank, during a lawful autopsy.¹¹⁵ Although Price's interpretation of South African law has been challenged,¹¹⁶ the proposal has merit as a legislative solution.¹¹⁷ The healthiest organs usually come from persons dying

112. The first amendment requirements are discussed in the text accompanying notes 90-94 *supra*.

113. *Legal Rights and Duties in Regard to Dead Bodies, Post-Mortems and Dissections*, 68 SOUTH AFRICAN L.J. (1951).

114. See C. WEHT, E. TURSHEN & W. RULE, *THE MEDICO-LEGAL AUTOPSY LAWS OF THE FIFTY STATES AND THE DISTRICT OF COLUMBIA* (1966).

115. Price, *supra* note 113, at 422.

116. Smith, *The Acquisition of Human Tissue for Transplantation Purposes: Legal Requirements in South Africa*, SOUTH AFRICAN MEDICAL J., Dec. 30, 1967, at 1274.

117. Cf. Vestal, Taber & Shoemaker, *Medical-Legal Aspects of Tissue Homotransplantation*, 18 U. DET. L.J. 271 (1955).

either as a result of an accident or in some other sudden and mysterious manner. If the medical examiner is authorized to remove organs for transplantation in all cases in which he is authorized to perform an autopsy, a large supply of healthy organs will become available.

In 1967 Hawaii passed legislation providing that the medical examiner in an authorized autopsy has the right to retain tissues useful for transplantation.¹¹⁸ A year later Virginia amended its medical-examiner statute to provide that, when the medical examiner is authorized to perform an autopsy, he may remove organs for transplantation if "there is insufficient time to contact the next of kin . . . and no known objection by the next of kin is foreseen . . ." ¹¹⁹ Similarly, Italian law allows the medical examiner to authorize removal of organs for transplantation in situations in which a post-mortem examination of the body is compulsory.¹²⁰

This method of securing cadaver organs deserves careful scrutiny. The medical examiner would, of course, have to determine when a transplantation would interfere with the investigation of a possible homicide, and thus his cooperation and coordination with the transplant surgeons would be essential. Since the transplant surgeons would receive the organ by permission of the medical examiner, any suit for unauthorized autopsy and removal of organs would have to be brought against the medical examiner, not against the surgeon. There might be advantages in this shifting of liability, for a public official is more likely to be responsive to religious groups objecting to an autopsy and would probably go to great lengths to satisfy them in his regulations. Moreover, the likelihood of a damage suit would be reduced because the organs would be removed in connection with a procedure known and accepted by the general public. The donation of organs by a medical examiner has many repercussions; those repercussions must be carefully analyzed in appraising this method of increasing the supply of organs.

5. *Other Human Sources of Supply*

One of the important problems in the area of the law applicable to transplant operations is determining the moment of death; an appropriate resolution of that problem may suggest another source

118. No. 188, § 2, [1967] Hawaii Sess. Laws 183.

119. VA. CODE ANN. § 19.1-46.1 (1968); see Note, *Organ Transplantation and the Donation: A Proposal for Legislation*, 10 WM. & MARY L. REV. 975 (1969).

120. See Couch, *Legal Aspects of Human Organ Transplantation*, in *ADVANCE IN TRANSPLANTATION* 726 (J. Dausset, J. Hamburger & G. Mathé ed. 1968).

of organs. Until the present era, death could be generally defined as the final cessation of vital functions, and few legal problems arose in this area.¹²¹ When no heartbeat could be heard, no respiration could be detected, the pupils became fixed and dilated, the stare became glassy, and the jaw dropped, the doctor pronounced death. With the development of vital organ transplantation, the time of death and the criteria for measuring death have become of crucial importance. In the past two years a spate of articles concerning the time of death has appeared in both popular and professional journals.¹²²

Dr. Henry K. Beecher has recently suggested that society should not condone the waste of organs of hopelessly unconscious and irretrievably injured persons kept "alive" only by extraordinary means.¹²³ Dr. Beecher would treat as dead those patients whose heart and lungs are maintained by a respirator or other extraordinary care, but whose brain is dead. He would define death as a permanently nonfunctioning brain, diagnosable from such clinical signs as no response to stimuli, no movements or breathing, and no reflexes.¹²⁴ Under this proposal a physician can pronounce a man dead, then turn off the respirator, and then turn the respirator back on to keep the organs perfused with blood until removal.¹²⁵ He does not have to wait until asphyxia occurs and the organs are

121. One problem that did arise was determining the time of death after two persons died in an accident and the first inherited from the second only if the first survived the second. *See In re Estate of Rowley*, 257 Cal. App. 2d 324, 65 Cal. Rptr. 139 (1967), in which the jury believed that one woman survived another by 1/500,000 of a second. For other contexts in which the time of death is legally important, see Washmuth, *The Concept of Death*, 30 OHIO ST. L.J. 32, 41-42 (1969).

122. *See, e.g., Ayd, Is Brain Death Legal Death?*, 4 MEDICAL-MORAL NEWSLETTER 18 (1968); Corday, *Life-Death in Human Transplantation*, 55 A.B.A.J. 629 (1969); Elkington, *The Dying Patient, the Doctor and the Law*, 13 VILL. L. REV. 740 (1968); Wassmer, *Between Life and Death: Ethical and Moral Issues Involved in Recent Medical Advances*, 13 VILL. L. REV. 759 (1968).

123. *Ethical Problems Created by the Hopelessly Unconscious Patient*, 278 NEW ENGLAND J. MEDICINE 1425 (1968). *But see* Carroll, *The Ethics of Transplantation*, 56 A.B.A.J. 137, 141 (1970); Potter, *The Paradoxical Preservation of a Principle*, 13 VILL. L. REV. 784 (1968).

124. Ad Hoc Comm. of the Harvard Medical School (Henry K. Beecher, chairman), *A Definition of Irreversible Coma*, 205 J.A.M.A. 337 (1968).

125. Is it legally possible for a man to die once, be revived, and die a second time? Some strange cases involving the Rule Against Perpetuities have assumed that he can. *See Brown v. Independent Baptist Church of Woburn*, 325 Mass. 645, 91 N.E.2d 922 (1950); *Knowles v. South County Hosp.*, 87 R.I. 303, 140 A.2d 499 (1958); 3 L. SIMES & A. SMITH, *THE LAW OF FUTURE INTERESTS* § 1241 (2d ed. 1956).

If the cryonics movement leads to success in freezing the dead and subsequently reviving them, a man may be able to die two or more times. *See* R. NELSON & S. STANLEY, *WE FROZE THE FIRST MAN* (1968); A. HARRINGTON, *THE IMMORTALIST* (1969). If cryonic suspension becomes a popular method of interment, the number of cadaver organs available for transplantation may be greatly reduced.

damaged. For Dr. Beecher, wasting these lifesaving organs by doing nothing is "far more radical"¹²⁶ than removing them. But Dr. Beecher does not indicate whether, in his view, the organs should be removed routinely unless there is objection or removed only with affirmative consent. For that reason, and for lack of information as to the number of persons in irreversible coma, it is difficult to predict how many healthy organs would be salvaged by determining death in the manner which he suggests.

The public may come to accept brain death as the time of death if it is satisfied that accurate ways of establishing brain death exist and are properly applied. But apart from the possibility of a malpractice suit or a criminal charge under present law,¹²⁷ there are at least two current difficulties with using brain death as the standard for determining when death occurs. First, some suspicion lingers in the public mind that electroencephalograms (EEGs) are not to be wholly trusted, especially since stories keep appearing about persons who recover after a long coma and, presumably, a flat EEG.¹²⁸ Second, determination of the brain death of an individual is made in a context in which another man lives if the first is declared dead. The medical profession must devise means to assure the public that the determination of death is not influenced in the slightest degree by the fact that his organs will be useful to another patient. There appears to be a growing consensus in the medical profession that the protection of a patient in such a situation is best ensured by a decision made by at least two physicians, neither of whom is a member of the transplant team, that the patient is dead.¹²⁹

There are other sources of human organs that raise more difficult moral questions. Dr. Roy Wolford has warned that the coming scarcity of organs may create strong social pressure to take organs

126. *After the "Definition of Irreversible Coma,"* 281 NEW ENGLAND J. MEDICINE 1070, 1071 (1969).

