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NOTES

LAW AND LIFE: ORGAN TRANSPLANTS

I. INTRODUCTION

It is the purpose of this paper to summarize some of the legal, moral, medical and ethical issues that have recently arisen as a result of the current rapid advances in medical science in prolonging life. Particular emphasis is given to the state of the medical art as well as the state of the law in South Carolina. While South Carolina may not be faced with the actual problems in the immediate future, it would be well to consider the issues in advance with the hope that legal, moral and ethical considerations will not act as a barrier to medical advancement nor will the interests of society be sacrificed in the name of scientific progress.

II. MEDICAL BACKGROUND

A. *Transplantation*

Most discussions of the history of transplantation begin with John Brinkley, one of the best known quacks of our century. Brinkley claimed to be able to restore lost virility by transplanting goat testes into his male patients.¹ The success of the technique² was purportedly demonstrated by the subsequent pregnancy of the spouse, but most investigators believe that another aspect of the "treatment"—the requirement that the patient and his wife reside temporarily close by the doctor—was responsible for the apparent result.

About the same time in Europe, Dr. Serge Voronoff was providing his similarly situated patients with the well known monkey glands—again testes, but this time from apes. Voronoff did not limit himself to old men, however, and claimed successful transplantation of the glands to other needy animals as well.³

1. Walford, *A Matter of Life and Death*, THE ATLANTIC MONTHLY, Aug. 1967, at 66.

2. This is referred to as a heterograft or heterotransplantation, i.e., between different species. Autograft refers to a graft in which the donor is also the recipient. Isograft is a graft between individuals with identical antigens (as in identical twins). Homograft refers to grafts between genetically dissimilar members of the same species, i.e., unrelated humans.

3. Walford, *supra* note 1, at 66.

The works of these two gentlemen were marked by the skepticism of the orthodox medical world of their time and especially by self-generated ballyhoo and publicity which is universally frowned on in medical circles. It should be noted that the widespread coverage by the communications media of the very recent transplants has been of concern to some medical groups because such coverage varies from the accepted procedure of technical reporting first to a peer group and because of the appearance of the surgeon celebrity.⁴ Nevertheless, it should also be noted that the greater public awareness has had a beneficial result on donor availability.

Autografts. At the same time Brinkley and Voronoff were performing their "rejuvenations," more serious work was being done by Dr. Alexis Carrel and Dr. Charles Guthrie; their work is responsible in part for the status of transplantation today.⁵ In a brilliant series of experiments covering several years and culminating in a Nobel Prize, Carrel and Guthrie first demonstrated functional success in a kidney transplant from one dog to another.⁶ The kidney functioned, but the donee dog died after nine days. Later transplants produced successes in which the animals survived for several weeks. But the big breakthrough came when it was discovered that kidneys could be replanted in the same animal and that the animal did not then die.⁷ The success of the autotransplants and the failure of the homotransplants could not be explained by differences in surgical technique or infection but was thought to be some sort of biological phenomenon.⁸ Though this problem, rejection of foreign tissue, is better understood today, its solution is not yet complete.

Autografts have progressed extensively and replantations of accidentally severed arms have been accomplished.⁹ Freed from the rejection phenomenon, autotransplants seem limited

4. Elkinton, *When Do We Let the Patients Die?*, 68 ANNALS OF INTERNAL MEDICINE 695 (1968).

5. Wasmuth & Stewart, *Medical and Legal Aspects of Human Organ Transplantation*, 14 CLEV.-MAR. L. REV. 442, 443 (1965).

6. Maisel, *The Miracle of Surgical Transplants*, READER'S DIGEST, Mar. 1968, at 67.

7. Carrel, *The Ultimate Result of a Double Nephrectomy and Replantation of One Kidney*, 14 J. OF EXPERIMENTAL MEDICINE 124 (1911).

8. Maisel, *supra* note 6, at 67.

9. Kiser & Kolff, *When Is Transplantation of Organs Feasible or Practical?*, DISEASE-A-MONTH, Sept. 1967, at 5; Walford, *supra* note 1, at 66.

only by surgical skill and the length of time the organ can be deprived of bodily support. It has even been suggested that a kidney, requiring surgical repair, could be removed from the patient, repaired "at the table side," and then replaced as an autotransplant.¹⁰

Isografts. A major step forward in human organ transplantation was made in 1954 when a surgical team at Boston's Peter Bent Brigham Hospital transplanted the healthy kidney of one brother to replace the diseased kidney of his identical twin.¹¹ Isografts were shown to avoid the rejection phenomenon just as had autografts. Many more isografts have been completed since that first one and a very high degree of success has been obtained.¹² This success is very limited, of course, for two obvious reasons. Twin donors are quite rare, and also the donor must have two of the needed organs and be able to survive with only one. Thus the need is clear for a method permitting the use of organs from unrelated recently deceased humans.