127. See Comment, *Liability and the Heart Transplant*, 6 HOUSTON L. REV. 85 (1968).

128. See Hamlin, *Life or Death by EEG*, 190 J.A.M.A. 112 (1964); 5 SCIENCE JOURNAL, Feb. 1969, at 11. An Israeli medical team, having witnessed recoveries of persons who have had a flat EEG for a prolonged period, has proposed that death be pronounced only after the oxygen consumption of the brain has steadily declined until no cerebral oxygen consumption is present. *Id.* at 13. *But see* Beecher, *supra* note 126.

129. Regulations in a number of countries require that death be pronounced by two physicians if organs are to be removed. Renal Transplantation Bill, § 4, introduced in the House of Commons on Nov. 27, 1968, Bill 41 (defeated on the second reading, see note 107 *supra*); Decree No. 47-2057 of Oct. 20, 1947, 1 INTL. DIGEST OF HEALTH LEGISLATION 95 (1948) (France); Decree-Law No. 45,683 of April 25, 1964, § 10, 16 INTL. DIGEST OF HEALTH LEGISLATION 394, 398 (1965) (Portugal); Minister of Health & Welfare Order No. 20,799 of Sept. 10, 1964, 17 INTL. DIGEST OF HEALTH LEGISLATION 605 (1966) (Portugal); Ministry of Health Instruction No. 5 of March 1, 1968, 20 INTL. DIGEST OF HEALTH LEGISLATION 427 (1969) (requires decision by team of doctors) (Czechoslovakia).

from human "vegetables" and mental defectives.¹³⁰ Some persons in irreversible coma can never regain consciousness because of damage to the cerebral cortex, but still have activity in the lower levels of the brain; such persons breathe on their own and can live for years with nourishment and nursing care. The care of such a human vegetable may cost more than 25,000 dollars a year and causes hospital beds and staff to be occupied. In terms of optimal allocation of economic resources, such expenditures are difficult to justify. Yet to accelerate the death of human vegetables opens the Pandora's box of involuntary euthanasia.¹³¹

The other suggested source of organs—the mentally defective—raises even more fearful questions. In 1969 the Kentucky Court of Appeals authorized the removal of a kidney from a mentally retarded individual aged twenty-seven who had the mind of a six-year-old and was a patient in a state mental hospital.¹³² The kidney was to be transplanted into his twenty-eight-year-old brother who suffered from a terminal kidney disease. Although the kidney donor had no capacity to consent, his parents consented; and an official of the state mental health department asserted the death of the older brother would have "an extremely traumatic effect" upon the younger because the two were very close. The court held, four to three, that the operation would be in the best interests of the retarded child because of the emotional impact that the death of his brother would have. Although this decision limits the taking of a kidney from mental defectives to intra-family transplantations, the case is indicative of the pressures that may be exerted to keep competent individuals alive.

Perhaps science will make it possible to avoid problems of this kind by producing a clone—an exact genetic copy of a human being. Dr. René Dubos believes that it will soon be technically possible to create clones;¹³³ if he is right, clones could be propagated on farms

130. *A Matter of Life and Death*, 220 ATLANTIC MONTHLY, Aug. 1967, at 65.

131. See G. WILLIAMS, *THE SANCTITY OF LIFE AND THE CRIMINAL LAW* 347-50 (1957); Vere, *Why the Preservation of Life?*, in *ETHICAL RESPONSIBILITY IN MEDICINE* 41 (V. Edmunds & C. Scorer ed. 1967).

In the spring of 1969 the House of Lords rejected a voluntary euthanasia bill introduced by Lord Raglan. The bill aroused a great deal of discussion. See *The Times* (London), March 24, 1969, at 8, col. 1; *The Observer*, March 30, 1969, at 9, col. 6. If voluntary euthanasia is unacceptable by the public involuntary euthanasia should be even more unacceptable.

132. *Strunk v. Strunk*, 445 S.W.2d 145 (Ky. 1969). See Savage, *Organ Transplantation with an Incompetent Donor: Kentucky Resolves the Dilemma of Strunk v. Strunk*, 58 Ky. L.J. 129 (1970), which points out that the mentally retarded donor would be excluded from hemodialysis or transplantation if his remaining kidney were to fail.

133. See Little, *Statistical Morality, Law and Tomorrow's World*, 21 U. FLA. L. REV. 442, 449 (1969).

for human spare parts. Of course, the issue would inevitably arise whether clones are people and thus entitled both to the respect due a human being and to equal protection of the law. Dr. Roderic Gorney has suggested that this difficulty might be circumvented by keeping the clone in unconscious storage so that it never develops a mind and human personality.¹³⁴ For such an approach to be completely successful, it would be necessary to create a "vegetable" clone for each person; the potential cost is beyond imagination. More realistically, science may make it possible for human beings to regenerate organs, as some lower vertebrates regenerate limbs; the liver can already partially regenerate itself. Yet, although these developments may come about in the future, the demand for human organs will probably require that some other solution be found first.

III. BUYING HUMAN ORGANS

It is the essence of a market economy that goods are transferred from those persons who have them to those who desire them by the medium of a sale. There is, however, nothing traditional about the sale of human organs and, indeed, the initial reaction to such a suggestion is likely to be extreme distaste. Understandably, the subject has not previously been given much analytical attention. But remarkable advances in transplantation, and the consequent increase in the demand for organs, require an examination of the matter.

Today the sale of bodily substances is not unknown. Blood is bought by hospitals and commercial blood banks. The price is usually ten to fifteen dollars a pint. Of the 348,571 units of blood collected in New York City in 1956, forty-two per cent was received from paid donors.¹³⁵ In 1964 it was estimated that the largest user of blood in New York City, Memorial Hospital, obtained from sixty to seventy per cent of its blood from commercial sources.¹³⁶ In Chicago it has been estimated that forty-five per cent of the blood collected is paid for.¹³⁷ Semen for use in artificial insemination is also bought, with prices ranging from five dollars to fifty dollars per ejaculation, and with the average price between fifteen and

134. *The New Biology and the Future of Man*, 15 UCLA L. REV. 273, 302 (1968).

135. N.Y. ACADEMY OF MEDICINE, COMM. ON PUBLIC HEALTH, HUMAN BLOOD IN NEW YORK CITY 66 (1958).

136. *Hearings on S. 2560 before the Subcomm. on Antitrust and Monopoly of the Senate Comm. on the Judiciary*, 88th Cong., 2d Sess. 100 (1964).

137. *Hearings on S. 1945 before the Subcomm. on Antitrust and Monopoly of the Senate Comm. on the Judiciary*, 90th Cong., 1st Sess. 33 (1967).

twenty-five dollars.¹³⁸ Pituitary glands from cadavers have also been bought; in Los Angeles, more than 1,000 pituitary glands were removed from cadavers in the coroner's office and were unlawfully sold by an employee to an institute studying abnormal growth.¹³⁹ The United States Public Health Service, largely through the National Institutes of Health, makes research grants in the field of medicine; expenditures by grantees of approved projects may include payment for such personal services as are required to carry out the project.¹⁴⁰ The Public Health Service specifically authorizes payment "to individuals who contribute blood, urine samples, and other body fluids or tissues used for the project."¹⁴¹ Payment in money to volunteers for human experimentation is practiced very widely.¹⁴²

As with blood, organs might be bought by the direct payment of money. Remuneration could, however, take some other form. In the case of live donors, remuneration might take the form of a promise of free medical care for a period of years or for life, either for all diseases and disabilities or for those resulting from the removal of the organ.¹⁴³ Alternately, remuneration might take the form of insurance on the donor's life.¹⁴⁴ Either of these forms of remuneration might be tailored to provide a rough indemnification to compensate the donor for the possible consequences of removing the organ.