Homografts. After Carrel's successful autografts, he and many other investigators directed their attention toward solution of the rejection problem. Another Nobel prizewinner, Peter Medowar, associated rejection with the body's immunity reaction to disease and infection.¹³ This was demonstrated in a series of experiments by the so called "second-set phenomenon."¹⁴ Rejection occurred much more quickly when a donee rabbit received a second graft from the same donor rabbit, similar to the body's building an immunity after exposure to a disease.

Other experiments with mice showed that the tendency to reject was increased as the genetic difference between donor and donee increased.¹⁵

Several approaches have been taken in order to overcome the body's tendency to reject foreign, though life-giving, grafts or transplants. An early attempt was the use of

10. Kiser & Kolff, *supra* note 9, at 6.

11. *Id.*; Wasmuth & Stewart, *supra* note 5, at 443; Maisel, *supra* note 6, at 68.

12. Kiser & Kolff, *supra* note 9, at 6.

13. *Id.* at 7; Walford, *supra* note 1, at 67; Medowar, *Behavior and Fate of Skin Autografts and Skin Homografts in Rabbits*, 78 J. ANATOMY 176 (1944).

14. Walford, *supra* note 1, at 67.

15. *Id.*

radiation therapy, which was known to reduce the body's defenses. The result was too much of a good thing because the proper dosage was nearly lethal itself.¹⁶

Other approaches have been more successful. Certain drugs, such as azathioprine, have a suppressive effect on immunorejection.¹⁷ The technique of suppression by drugs has been employed in many kidney transplants and in the recent heart transplants with some degree of success. Much effort continues in the area of improving the drugs because they have the same drawback as the radiation technique did. The body's ability to fight off infection is seriously reduced at a time when the body is in a weakened condition. Again the cure can become as dangerous as the malady.

A third approach requires "typing" of tissues of the donor and donee, much as blood must be type-matched before transfusions; this "typing" is, however, much more complicated.¹⁸ The drawback to this approach is that the process of typing is difficult and time consuming, and time is usually critical. Also it is rare, at this point in time, that there is much choice available as to donor and donee, regardless of their histo-compatibility. But at least, the severity of the immunosuppressant treatment may be reduced when there is genetic similarity between donor and donee.

Heterografts. The final category of grafts and transplantation has had the least degree of success but may bear the greatest promise for the future. Transplants between animals of different species have resulted in severe immunological reaction and rejection. In 1964 the heart of a chimpanzee was given to a dying man at the University of Mississippi Medical Center,¹⁹ who died shortly thereafter. This type transplant is no longer considered bizarre. Dr. George Hufnagel of Georgetown University Medical School has suggested transplantation to humans of unborn calf hearts.²⁰ Dr. Christian Barnard, on the other hand, feels pig hearts would be preferable.²¹ In Great Britain, a defective heart valve has been replaced with the valve of a pig's heart,²² and in Tel

16. Kiser & Kolff, *supra* note 9, at 8.

17. *Id.*

18. Walford, *supra* note 1, at 67-68.

19. NEWSWEEK, Dec. 18, 1967, at 89.

20. SCIENCE NEWS, Jan. 27, 1968, at 91.

21. *Id.*

22. U.S. NEWS & WORLD REPORT, Jan. 22, 1968, at 58.

Aviv, a calf's heart valve has been used.²³ Attempts have been made to transplant baboon and chimpanzee kidneys to humans.²⁴ Surprisingly, a nine month survival of a chimpanzee-man kidney heterotransplant has been reported.²⁵ All this may be quite significant, since complete success in this area could solve all legal and logistic problems, leaving, perhaps, only some moral and prejudicial reluctance.

Current Status. In a field as rapidly moving as this one, any report of current achievements has only short-lived accuracy. A few years ago, skin, bone and blood might have been thought to be the outer limit of correcting one body's defects with matter from another. Today there have been reported,²⁶ in varying degrees of success, transplants of the stomach, small intestines, thyroid and parathyroid glands, lung, limbs, liver, pancreas, duodenum, kidney and finally the heart. At the time of this writing there have been more than two dozen heart transplants and many of the recipients are leading nearly normal lives. One may well wonder whether there remains anything further that can be accomplished, beyond perfecting the techniques for what has already been done. The answer is "yes"—the ultimate transplant.

Professor Robert White, director of the Department of Neurosurgery at Cleveland Metropolitan General Hospital, has stated that, while it would not now be possible to replace a brain within a skull, it is entirely possible to transplant an entire head.²⁷ This and other more difficult operations have already been performed on animals under circumstances more complicated than they would be with humans. Professor White feels that the first head transplant will be accomplished in Japan, apparently because the moral problem will not be a barrier there.²⁸

While there may be moral barriers halting progress to the "ultimate transplants," there are presently difficult legal barriers hampering the usefulness of the proven techniques. It has been estimated by the Special Committee on the Uniform Anatomical Gift Act that up to 100,000 lives per year

23. *Id.*; SCIENCE NEWS, Jan. 27, 1968, at 91.

24. Kiser & Kolff, *supra* note 9, at 7.

25. *Id.*

26. *Id.* at 4.

27. Fallacy, *The Dead Body and the Living Brain*, LOOK, Nov. 28, 1967, at 106.

28. *Id.* at 108.

could be saved through kidney transplantation alone. To that figure can be added several hundred thousands more who could be saved by other organs. But the Committee states that "[t]he most formidable obstacle . . . is the legal situation."²⁹

Logistics and Timing. An available supply of fresh organs is the goal. Organ transplants are now usually made only as a last resort and at a time when it appears that death is otherwise certain. There is little selectivity as to the time the operation should be performed. At the present time, eye corneas are the only tissue which can be preserved for any length of time. Thus for the successful heart transplant to take place, there must be an available donor at the same time the donee's condition becomes critical.

With kidney patients, some leeway is provided by the use of the artificial kidney machine by the donee and by the fact that the kidney may be successfully transplanted up to one hour after its removal.³⁰ Of course, the timing and logistic problems are further reduced if a live donor is willing to make a kidney available when required.

With a heart patient, the problems are considerably more difficult. First, the patient cannot be maintained on the heart-lung machine more than five to six hours.³¹ The heart must be removed from the donor within 30 minutes³² to prevent its deterioration. And lastly, and perhaps most significantly, the donor must die at the right time. If the donor dies before the donee can be prepared, the heart may deteriorate beyond usefulness; if the donor lingers, he may outlive the donee.³³

B. Other Life-Prolonging Advances

Without going into any detail, a word should be said about other techniques which generate legal issues to be developed

29. UNIFORM ANATOMICAL GIFT ACT, Prefatory Note at 3 (Tent. Draft No. 2, 1968).

30. Wasmuth & Stewart, *supra* note 5, at 445.

31. Lear, *A Realistic Look at Heart Transplants*, SATURDAY REVIEW, Feb. 3, 1968, at 58.

32. TIME, Dec. 15, 1967, at 64; BUSINESS WEEK, Dec. 2, 1967, at 100.

33. In Los Angeles a number of hospitals have combined in an effort to set up the first organ "pool." All the required information on patients and consenting donors is computerized and matched. When a prospective donor dies, the organ or organs are removed and rushed to the selected donee or donees. U.S. NEWS & WORLD REPORT, Jan. 22, 1968, at 58.

subsequently. Mention has already been made of the artificial kidney machine and the heart-lung machine. Other elaborate mechanical devices exist which can be substituted for the body's defective organs, thus delaying death. Perhaps no one today would lift an eyebrow to know that an artificial kidney or an artificial heart could provide continued life for a patient. But the fact is that in some cases the use of *all* the machines may be required to sustain life. "Life" may be preserved in this manner after the "death" of the brain. This technique may also be employed to delay the death of a potential organ donor as a partial solution to the logistic problem. The issues surround the continued "life" of what is referred to as a "human vegetable."

Another bizarre technique is now being employed to cheat death. The science of cryogenics (supercooling), so useful in the physical sciences, has been used to preserve recently deceased victims of disease with the hope that, upon the discovery of a cure for the disease, the subject can be resuscitated and cured.³⁴

With this background, we may turn to the issues, some of which may be new, others of which may be just becoming apparent.