In the case of cadaver organs, remuneration might take the form of relieving the decedent's estate of the uninsured portion of the decedent's final hospital bill, or payment might take the form of giving the spouse and children priority if any of them ever needs an organ. For example, a certificate of priority for two kidneys might be issued to the wife and children of the dead donor. This certificate could be nontransferable; in that case, it would probably not greatly affect the allocation system and would be similar to current blood

138. Smith, *Through a Test Tube Darkly: Artificial Insemination and the Law*, 67 MICH. L. REV. 127, 133 (1968).

139. The employee was given a thirty-day jail sentence for malicious mischief. Los Angeles Times, Nov. 19, 1966, pt. 1, at 24, col. 1.

140. 42 C.F.R. §§ 52.31, 52.33(a) (1969).

141. U.S. PUBLIC HEALTH SERVICE, U.S. DEPT. OF HEALTH, EDUCATION & WELFARE, GRANTS FOR RESEARCH PROJECTS, POLICY STATEMENT 20 (Public Health Service Publication No. 1301, July 1967). See also 24 U.S.C. § 30 (1964).

142. CIBA FOUNDATION SYMPOSIUM, *supra* note 3, at 38 (remarks of G. Schreiner); Moore, *Biological and Medical Studies in Human Volunteer Subjects: Ethics and Safeguards*, 1 CLINICAL PHARMACOLOGY & THERAPY 149, 153-54 (1960).

143. In the first kidney transplant from an identical twin, at the Peter Bent Brigham Hospital in Boston, the donor asked the doctors if they would provide him with free medical care for the rest of his life. The physicians refused. CIBA FOUNDATION SYMPOSIUM, *supra* note 3, at 17 (remarks of J.E. Murray).

144. See *id.* at 163-64 (remarks of J.J. Van Rood & G. Schreiner).

insurance plans.¹⁴⁵ Alternatively, the certificate could be transferable, which would lead to the allocation of organs by the market.

Thus, remuneration may take a variety of forms other than the direct payment of money. Some forms of remuneration may be ethically justifiable even if one concludes that direct payment of money is not.

A. Sales by Living Persons with Delivery During Life

1. Legality

In some foreign countries live persons are not permitted either to give or to sell their spare organs when delivery is to take place during life. In Italy, such a statutory provision exists as a result of an incident which occurred in the 1930's when a rich man bought a testis from a young Neapolitan and had it transplanted by a surgeon. The public outrage resulted in the passage of a law prohibiting the sale or gift by a live person of an organ if removal of the organ could produce a permanent deficiency.¹⁴⁶ The Italian law was modified in 1967 to permit the removal of kidneys from live persons for transplantation.¹⁴⁷ In France, removal of organs from live persons for transplantation is indirectly prohibited through a provision that surgical operations are not permitted except for the benefit of the patient.¹⁴⁸ In South Africa, before tissue may be removed from living persons for transplantation, two medical practitioners other than the surgeon who performs the operation must certify in writing

145. Blood insurance companies provide indemnity insurance against blood transfusion costs. Premiums may be paid in cash or through a donation of a pint of blood. See *Blood Serv. Plan Ins. Co. v. Roddis*, 259 Cal. App. 2d 807, 66 Cal. Rptr. 649 (1968).

Transplant insurance is now being offered by the Hartford Life Insurance Company. For an annual premium of \$1 to \$3, the policy will cover transplant expenses up to \$50,000. *AMA News*, May 26, 1969, at 1, col. 1.

146. CIBA FOUNDATION SYMPOSIUM, *supra* note 3, at 16. C. Civ. art. V (Hoepli 1967), THE ITALIAN CIVIL CODE art. 5, at 7 (M. Beltramo, G. Longo & J. Merryman transl. 1969). William Butler Yeats, in his later years, received a testis from a monkey. He claimed to have been greatly rejuvenated by the operation, and G.S. Fraser asserts that it increased the fine eroticism in Yeats' subsequent verse. G. FRASER, W.B. YEATS 22 (1954).

147. Presidential Decree of June 26, 1967, [1967] *Gaz. Uff.* 3478, 19 *INTL. DIGEST OF HEALTH LEGISLATION* 389 (1968). The decree prohibits sale of organs, and provides a fine or imprisonment as punishment. Presidential Decree of June 26, 1967, §§ 6, 7, [1967] *Gaz. Uff.* 3478.

148. Revillard & Revillard, *Les Aspects Juridiques des Transplantations d'Organes Chez L'Homme*, 15 *REV. LYON. MED.*, Feb. 28, 1966, at 159; cf. 2 R. SABATIER, *TRAITÉ DE LA RESPONSABILITÉ CIVILE EN DROIT FRANÇAIS* §§ 786-87 (1951). One of the pioneers in kidney transplants from one sibling to another was Dr. Jean Hamburger of Paris. When asked why he had not been prosecuted, he replied: "The prosecution may come only from the patient or his family. The day may come when one ill-humoured member of the family decides to prosecute us if the patient dies." CIBA FOUNDATION SYMPOSIUM, *supra* note 3, at 154.

that in their opinion the removal of the specified tissue will not prejudice that person in any way.¹⁴⁹

Research has revealed no statute in an American state expressly prohibiting the sale of a spare organ by a living person for immediate delivery. Thus, the question must be answered by resort to general principles of law. The question can be illuminated by examining first the law respecting transplantation of donated organs. If it appears that the removal of donated organs is lawful, the question then becomes whether the reasons which support that view apply to the sale of organs.

a. *Civil liability for removing an organ.* In the United States several hundred kidneys have been removed from consenting live persons for transplantation, even though the donors do not physically benefit from the operation.¹⁵⁰ If the donor is an adult, understands the nature of the procedure, and voluntarily consents to removal of a kidney for transplantation, the surgeon is not normally subject to civil liability.¹⁵¹ The traditional legal approach to civil suits against surgeons for assault and battery is to ascertain whether the donor gave an informed and voluntary consent to the assault.¹⁵² There may, however, be some inherent limitations upon what a person can consent to.¹⁵³ Removal of a spare kidney involves little risk of death and little impairment of bodily functions.¹⁵⁴ On the other hand, removal of a "spare" eye or lung for transplantation results in substantial physical impairment, and it would be dangerous

149. Smith, *supra* note 116, at 1276. Smith doubts that this requirement can ever be met. *Id.*

150. In the *Sixth Report of the Human Kidney Transplant Registry*, 6 TRANSPLANTATION 944 (1968), it is stated that on January 1, 1968, 1,741 kidney transplants had taken place and the proportions of the donors of kidneys were as follows: parent, 26%; sibling, 20%; other blood relatives, 2%; unrelated live donor, 9%; and cadaver, 43%.

151. Louisell, *Transplantation: Existing Legal Constraints*, in CIBA FOUNDATION SYMPOSIUM, *supra* note 3, at 78, 80.

152. Plante, *An Analysis of "Informed Consent"*, 36 FORDHAM L. REV. 639 (1968); Waltz & Scheuneman, *Informed Consent to Therapy*, 64 N.W. U. L. REV. 628 (1969).