III. THE LEGAL, MORAL AND ETHICAL ISSUES

The legal issues brought to light by recent medical advances may be divided into three categories. First are the issues which have arisen as a direct result of, and bearing directly upon, the ability to perform the new procedures. Second are issues which were already lurking in the background, but which were brought to the public's attention only by recent publicity. The third category of legal issues may be entirely independent of the new techniques; the desirability of consistency in the law may require updating legal concepts to conform with the increase in scientific and medical knowledge.

The moral and ethical considerations surrounding the area of forestalling death are properly beyond the scope of this paper. But it is at least well to know that they exist. The law can only deal with specific facts after an irrevocable decision has been made. Yet the factors influencing that

34. Wainwright, *The Cold Way to New Life*, LIFE, Jan. 27, 1967, at 16.

decision will not only be the state of the law, but also the moral and ethical codes by which the attending physician may be bound.

In the final analysis, society, by a process of pragmatic political accommodation, will assign its own priorities. And in doing so it will have to make up its mind collectively as to what extent, and at what cost, one segment of society is to have life prolonged by borrowing organs from the rest of society.³⁵

A. *The Legal Issues*

"Death." As has been mentioned, three categories of legal issues may be envisioned; this particular one may overlap all three categories. In the case of vital organ transplants when the donor has but a single such organ, the donor's death is a condition precedent to the organ's removal. In addition, we may well inquire whether the medical practice need standardize the concept of death or whether a dual standard may be employed when the dying patient is not a perspective donor. And lastly, should areas of the law entirely independent of medical practice be reexamined and made consistent with a new concept of death. An example would be the definition of death in the simultaneous death cases.

The lawyer, usually in court long after death has occurred, thinks of this topic as "a matter of proof."³⁶ He rarely thinks, or needs to think, of the *fact* sought to be proved. The doctor, on the other hand, usually is interested only in the presence or the absence of certain vital signs of life. Of course there may be errors in the detection of the signs, and South Carolinians will recall the recent instance of a local soldier pronounced dead in Vietnam only to be found alive by the mortician and subsequently saved.

It is not error in application of the test which is now of concern; rather, the questions are: Were the correct tests used, and what facts did the tests show? Or stated in another fashion, what is death, and what tests may validly be used to determine the existence of that state?

35. Elkinton, *supra* note 4, at 699.

36. As to proof of death and a listing of the signs indicating death see 4 AM. JUR. PROOF OF FACTS *Death* §§ 4-6 (1960).

Traditionally, the cessation of heartbeat and respiration have indicated that life no longer remains within the body.³⁷ Legally, unless contradicted, proof that a physician certified the lack of heartbeat and breathing suffices. This provides the foundation for the statement of lawyer-doctor Carl E. Wasmuth that "[a] patient is legally dead when the doctor says he is dead."³⁸

We now know, of course, that these tests are no longer completely valid. A sizeable number of patients are walking around today who have suffered cardiac arrests only to have their hearts restarted through external chest massage or direct heart massage. Other patients continue to live only because their hearts receive artificial stimulation impulses from electric pacemakers.³⁹ Thus the fact of heart stoppage cannot be equated with death.

Similarly, cessation of respiration and lack of capacity to continue breathing cannot indicate death, as evidenced by patients supported by mechanical respirators or "iron lungs." Nor is there any reason to suggest that the simultaneous stoppage of heart beat and respiration indicate death when, in fact, they are restarted by surgical or mechanical techniques.

Advanced opinion today is that "death" should be equated with brain death. When the brain is irrevocably and irreversibly damaged so that "chances of recovery of consciousness have been totally eliminated, brain death has occurred."⁴⁰ But this "answer" raises two more questions. What tests can be trusted to indicate the elimination of the possibility of recovery of consciousness? And what should be done with patients whose brain is dead but whose body continues to live? The latter question is of vital interest to physicians who face the decision of whether to "turn off the machines."⁴¹ "Is this an act of mercy or an act of murder?"⁴²

37. Elkinton, *supra* note 4, at 697; 4 AM. JUR. PROOF OF FACTS *Death* § 4 (1960).

38. BUSINESS WEEK, Dec. 2, 1967, at 102; NEWSWEEK, Dec. 18, 1967, at 87.

39. Elkinton, *supra* note 4, at 696.

40. Wasmuth & Stewart, *supra* note 5, at 466.

41. It is doubtful, under existing law, whether the consent of the next-of-kin matters. Recently, a 13-year-old boy suffered brain death when he was buried in sand for a half hour. His body was kept alive mechanically, however, at a cost of \$200 per day to his family and over their impassioned plea that "[i]t would be so much better if he were allowed to die." The State, Apr. 26, 1968, at 1A, col. 1.

42. Elkinton, *supra* note 4, at 696.

Among the tests for brain death, perhaps the most important employs the electroencephalograph which records the brain's activity in what is known as "brainwave tracings" or "EEG tracings." When brain activity ceases, the tracings are "flat," the ripples becoming straight lines. The difficulty, even with this more sophisticated technique is the lack of medical agreement on how long the waves must remain flat. One authority would require a 4 hour minimum with 24 hours under certain conditions and "in the case of young children, several days."⁴³ Neurologist Dr. Robert S. Schwab would require 24 hours of flat EEG waves and, in addition, no muscular or pupillary reflexes and no heartbeat or respiration other than machine induced.⁴⁴ The French National Academy of Medicine would require an EEG indication of no brain activity for 48 hours.⁴⁵

One further complicating factor bears mentioning before proceeding to the issue as it affects organ transplant teams, donors and their physicians. Assume a patient who has heartbeat, respiration and brain activity. Assume further that the patient's breathing and heartbeat cease and that his heart cannot be restarted. It can be shown by means of EEG tracings that his brain *continues to live* for about three minutes⁴⁶ before it too dies.

In contemplating these considerations, one is constrained to conclude that various vital organs of the body may and do cease to function at different times; that, following cessation, some or all of the organs may be restarted or replaced; that death does not necessarily result even when some organs are irrevocably nonfunctional; that, as between the heart and the brain, the brain is the better indicator of the existence or non-existence of "the person."⁴⁷

A change to a brain-death concept could be extremely beneficial in the vital organ transplant area. If the test for death were flat brainwave tracings for four hours, this determination could be made simultaneous with recipient prepa-

43. *Id.* at 697.

44. *TIME*, May 27, 1966, at 78.

45. *Id.*

46. Fallacy, *supra* note 27, *passim*.

47. "The Rev. Thomas O'Donnell, S.J., former lecturer in medical ethics at the Georgetown University School of Medicine, regards the heart as an 'efficient pump' with no moral significance whatsoever" *NEWSWEEK*, Dec. 18, 1967, at 87.

ration and tissue typing, while the donor's organs are maintained viable through the use of the required artificial support machines. "Thus a patient's heart could be removed while it was still beating."⁴⁸ Those who have difficulty accepting the thought of removing a "live," beating heart should be reminded that *some* test is necessary and that there is far less chance of foreclosing possible recovery by the use of the brain wave test than by permitting the removal of a heart the instant it ceases beating, as apparently the law would now permit.

It is submitted, therefore, that the interests of doctor, potential donor and donee, as well as those of society would be furthered by adopting the more realistic concept of brain death and that when the equipment is available and when the instant and certainty of death are critical, flat brain wave tracings for at least four hours should be the test. It should be noted that the second tentative draft of the proposed Uniform Anatomical Gift Act, to be discussed subsequently, while attempting to remove legal barriers, fails to deal with this subject. It would, however, certainly seem to be a suitable subject for legislation and particularly uniform legislation.

Adopting a new concept of death, beyond refining the technical aspects of murder on the operating table, may affect other areas of the law. One which comes to mind is the area of simultaneous death.

A most interesting simultaneous death case is unreported except by Arthur Garfield Hays in the autobiography of his legal career, *City Lawyer*. Indeed, the very issue was whether "heart death" or "brain death" would be controlling. Though there was conflicting evidence as to the order of events, the referee's ruling apparently embodied the rule that a decapitated victim would continue to live until the cessation of his heart beat. During the trial, examples of guillotinees whose hearts continued beating for over an hour were given.⁴⁹ According to the standard proposed herein, the time of death of one whose head is severed from his body is about three minutes after the flow of blood to the brain ceases. Perhaps it could be argued that the instant the head is severed, the damage is irrevocably done and that that should be the in-

48. *Id.* at 90.

49. A. HAYS, *CITY LAWYER* 451 (1942).

stant of death. In reply, one could argue that from the instant an infant's eyes behold the light of day he is irrevocably doomed and that the concept of life necessarily assumes its transitoriness and that it continues from the moment brain waves begin until they cease, regardless of events that may hasten their cessation.