153. Beeson, *Panel Discussion: Moral Issues in Clinical Research*, 36 YALE J. BIOLOGY & MEDICINE 455 (1964).

154. There are two risks involved: the immediate risk of the surgical operation, and the long-term risk of living with only one kidney. The first risk is slight. Dr. D.L. Stickel estimates that the immediate risk of death or permanent disability from the operation is one in 1,000. *Organ Transplantation in Medical and Legal Perspectives*, 32 LAW & CONTEMP. PROB. 597, 600 (1967). The risk that the donor's remaining kidney will eventually fail is the same that a person between 25 and 35 takes if he drives a car 8,000 miles a year. Merrill, *Letter to the Editor*, 91 ANNALS OF INTERNAL MEDICINE 356 (1964). Life insurance companies accept a person after a removal of a kidney as a normal risk. CIBA FOUNDATION SYMPOSIUM, *supra* note 3, at 163 (remarks of J.E. Murray); *id.* at 209 (remarks of V. Edmunds). *See also id.* at 19 (remarks of J. Hamburger, stating risk to be 0.12%).

to assume that the doctrine of informed consent extends to all "spare" organs.¹⁵⁵

Another limitation upon informed consent has been developed in cases of minors and mental defectives. It has been held that a minor cannot consent by himself to an operation that is not for his benefit;¹⁵⁶ consent of his parents is also required. In three declaratory judgment actions in Massachusetts,¹⁵⁷ approval was sought for the removal of a kidney from a minor for transplantation to the minor's twin. The court approved the operations upon finding (1) that the parents had consented; (2) that the minor donors fully understood the nature of the operation and its possible consequences and had consented to it; and (3) that by avoiding the "grave emotional impact" which the minor would suffer if his twin died, the minor gained potential benefit. This last requirement apparently precludes donation or sale by a minor to a person who is not a close member of the family, because the recipient's death would usually have little emotional impact upon the donor. The same requirement has been applied in Kentucky to the removal of a kidney from a mentally defective person.¹⁵⁸

It can be argued that the capacity of an adult to consent to a kidney removal should be subject to the requirement that the operation may prevent a death which would cause the donor severe emotional trauma. Kidneys have been removed from consenting prisoners and transplanted into persons unknown to them,¹⁵⁹ but there have been no cases in which consenting adults subsequently have argued that the consent was invalid and have sued the surgeon for removing the kidney. Nevertheless if a court were to conclude

155. A spare organ for transplantation is defined here as an organ that can be removed with minimal risk of death and with little or no functional impairment of the donor. At the present time a kidney is the only organ which generally comes within this definition.

156. *Bonner v. Moran*, 126 F.2d 121 (D.C. Cir. 1941).

157. *Masden v. Harrison*, No. 68,651 Eq. (Mass. Sup. Jud. Ct. June 12, 1957); *Huskey v. Harrison*, No. 68,666 Eq. (Mass. Sup. Jud. Ct. Aug. 30, 1957); *Foster v. Harrison*, No. 68,674 Eq. (Mass. Sup. Jud. Ct. Nov. 20, 1957). See Curran, *A Problem of Consent: Kidney Transplantation in Minors*, 34 N.Y.U. L. REV. 891 (1959).

158. *Strunk v. Strunk*, 445 S.W.2d 145 (Ky. 1969). See text accompanying note 132 *supra*. But see dissenting opinion of Judge Steinfeld, 445 S.W.2d at 150: "It is common knowledge beyond dispute that the loss of a close relative or a friend to a six-year-old child is not of major impact." See also the remarks of one of the pioneers in kidney transplantation, Dr. J.E. Murray:

The age of 12 or 13 has proved to be medically reasonable; we felt that donors under this age had no awareness of psychological gain or trauma. For that reason we have refused donors under that age even though the potential recipient would necessarily die. By the age of 12 or so children can form very strong attachments. CIBA FOUNDATION SYMPOSIUM, *supra* note 3, at 203. See also *id.* at 198 (remarks of D. Daube); Savage, note 132 *supra*.

159. *Id.* at 74-77 (remarks of T.E. Starzl).

that sale of a kidney by an adult offends public policy, it could extend the avoidance-of-psychological-trauma requirement to adults. This extension would indirectly, but effectively, preclude sales by living donors. Before such a view can be accepted, however, kidney removal must be distinguished from medical procedures and experiments other than transplantations that are not performed for the physical benefit of the patient but can legally be carried on even though they do not have the purpose of preventing the death of someone close to the patient. The distinction would have to be based upon the relative severity of the risk of death, the emotional stress involved, and the potential permanent physical impairment which might result.

b. *Criminal liability for removing an organ.* Criminal law sets limits on the ability of a patient to give his informed consent to a surgical operation that is not for his benefit, but, as in the case of civil liability, exactly what those limits are is unclear. It is clear that one cannot consent to the infliction of death, and consequently an unpaired vital organ such as the liver may not be consensually removed. Under some circumstances, a person cannot consent to serious bodily injury; the removal of an organ, even with the donor's consent, may constitute the crime of assault and battery or the crime of mayhem. Under what circumstances a person does not have the capacity to consent to bodily injury is not very clear. Only two cases seem pertinent, and they are easily distinguishable. In *Commonwealth v. Farrell*,¹⁶⁰ an Army lieutenant took lighted cigarettes and burned his initials on a young woman's breasts, thighs, and buttocks with her apparent consent. The woman was scarred for life. In upholding his conviction for assault with intent to maim, the court declared that consent was not a defense when bodily harm was likely to result. In *Rex v. Donovan*,¹⁶¹ the defendant was charged with assault for beating a girl with a cane for the purpose of his sexual gratification. Although the girl may have consented to the beating, the court indicated that the consent made no difference; even with the victim's consent, the court reasoned, one may not commit an unlawful assault intended to produce bodily harm. Of course, the reasoning of the court is circular since whether the assault was unlawful is the very question to be answered.

The rule applied in these cases seems to cut much too wide a swath if it means that a person cannot consent to any hurt that interferes with his comfort. As Glanville Williams has pointed out:

160. 322 Mass. 606, 78 N.E.2d 697 (1948).

161. [1934] 2 K.B. 498.

Every surgical operation temporarily interferes with comfort but is not for that reason illegal. Even if the hurt is consented to for some reason that a court does not regard as adequate, this does not mean that it is illegal. Human beings are usually the best judges of their own interest, and if they consent to damage, there is generally no reason why the law should protect them further. Ritual circumcisions, for example, or skin-grafting or face lifting operations may be undertaken for reasons of tradition or superstition or vanity, as the case may be, and they undoubtedly produce discomfort; yet it would be absurd to hold them unlawful.¹⁶²

A sweeping rule laid down in cases involving sado-masochistic practices should not be applied to the very different context of organ transplants, especially when, at least in one of the cases, the judges were morally indignant at the "perverted desires" and "corrupt motive"¹⁶³ of the actors.

Mayhem is the crime of intentionally and maliciously maiming or disfiguring a person. At common law, mayhem was limited only to deprivation of such of a man's organs "as may render him the less able, in fighting, either to defend himself or to annoy his adversary."¹⁶⁴ Included were a man's hand, his finger, his foot, his testicle, or his eye. The significance of the organs in fighting is irrelevant today, and modern statutes have extended the crime of mayhem to disfigurings in general and to the disfiguring of women as well as of men. Under modern law, it is possible to contend that surgically removing an internal organ from a person constitutes mayhem.

Again the question arises whether, if removing a kidney for transplantation is mayhem, consent by the donor is a defense to the charge.¹⁶⁵ Only two cases are even remotely relevant, and in both of those the victim's consent had no effect. In *Wright's Case*,¹⁶⁶

162. G. WILLIAMS, *supra* note 131, at 106.

163. [1934] 2 K.B. at 509.

164. 4 W. BLACKSTONE, COMMENTARIES *205.

165. A medical procedure somewhat analogous to removing kidneys from consenting live donors is voluntary sterilization in the absence of medical necessity. In both cases a surgical operation is required, the result is probably irreversible, and no medical benefit to the patient results. Sterilization, however, differs from transplantation in one important way: removing a kidney for transplantation results in a medical benefit to a third person. Whether voluntary sterilization constitutes assault or mayhem is not clear; there are no cases directly in point, and the commentators are divided. G. WILLIAMS, *supra* note 131, at 106-10; Bravenec, *Voluntary Sterilization as a Crime: Applicability of Assault and Battery and of Mayhem*, 6 J. FAMILY LAW 94 (1966); Note, *Sterilization: A Continuing Controversy*, 1 U. SAN FRANCISCO L. REV. 159 (1966). A recent law review study indicates that because of the uncertainty in the law many surgeons are reluctant to run the risk of civil and criminal liability; they perform sterilization only when it is for the health of the patient. Note, *Elective Sterilization*, 113 U. PA. L. REV. 415, 419-21 (1965).

166. 1 COKE ON LITTLETON § 194, at 126.6.

recorded by Lord Coke in 1603, "a strong and lustie rogue" directed his companion to cut off the rogue's left hand so that he might get out of work and beg more effectively. Both the rogue and his companion were convicted of mayhem; consent was held to be no defense to the crime. In *State v. Bass*,¹⁶⁷ a man wanted his fingers cut off so that he could collect insurance money. With full knowledge of the purpose, a physician deadened four fingers of the man's left hand, which were then cut off by another man using an electric saw. The physician was convicted of being an accessory to mayhem. The court held that consent of the person was no defense to the charge. Although the opinion of the court in *State v. Bass* was extremely vague, the court apparently thought that cutting off the fingers was no "benefit" to the man and that the conduct was "antisocial." The court did not indicate what policy propositions it assumed in its determinations that insurance proceeds provided no offsetting benefits for the loss of the fingers and that the conduct was antisocial.

Inasmuch as the decided cases are not very helpful in the transplant situation, it is particularly useful to see how the problem is solved by the American Law Institute's Model Penal Code, which represents a decade of work by distinguished scholars to define the appropriate criteria for criminal punishment. The Code abolishes the crime of mayhem, subsuming it under aggravated assault. A person commits aggravated assault when he knowingly causes serious bodily injury to another.¹⁶⁸ Since a surgeon who removes a kidney for transplantation does so knowingly, the act is aggravated assault if it causes serious bodily injury. "Serious bodily injury" is, in turn, defined by the Code to include "protracted loss or impairment of the function of any bodily member or organ."¹⁶⁹ Removing a kidney for transplantation therefore comes within the definition of aggravated assault under the Model Penal Code.

Under the Code consent is not a defense to aggravated assault; consent is a defense only if the bodily harm consented to is not serious.¹⁷⁰ However, the surgeon does have the defenses of "justification" and "de minimis." Section 3.08(4) of the Code gives doctors a specific defense of justification. It provides that the use of force—the surgery—is justifiable when done by a doctor "(a) . . . for the purpose of administering a recognized form of treatment which the doctor believes to be adapted to promoting the physical

167. 255 N.C. 42, 130 S.E.2d 481 (1961).

168. MODEL PENAL CODE § 211.1(2)(a) (Proposed Official Draft, 1962).

169. MODEL PENAL CODE § 210.0(3) (Proposed Official Draft, 1962).

170. MODEL PENAL CODE § 2.11(2)(a) (Proposed Official Draft, 1962).

or mental health of the patient; and (b) the treatment is administered with the consent of the patient."¹⁷¹ This section covers removal of spare organs for transplantation only if that procedure is a "recognized form of treatment" which the doctor believes is for the "physical or mental health" of the donor. It can be contended that "mental health" includes the psychological or spiritual benefit that results from the heroic act of giving,¹⁷² but courts may not interpret the term so broadly.¹⁷³ A person in sound mental health may feel better by giving an organ, but it cannot be inferred that his sound mental health would deteriorate if he could not give an organ. Yet that inference may be what the Model Penal Code requires.

If the specific defense of justification that the Code gives doctors is not applicable, the general defense of justification available to all persons may give the surgeon an effective defense. Section 3.02 of the Model Penal Code provides that an action which a person believes to be necessary to avoid a harm or evil is justifiable if "the harm or evil sought to be avoided by such conduct is greater than that sought to be prevented by the law defining the offense charged."¹⁷⁴ If the doctor who removes a spare kidney for transplantation relies on the general defense of justification, a judge or jury must balance the evils. The strongest case for kidney transplantation from inter vivos donors is that it results in a greater quantum of good than would any other course of action, including transplantation from cadavers, hemodialysis, and inaction. The principle of utility—which is the philosophical basis for the general defense of justification—requires that losses should be minimized. If it appears, in light of the choices available to the doctor, that the plight of the prospective recipient outweighs both the risk of the donor's death and the risk of the functional impairment of the donor, then the doctor's action is justifiable.¹⁷⁵ Professor David Daube concludes

171. MODEL PENAL CODE § 3.08(4) (Proposed Official Draft, 1962).

172. Beecher, *Scarce Resources and Medical Advancement*, in DAEDALUS, Spring 1969, at 275, 304: "Any maiming of a patient should be for his benefit. The principle of totality covers this: A part of the body may be sacrificed for the good of the whole. The donor loses a kidney, but has spiritual gain in his sacrifice."

173. *But cf.* cases cited notes 157-58 *supra*.

174. MODEL PENAL CODE § 3.02(1)(a) (Proposed Official Draft, 1962); *cf.* Czechoslovakia Order No. 42 of June 13, 1966, § 47(1), 18 INTL. DIGEST OF HEALTH LEGISLATION 25 (1967), which provides that the donation of organs may be accepted only if, in the opinion of an expert committee, the operation is likely to be successful and the benefit to the recipient outweighs, from the social point of view, the harm to the donor.

175. Schreiner, CIBA FOUNDATION SYMPOSIUM, *supra* note 3, at 68, and McGeown, *Ethics for the Use of Live Donors in Kidney Transplantation*, 75 AM. HEART J., May 1968, at 711, doubt that the use of live donors is justifiable when cadaver organs which are just as satisfactory are available.

that the law, in subjecting the doctor's conduct to a kind of post audit, should be generous in this situation and should rely on the conscience of the surgeon.¹⁷⁶ It is likely that the law will, so long as the conscience of the surgeon reflects the ethics of the medical profession.

The other defense available to the surgeon is that his act is a de minimis infraction. Section 2.12 of the Code provides for dismissal of a prosecution when the acts are "within a customary license or tolerance"¹⁷⁷ or "cannot reasonably be regarded as envisaged by the legislature in forbidding the offense."¹⁷⁸ Removal of a kidney for transplantation appears to come within the terms of that section. Thus, barring unusual circumstances, either the special or general defense of justification or the defense of de minimis infraction appears to permit a surgeon to avoid criminal liability for removing a kidney from a consenting adult for transplantation.

The situation may be changed, however, by the payment of consideration for the kidney. First, the specific defense of justification given to doctors by section 3.08(4) may not be applicable to the purchase of a kidney. In order to apply the defense to kidney donations, "mental health" must be interpreted to include avoidance of the psychological trauma of the death of a loved one or the spiritual gain from an heroic act. A court might not stretch "mental health" to include an increase in the donor's happiness which results from his receiving money to pay for some necessity, comfort, or luxury, especially since such a broad interpretation would prevent the provision from serving as a useful guide by which to judge the surgeon's conduct. The surgeon's defense of de minimis also may not be applicable when an organ is purchased, since the purchase of organs is not yet "within a customary license or tolerance."

The general defense of justification under section 3.02, however, would be applicable to a purchase of an organ and in the application of that defense some most difficult and hitherto unanswered questions arise. When the surgeon balances the plight of the prospective recipient against the loss to the donor, is he justified in offsetting against that loss any monetary gain by the donor? Furthermore, in weighing the donor's net gain or loss, must the surgeon look into the adequacy of the remuneration and into the uses which the donor intends to make of any monetary payment? Suppose patient *A*

176. *Transplantation: Acceptability of Procedures and the Required Legal Sanctions*, in CIBA FOUNDATION SYMPOSIUM, *supra* note 3, at 188, 195-96.