One might also argue that increased highly technical scientific understanding of biology ought not affect the devolution of property at all. And that might be true. Indeed, property law has precedent for declaring its independence of science, and lawyers will quickly recall the example of the "fertile octogenarian." Nevertheless, it is the law which fixes itself onto the decisiveness of the instant of death, and science is merely providing the proper fact for the application of the rule.

This principle was adopted by a recent California simultaneous death case, *In re Estate of Rowley*,⁵⁰ in which the court said that "[t]his case involves a mixed question of medical science and the rules governing the application of physical force."⁵¹ The court, however, sustained perhaps the most unscientific lower court finding of survivorship imaginable. The two victims had been instantly killed in a high speed automobile accident in which there was evidence that the impact was away from the driver's side. The coroner, a medical doctor, had testified:

Mrs. Rowley did die first, by about one hundred and fifty thousandth of a second I took the highway patrolman's report of the speed of the Cadillac [elsewhere the court noted, "Because of the delicate nature of the (speedometer) . . . and the great shock to it, the needle could stop at any point.]"⁵² and the speed of the Falcon coming together, and made a rough guess at how much longer time it took the Falcon to push Mrs. Rowley over and kill [*sic*] Cooper. That would be a rough mathematical guess.⁵³

Finding it to be "within the exclusive province of the trier of fact to determine the credibility of experts," the court

50. 65 Cal. Rptr. 139 (1967).

51. *Id.* at 150.

52. *Id.* at 141, n.2, *citing* *Eramd v. Interstate Bakery Corp.*, 153 Cal. App. 2d 590, 601, 351 P2d 19, 25 (1957).

53. *Id.* at 143.

affirmed the survivorship of Miss Cooper. Perhaps in abusing scientific principles, the court reached the more desirable property law and social result by sustaining the moderate legacy to the estate of Miss Cooper, companion to the wealthy testatrix.

The Uniform Simultaneous Death Act⁵⁴ was enacted to provide a rule of distribution when no sufficient evidence is available that one party survived the other and the distribution would otherwise depend on survivorship. As the court in *Rowley* quoted, its enactment was

to supplant the former arbitrary and complicated presumptions of survivorship with effective, workable, and equitable rules applicable to the ever-increasing number of cases where two or more persons have died under such circumstances that there is no sufficient evidence to indicate that they have died otherwise than simultaneously.⁵⁵

The concept of death is difficult as we have seen, and its timing may be even more difficult. The attempt of the law to remove the necessity of strained findings by providing workable distribution rules has not been altogether successful, as illustrated by the *Rowley* case. It is with some misgivings, therefore, that a scientific updating of the concept of death is suggested when we observe courts grasping at 150,000th's of a second "scientific" straws.

Who Shall Live? The Survival of the "Sickest."

*Science finds out ingenious ways to kill
Strong men, and keep alive the weak and ill—
That these a sickly progeny may breed,
Too poor to tax, too numerous to feed.*⁵⁶

These words were written shortly after World War I to illustrate war's effect on humanity. Dr. René Dubos uses them to illustrate the position held by some that "as medical science becomes more effective in prolonging survival, there will be an increase in the frequency of detrimental genes allowed to accumulate in our communities."⁵⁷ This would

54. S.C. CODE ANN. §§ 19-301 to -308 (1962).

55. *In Re Rowley*, 65 Cal. Rptr. 139, 144 (1967), citing *Azvedo v. Benevolent Society*, 125 Cal. App. 2d Supp. 894, 901, 270 P.2d 948, 952 (1954).

56. R. DUBOS, *THE DREAMS OF REASON* 80 (1961).

57. *Id.* at 79.

oppose the genetic upgrading afforded by the naturally occurring rule of "survival of the fittest." Before it can be inferred that there is any suggestion of Nazi-like theories of upgrading the race, let it hastily be added that Dr. Dubos only raised the question of the balance of medical emphasis—"to increase the ability of the individual and of the social body to meet the stresses and strains of adversity" or to take the more negative approach of merely avoiding existing threats and dangers.⁵⁸ It is Dr. Dubos' theory that "society . . . must decide on the types of threats it is most anxious to avoid and the kind of health it wants . . ., whether it is willing to jeopardize the future for the sake of present-day comfort," and that the knowledge necessary for the choice is not available.⁵⁹

The question is whether society should be able to ask the questions and seek the knowledge. When Dr. Christian Barnard was asked whether he thought there was a public interest in transplant ethics and whether a commission should at least study the ethics question, he emphatically replied, "No! no! no! Such a commission would be an insult to your doctors. Only doctors have the experience to make such decisions, and they have been making them for very many years."⁶⁰

Dr. Barnard further suggests that the rule to be utilized by the doctors is to "[o]perate on the patient who needs it most,"⁶¹ the one "who is the sickest patient."⁶² Thus a compounding factor is added to the negative approach questioned by Dr. Dubos; not only is the emphasis on prolonging the life of the sick, but the sickest. One might well question both the substance of the rule as well as the assertion that doctors and not society have the right to influence the choice.