177. MODEL PENAL CODE § 2.12(1) (Proposed Official Draft, 1962).

178. MODEL PENAL CODE § 2.12(3) (Proposed Official Draft, 1962).

offers to sell a kidney for 5,000 dollars in order to invest in the stock market, patient *B* offers a kidney for 1 million dollars in order to invest in Government bonds, patient *C* offers a kidney for 200,000 dollars in order to set up a trust fund to care for his mentally retarded child, and patient *D* offers a kidney for 25,000 dollars in order to pay for plastic surgery on his horribly scarred face.¹⁷⁹ If all four patients are ordinary workers with an income of 7,000 dollars a year each, is acceptance of any one of these offers justified? The balancing considerations are extraordinarily difficult, and the surgeon will be accountable to a judge and jury for his conduct. At this point in the development of organ transplantation, the surgeon should act only with the approval of the hospital review committee when an economic inducement is involved.

2. *Is the Sale of a Spare Organ Against Public Policy?*

There are at least four basic positions from which one may approach the problem of organ sale. The first is founded upon an acceptance of the general ethical principle of preservation of life. That principle, simply stated, is that an individual should not endanger his life except for the love of another or in a case such that the danger is an indirect consequence of the activity.¹⁸⁰ This position has deep roots in Judaeo-Christian, and even earlier, teachings that man should not seek his own destruction. Unlike the Eskimos, who encourage suicide by the elderly when they can no longer contribute to the family larder,¹⁸¹ most western societies have long condemned taking one's own life. In ancient Athens a man who unsuccessfully attempted suicide was punished by the cutting off of his hand.¹⁸² In medieval England a stake was driven through the heart of a man who committed suicide and all his property was forfeited to the crown;¹⁸³ Christians who committed suicide could not be buried in consecrated ground.¹⁸⁴ Remnants of this attitude can still be found in laws against abetting and, in some places, attempting suicide.¹⁸⁵

However, the principle of preserving life does permit some

179. The following advertisement appeared in the Los Angeles Times, May 24, 1969, pt. IV, at 2, col. 1: "Young man badly needs money for surgical operation. Avail. for medical experiments or what-have-you? Call SY 6-8191 (24 hr. ans. serv.)."

180. See P. RAMSEY, *DEEDS AND RULES IN CHRISTIAN ETHICS* 90-91 (1965).

181. E. HOEBEL, *THE LAW OF PRIMITIVE MAN* 76 (1954).

182. 4 W. BLACKSTONE, *COMMENTARIES* *189.

183. *Id.* at *190.

184. P. JACKSON, *THE LAW OF CADAVERS* 57 (1950).

185. R. PERKINS, *CRIMINAL LAW* 83-86 (2d ed. 1969).

exceptions. Society condones, and even praises, some acts of heroism and self-sacrifice, such as that of the man who gives up his seat in the lifeboat, the passerby who enters a burning building to save the occupants, or the mother who jumps into the rapids to save her child. These are heroic acts motivated by the desire to help others. Under this view, the sole motivation for risking one's life by giving up an organ must be the love of one's fellow man,¹⁸⁶ and a gift of a spare organ to a specific donee is permissible so long as such a motivation exists. Otherwise, allowing the removal of an organ for transplantation is condemned.

Yet if a charitable motive is so important in judging conduct in situations involving a risking of one's life, how can we permit men to risk their lives in driving racing cars, in entering boxing contests, and in pursuing all kinds of paid risky occupations and still object to the paid kidney donor? When confronted with this question many moral theologians draw a line between direct and indirect effects.¹⁸⁷ For race car drivers and others in risky occupations, dying or being functionally impaired is an indirect consequence, which is foreseen as only possible. In the transplantation case, they argue, removal of the organ from the donor is a life-risking procedure which is the necessary means to the end.¹⁸⁸ If, however, the direct-indirect distinction is accepted, the conclusion that it is unethical to pay a man for a kidney to save life, even though the risks to him are small, but ethical to pay a race car driver at the Indianapolis 500 for entertainment, even though the risks to him are great, can hardly be avoided. Such a principle is troubling indeed.

The second position from which the problem of organ sale can be approached may be characterized as one of "free will." This position is based upon the principle that a person should be able to do whatever he chooses, so long as he does not harm another.¹⁸⁹ Particularly among the young, this position is now much in vogue.

186. This position may also be understood by resort to the principle of totality. The donor gives up a physical part of his body in exchange for spiritual gain. CIBA FOUNDATION SYMPOSIUM, *supra* note 3, at 207 (remarks of J.E. Murray); Beecher, *supra* note 172. This view is similar to that used by courts approving donations by minors and mental defectives. See notes 157-58 *supra* and accompanying text.

187. CIBA FOUNDATION SYMPOSIUM, *supra* note 3, at 19 (remarks of G.B. Bentley).

188. Those who accept the direct-indirect distinction assume that removal of an organ results in a direct threat to life or in functional impairment. But that, of course, assumes away one of the threshold questions: What is the probability of death or of functional impairment from organ removal and to what extent should probability be taken into account?

189. See Fletcher, *Human Experimentation: Ethics in the Consent Situation*, 32 LAW & CONTEMP. PROB. 620 (1967). An articulate proponent of this principle was John Stuart Mill. ON LIBERTY 9 (A. Castell ed. 1947).

It underlies much of the current trend to liberate "sins," such as private deviate sexual conduct and fornication by the unmarried, from criminal sanction.¹⁹⁰ Undoubtedly this principle has also influenced the judicial decisions which have relaxed old proscriptions against obscenity, and it is the base of the recent decisions holding that statutes requiring motorcyclists to wear helmets are unconstitutional since the state may not require a citizen to protect his health alone.¹⁹¹ As applied to organ sales, the argument would be that an individual has the right to decide for himself whether to sell an organ.

A principle difficulty with this view is that in harming himself a person may harm society; a person who gives or sells a kidney might, if his other kidney fails, have to be maintained by the government on an artificial kidney machine. If he gives or sells other spare organs, the risk that he will disable himself is greater and the resulting harm to society may be substantial. To represent society's interest, a person other than the donor, such as a judge or a physician, must appraise the possible harm to society at large.

A variation of the free-will view is that free will, or informed consent as it is known in medico-legal terminology, should be the ethical criterion, but that a monetary payment for an organ would constitute economic coercion so that the consent would not really represent an act of free will.¹⁹² This is merely a conclusion, however, and is not a reason. What is really at issue is the determination of criteria by which to measure "unfair inducement" or "economic coercion" in situations involving the risking of life. Why is it unfair to induce a man to sell a kidney and not unfair to induce him into the boxing ring or into a coal mine?

The third way of evaluating the propriety of permitting organ sale is not to start from any general ethical rule of human conduct but to narrow the problem to the context of the physician-patient relationship. Professor Paul Freund has pointed out that "[t]he great traditional safeguard in the field of medical experimentation is the disciplined fidelity of the physician to his patient: *primum*

190. H. PACKER, *THE LIMITS OF THE CRIMINAL SANCTION* 328 (1968).

191. *American Motorcycle Assn. v. Davids*, 11 Mich. App. 351, 158 N.W.2d 72 (1968), noted in 82 HARV. L. REV. 469 (1968) and 67 MICH. L. REV. 360 (1968); *People v. Smallwood*, 52 Misc. 2d 1027, 277 N.Y.S.2d 429 (1967). *Contra*, *Everhardt v. City of New Orleans*, 253 La. 285, 217 S.2d 400 (1968) (4-3 decision); *State ex rel. Colvin v. Lombardi*, 241 A.2d 625 (R.I. 1968); *Bisenius v. Karns*, 42 Wis. 2d 42, 165 N.W.2d 377 (1969).

192. Stickel, *Ethical and Moral Aspects of Transplantation*, 3 MONOGRAPHS ON SURGICAL SCIENCE 267, 280, 282 (1966); CIBA FOUNDATION SYMPOSIUM, *supra* note 3, at 37 (remarks of J. Hamburger).

non nocere. First of all, do not do injury."¹⁹³ From this viewpoint the basic question is not the donor's motivation or freewill; the issue is whether buying this particular organ from this individual patient is for his welfare. If the principle of totality permits sacrificing a part of the body for the good of the whole—which includes spiritual gain and the avoidance of psychological trauma—it is not difficult to conceive of situations in which a physician could ethically conclude that the sale is for the patient's welfare. Suppose, for example, that a very rich man needs a kidney and the closest tissue match is his sister, who is poor. While the sister is thinking about offering a kidney, her brother lets her know that he will accept it only in exchange for 100,000 dollars—an exchange which may have income and estate tax advantages for him.¹⁹⁴ If the sister decides to sell the kidney, her knowledge of forthcoming remuneration makes it impossible to conclude that she acts solely for spiritual gain, and yet it does not seem unethical to allow her to sell the kidney. Under the principle of totality, the surgeon must conclude that the donor benefits by removal of his kidney. To arrive at that conclusion the surgeon may have to inquire as to how the donor proposes to use any monetary payment and may then have to decide for himself whether the donor will benefit physically or mentally from that particular use.¹⁹⁵

Finally, the question of organ sale can be probed by disregarding ethical positions and analyzing only the consequences of permitting such sales. Sales will have some impact both on the total amount of economic resources which are to be allocated to medicine and on the selection of recipients, but the precise nature of that impact is not clear. The nature of the impact will depend upon the manner in which two distinguishable problems are approached: (1) creating an adequate quantity of organs supplied and (2) selecting the persons to receive them. The quantity of organs supplied could be increased by buying them, and they could then be allocated among recipients by some method other than sale. For example, a third party, such as the government or a hospital, might absorb the cost. But the consequence of the government's purchase of organs for recipients might be that the government's economic resources which are committed to medicine would be used for the purchase of organs rather than for other medical needs. To achieve the best use of the resources avail-

193. *Ethical Problems in Human Experimentation*, 273 *NEW ENGLAND J. MEDICINE* 687, 689 (1965). See generally J. FLETCHER, *SITUATION ETHICS* (1966).

194. See Sanders & Dukeminier, *Medical Advance and Legal Lag: Hemodialysis and Kidney Transplantation*, 15 *UCLA L. REV.* 357, 390-93 (1968).

195. See text following note 178 *supra*.

able for medical purposes, other ways of securing a satisfactory quantity of organs should first be exhausted. If the cost of buying organs is passed on to the recipient, life-saving resources would be distributed on the basis of ability to pay. The use of wealth as a means of selecting who shall be saved among the dying raises immensely troublesome ethical and legal quandaries.¹⁹⁶

Under some approaches to the problem the procedure of buying organs may be thought to be impermissible in some or all circumstances. The sounder arguments, however, appear to permit a surgeon to offer remuneration if, acting in accordance with contemporary ethical standards and with the permission of a hospital review committee, he concludes that in a particular case the operation will promote the physical or mental health of the donor. In arriving at that conclusion, the surgeon and the review committee must balance various interests, but the most important is the doctor's duty to his patient.¹⁹⁷

B. Sales of Cadaver Organs by the Decedent Before His Death

In almost all states there are statutes authorizing bequests of bodies, or parts of bodies, to medical science.¹⁹⁸ Few of these statutes prohibit sale. Statutes in Delaware, Hawaii, Nevada, New York, and Oklahoma provide that no remuneration shall be given the deceased;¹⁹⁹ but they do not prohibit the sale of organs by the next of kin. In Georgia it is a misdemeanor to receive remuneration for an eye or to take possession of an eye for which a person has received compensation.²⁰⁰ Mississippi has a unique statute that permits a person to contract—with or without a monetary consideration—to donate parts of his body at death to a hospital; it further provides that if the donor revokes the contract, he must repay any monetary consideration with six per cent interest.²⁰¹ Only Massachusetts pro-

196. Abram & Wadlington, *Selection of Patients for Artificial and Transplanted Organs*, 69 ANNALS OF INTERNAL MEDICINE 615 (1968); Sanders & Dukeminier, *supra* note 194, at 373-80; Note, *Scarce Medical Resources*, 69 COLUM. L. REV. 620, 652-70 (1969); Note, *Patient Selection for Artificial and Transplanted Organs*, 82 HARV. L. REV. 1322, 1333-34 (1969).

197. See text accompanying note 179 *supra*.

198. See notes 20-22 *supra*.

199. DEL. CODE ANN. tit. 24, § 1780(b) (1968); HAWAII REV. LAWS §§ 327-1 (1968); NEV. REV. STAT. § 451.440 (1967); N.Y. PUB. HEALTH LAW § 4201(2) (McKinney Supp. 1969); OKLA. STAT. tit. 63, § 105 (1969). In addition, Arkansas, Maine, and West Virginia prohibit the deceased from receiving remuneration for his eyes. ARK. STAT. ANN. § 82-410.2 (Supp. 1969); ME. REV. STAT. ANN. tit. 22, § 2889 (Supp. 1970); W. VA. CODE ANN. § 16-19-2 (Supp. 1968).

200. GA. CODE ANN. § 88-2009 (Supp. 1969).

201. MISS. CODE ANN. § 278.5 (Supp. 1969).

hibits the payment of compensation to any person for any cadaver organ.²⁰² The Uniform Anatomical Gift Act contains no provision forbidding the sale of organs.

The Georgia statute prohibiting the sale of an eye²⁰³ is the only statute containing a criminal penalty. In other states with statutes prohibiting remuneration for organs, the donee cannot enforce a contract if remuneration is given, but there is no criminal sanction. If the donation is invalid because it was made for consideration, the organs cannot be removed without the consent of the next of kin. If the donee is forbidden to pay the donor, but he nonetheless does pay, he can still remove the organs with the consent of the next of kin.

If a man can give his body to medical science at death, should he also be able to sell it? That is the basic policy question to be considered in this analysis. Suppose a sick man runs up a large hospital bill, and, to save his family from destitution, he offers all his organs for transplantation after death in exchange for being forgiven the hospital bill. If medical treatment of a sick man is the consideration for his agreement to give his organs, the agreement has as its purpose saving both the life of the donor and, through the eventually donated organs, the lives of others. Hence, one might conclude that life-supporting treatment of the donor could be a proper consideration for removing his transplantable organs at death.²⁰⁴ On the other hand, if this grew into a general practice, it would make some dying persons very uncomfortable. A dying person might feel pressures, real or supposed, to consent to the removal of his organs so that his family would not suffer economic detriment. It may be argued that those persons who do not want their organs removed should be protected against any embarrassment or economic pressures, and, therefore, that no one should be permitted to give his organs in exchange for hospital care or other remuneration. This principle would be similar to a club rule against tipping—a rule which is in force in order to save the nontipper from embarrassment or anxiety.

Another matter to be considered in determining whether sales by the decedent are against public policy is the effect that sales will have on the allocation of medical resources. If organs are bought and the cost is not passed on to the recipient, economic expenditures

202. MASS. GEN. LAWS ANN. ch. 113, § 7 (Supp. 1969). Maryland formerly had a statute prohibiting the payment of compensation for cadaver organs [MD. ANN. CODE art. 43, § 149(b) (1967)]; this statute was repealed by ch. 465, [1968] Md. Acts 850.

203. GA. CODE ANN. § 88-2009 (Supp. 1969).

204. The New Zealand Hospitals Amendment Act of 1966, N.Z. Statutes of 1966, 1072-79, provides for hospital care and medical treatment free of charge for any person willing to donate his cadaver organs for transplantation.

in other areas of medicine might have to be restricted.²⁰⁵ But if the cost is passed on to the recipient, the selection of recipients will be greatly affected by their ability to pay. At the present time recipients of cadaver kidneys are determined by various criteria such as logistics, medical criteria, and tissue typing;²⁰⁶ ability to pay is a minimal factor in choosing among those on waiting lists.²⁰⁷ Selection of a recipient on the basis of ability to pay may, at the present time, prevent an organ from going to the person with the best tissue match and thereby decrease the total number of lives saved by transplantation. Of course, if the immunological barrier is broken so that organs become easily transferable, allocation of organs on the basis of ability to pay might not diminish the number of successful transplants; but there would remain the serious question whether such a method of choosing whom to save is ethical and, if government resources are involved, whether it is constitutional.²⁰⁸

Regardless of the general policy decisions, there are practical problems in buying organs from living persons with delivery to take place after death, and these problems may prove insurmountable. Few persons would pay for an organ unless they were certain of its delivery in a usable condition. Accordingly, bargains could be reached only with persons fatally ill in hospitals. In most circumstances, however, psychological considerations would be such that doctors would be extremely reluctant to approach such patients. Hence it appears that few organs would be obtained by buying them from a person prior to his death. However, the psychological considerations which would inhibit conversations with a patient about the sale of his organs may not affect the willingness of doctors to talk with a patient's next of kin. Thus, the sale of cadaver organs by the next of kin must now be examined.