First, most statutes providing for organ donation, including the Uniform Anatomical Gift Act⁶³ and South Carolina's Gifts of the Human Anatomy Act,⁶⁴ permit the donor to specify the donee or the specific use to be made of the organ. Of course, organ donors may not frequently be in a position

58. *Id.* at 86.

59. *Id.*

60. SCIENCE NEWS, Mar. 23, 1968, at 282.

61. The State, Mar. 9, 1968, at 2A, col. 2.

62. *Id.*

63. UNIFORM ANATOMICAL GIFT ACT § 3(4) (Tent. Draft No. 2, 1968).

64. S.C. CODE ANN. § 9-521 (Supp. 1967).

to name the intended recipient. They will, more often, name a physician or institution. But suppose neither of these has the effect of leaving the decision to the chief of the surgical team or "the captain of the ship," as Dr. Barnard calls himself. So it may very well be that the organ will carry with it a decision precluding the surgeon's choice.

But, assuming that the choice is the chief surgeon's, is the degree of sickness the exclusive proper criterion? A National Institute of Health official asked: "Should . . . patients come to the brink of death in a gruesome competition to see who can get sickest without dying?"⁶⁵ Consider competition between a 95 year old patient who has already been given two new hearts and who is, nevertheless, sicker than a 35 year old surgeon with a wife and children, and a very bad heart. One might question whether the patient "who needs it most" and the patient "who is sickest" are even the same. In any case, there is no question which person society needs most. Suppose, even with the new organ, the "sickest" patient could only be expected to live 6 months, whereas the competitor could be expected to live 20 years. Is it so clear that a proper choice should yield the result that after 6 months all parties are dead?

Of course, many hypotheticals could be posed and were posed to Dr. Barnard. To all these he adamantly gave the same reply. Fortunately, all chief surgeons do not agree with Dr. Barnard. Dr. Adrian Kantrowitz feels that congressional study of this issue is "entirely appropriate."⁶⁶ Also disagreeing is the Board on Medicine of the National Academy of Sciences, who would put the selection in the hands of "expert, mature physicians," who are unconnected with and independent of the transplant team.⁶⁷

Doctors Kiser and Kolff feel that the most equitable method of selection of kidney transplant recipients, after determining that the condition is irreversibly terminal and that no other diseases would prevent success, is what might be termed "first come—first 'saved.'"⁶⁸ Others prefer that "the patient should be less than 50 years of age, intelligent

65. SCIENCE NEWS, Mar. 23, 1968, at 263.

66. *Id.* at 262.

67. SCIENCE NEWS, Mar. 9, 1968 at 233; SATURDAY REVIEW, Apr. 6, 1968, at 59.

68. Kiser & Kolff, *supra* note 9, at 11.

and potentially capable of living a productive life.”⁶⁹ Some allow a committee of physicians to make an anonymous but recorded decision; others add lay community leaders to the committee in order to balance the decision in favor of societal goals.

It is submitted that, given the fact that only terminal patients are competitors for the life-giving organs, the only basis for a medical choice is already foreclosed. The decision beyond that should reflect the interests of society. Perhaps several factors, such as donor preference, first in time, potential of a productive life, should all be considered. In any event, “society, by a process of pragmatic political accommodation, will assign its own priorities.”⁷⁰

Gifts of the Human Anatomy—Rights and Liabilities. For the foreseeable future, at least, the source of organs for transplanting will be humans—either living or dead. Before medical authorities permit removal from either, of course, they must make certain the removal is authorized and that no liability will flow therefrom. Kidneys and other paired organs may be supplied from live donors, and this fact not only reduces medical but also legal barriers. The medical barriers are reduced in the case of kidneys because the donated kidney is available at any time and because the donee can be sustained on the kidney machine while medical preparation and typing are accomplished. During this time period, consent of all the parties may be secured. In the case of the first successful kidney transplant in 1954, the donor and the donee were minors and the sanction of the court was obtained by means of a declaratory judgment.⁷¹

But with the advent of the single organ transplants, both medical and legal problems become more complex. The time available for the required medical preparation and verification of consent is much more limited. The legal problem, liability for acts done to dead bodies, is a particularly confusing one. The reason for the confusion can be traced to our English heritage.