205. R. DUBOS, *MAN ADAPTING* 389-90 (1966):

[T]he time is rapidly approaching, if it has not been reached already, when economics will have to play a large part in medical decisions. In fact, . . . modern societies appear to limit their medical expenditures more or less unconsciously. In all countries of Western civilization the ratio of these expenditures to the gross national income is maintained at an approximately constant level, and this level is much the same everywhere, irrespective of economic prosperity. . . . There is good reason to believe, however, that the medical limitations imposed by economic necessities will soon become more stringent than they were in the past.

206. Note, *Scarce Medical Resources*, 69 COLUM. L. REV. 620 (1969); Note, *Patient Selection for Artificial and Transplanted Organs*, 82 HARV. L. REV. 1322 (1969).

207. Financial resources do, however, play a large role in processing a person from the doctor's initial diagnosis of renal failure to the waiting lists for transplantation. See R. DUFF & A. HOLLINGSHEAD, *SICKNESS AND SOCIETY* (1968); Powledge, *What Will the Doctors Do for Jean Paul Getty That They Won't Do for You?*, 60 ESQUIRE, Oct. 1968, at 200.

208. See note 196 *supra*.

C. Sales of Cadaver Organs by the Next of Kin

Sale of cadaver organs by the next of kin appears to be more objectionable than is sale by the decedent himself, but such sales are prohibited by statute only in Massachusetts²⁰⁹ and Georgia.²¹⁰ Apart from the unavoriness of the idea, permitting sales by the next of kin may well result in great anxiety and fear on the part of a patient that his doctors and next of kin would not do everything possible to save him. It does not seem likely that such sales would lead to murder, as happened when cadavers were bought in the early nineteenth century in Edinburgh;²¹¹ organs will be useful only if they are removed immediately after death, and thus, as a practical matter, organs for transplantation can be removed only from persons who die in hospitals. Nonetheless, permitting sales by the next of kin would increase the possibility that the dead man's wishes would not be carried out. The financial benefit from a sale might be irresistible to the next of kin, and even a statutory provision that the rights of the donee created by the gift of the dead donor are paramount to the rights of the next of kin²¹² will probably not be enforceable if the next of kin demands payment. Because of the risk that the donation ceremony was not properly performed or that the donation has been revoked,²¹³ surgeons will not remove an organ over the positive objection of the next of kin. Moreover, if sales were permitted, donations by the next of kin would probably decline. If payment is made to the next of kin in one case, the next of kin may well demand it in the next, and that demand will usually have to be met so that consent can be obtained. If donation of organs declines as a result, economic resources that could have been used elsewhere in medicine would have to be allocated to payment for organs so that transplantation can continue.

It may be contended that it is ethically permissible to offer the next of kin, as the consideration for removing the organs, payment for services that benefited the dead man during his life. For example, if the decedent dies of a brain tumor and has incurred large hospital bills during his life, the next of kin might consent to removing the decedent's kidneys in exchange for the cancellation of the hospital

209. MASS. GEN. LAWS ANN. ch. 113, § 7 (Supp. 1969).

210. GA. CODE ANN. § 88-2009 (Supp. 1969) (sale of eyes by next of kin is a misdemeanor).

211. See note 2 *supra*.

212. UNIFORM ANATOMICAL GIFT ACT § 2(e).

213. See text following note 48 *supra*.

bill. This kind of remuneration would result in different valuations for each person's kidney in accordance with his hospital bill, but that is not the most disturbing element of such an approach. Rather, the primary difficulty in approving such a means of payment lies in the consequences. The decedent may not wish his body cut open and may prefer that his estate pay the hospital bill; an economic incentive would be given his next of kin not to carry out his wishes. Indeed, this consequence characterizes all proposals to permit the sale of cadaver organs by the next of kin.

D. *Conclusion*

Compensation for organs can take many forms. The amount can be appropriate to the risk and inconvenience, or it can be a sum providing an economic inducement either small or large. Remuneration can take the form of cash, free medical services, or organ priority if a surviving member of the family later needs a transplant. It might even take the form of barter for another organ needed by the donor.

It is difficult to conclude that under no circumstances should remuneration be given for organs; too much depends upon an analysis of the many variables within a particular context. As a general matter, however, there are a number of undesirable consequences which might result from widespread purchases of organs and these consequences must be taken into account if such purchases are ever to be permitted. Some of the economic resources devoted to medicine would be used to pay for organs which could probably be acquired without cost through some other method. If organs are allocated to recipients on the basis of ability to pay, a troublesome criterion has been introduced into the method of allocating scarce life-saving resources. If organs can be sold by a dying man, dying men who do not want to sell their organs and thereby benefit their families economically are put in an embarrassing situation. If organs can be sold by the next of kin, an economic inducement is provided not to carry out a decedent's desire to be buried whole. Because of the economic value of his organs to his next of kin, a person might fear that his physicians and next of kin would not do all that is possible to save his life. These consequences lead to the conclusion that widespread compensation for organs should be avoided. But if providing compensation in a particular case is not likely to lead to the widespread practice of remunerating donors, there seems to be no public-policy objection to compensating the donor so long as the surgeon concludes that the removal will promote the physical or mental

health of the donor and so long as the compensation is viewed as justifiable under contemporary medical ethics.

IV. THE HARD CHOICE

I have set before you life and death, blessing and curse; therefore choose life, that you and your descendants may live.

—Deuteronomy 30:19

Society must ultimately face the fact that cadaver organs can be used to save human life and that a hard choice must now be made. It must decide whether to advance the policy of preserving life or to stand paralyzed by its taboos.

With the financial assistance of the National Institutes of Health, the Uniform Anatomical Gift Act was drafted and widely publicized as a solution to the problem of inadequate organ supply. The Act has been adopted, in some version, in forty-one states.²¹⁴ But instead of providing a disciplined policy analysis and a study of the comparative economic costs of the various methods of organ supply, the draftsmen of the Uniform Anatomical Gift Act maintained a too constant fidelity to the purposes and methods of the past. All evidence indicates that the Act will not relieve the shortage of free cadaver organs to any appreciable extent and that thousands of people will continue to die because of lack of a needed organ. The Act is a placebo, easily swallowed, but not a remedy.

If the quantity of cadaver organs supplied does not equal the quantity demanded at zero price, our preference that organs not be bought will be put under increasing pressure by the demands of people fighting for life and willing to pay for it. To preserve any semblance of current human values the law must direct its creative efforts toward an innovative solution which obtains, at no cost, the quantity of organs needed. A sufficient quantity could be obtained by routine autopsies, and this quantity would not be greatly diminished by permitting dying persons or their next of kin to object to, and thereby to prevent, organ removal. Because there is a traditional psychological involvement with a cadaver, which symbolizes the living man, one turns reluctantly to routine autopsies as the best solution. Yet, as medical science progresses, hardly any taboo will remain immune from a painful reappraisal. In order to maximize both the number of lives saved and the use of our economic and medical resources, routine autopsy seems the only realistic method. If human lives are to be saved, the agony of hard choices cannot be avoided.

²¹⁴ See note 20 *supra*.