Early in the history of England’s complicated court system, the law concerning the dead gradually became the sole con-

69. *Id.* at 10.

70. Elkinton, *supra* note 4, at 699.

71. Wasmuth & Stewart, *supra* note 5, at 446.

cern of the ecclesiastical courts. The common law courts dealt only with persons and property; neither category included a corpse. As to the latter point, it has been asserted that Lord Coke, in pronouncing the rule of the common law that a corpse is the property of no one,⁷² mistook an earlier English case, *Haynes' Case*.⁷³ Instead of holding that a body cannot be property, "[t]he holding was really that there was no capacity in the body to take a gift and to have property . . ."⁷⁴ Regardless of how the rule became incorporated into the common law, it remained firmly entrenched well past the time the common law was received in this country.

The courts of this country, having inherited no common starting point, began to develop theories of recovery; but, as might be expected, varied theories resulted, creating confusion. The theories providing for relief for disturbance of dead bodies can be categorized into three basic approaches—property, quasi-property, and emotional tort.

The property approach was usually limited to situations after burial and provided recovery only for disturbance of the burial accouterments and of the land itself. The body was still held to be the property of no one both in this country and in England,⁷⁵ and this is still the law.

Struggling with traditional concepts, other courts found that while there was no property in the ordinary sense; nevertheless, the survivors had certain rights with respect to dead bodies. Given the notion that torts may be committed only upon persons or property, these courts chose to characterize the rights of the survivors as quasi-property rights.⁷⁶

Finally, other jurisdictions, facing up to what was more nearly the reality of the situation, conceived the notion of an independent tort, "affording a remedy for injury to the feelings occasioned by interference with dead bodies and their proper interment."⁷⁷

South Carolina cases, though not numerous, do present an interesting array of situations and theories. In an 1884 case,

72. 3 COKE INST. 203.

73. 12 COKE 113, 77 Eng. Rep. 1389 (c. 1612).

74. P. JACKSON, *THE LAW OF CADAVERS* 127 (2d ed. 1950).

75. *Id.* at 126-7.

76. *Id.* at 133.

77. *Id.* at 143.

*Griffith v. Charlotte, Columbia & Augusta Railroad*⁷⁸ a murder victim had been placed on the defendant's tracks to make the death appear accidental. The action for mutilation had been brought by the administrator of the estate of the deceased, but the court held that the action was without either common law or statutory basis and denied recovery. In discussing whether there could be property in a dead body, the court said that

wherever civilization at least has dawned, or has commenced to throw even a flickering light upon the people, reverence for the dead has become a universal and most sacred sentiment, one which would revolt at the idea of their remains becoming property . . .⁷⁹

As to the quasi-property theory, the court said:

But can there not be a qualified property in the dead? . . . Can it be that there is no legal guardianship of the dead? And that when life escapes the body is left . . . without protection, . . . and that those to whom it was bound in life . . . can invoke the aid of no court in preventing its mutilation? . . . [S]uch seems to be the fact, at least so far as our limited examination of the cases, both in this country and in England, . . . has enabled us to ascertain.⁸⁰

A later case, *Osteen v. Southern Railway*⁸¹ concerned the extortion of an illegal fare for the transportation of the dead body. Though the defendant's wrongdoing was concerned solely with causing the burial party mental anguish in their time of grief, even out of the presence of the body, the court found it necessary to state:

This court will not commit itself to such a barbarous and savage doctrine as to hold that when a person dies no one has such a property interest in the body as to see the body is decently interred, and resting place uninterfered with, and a relative or friend has a right to see that the body is protected, and these feelings in relation thereto protected.⁸²

78. 23 S.C. 25 (1884).

79. *Id.* at 40.

80. *Id.*

81. 101 S.C. 532, 86 S.E. 30 (1915).

82. *Id.* at 541, 86 S.E. at 31.

The last word on the subject was spoken in *Simpkins v. Lumbermen's Mutual Casualty Co.*⁸³ But it does no more to clarify the situation than the two previous cases. In *Simpkins* the widow sought recovery for damaged feelings because of an autopsy conducted over her objection. Though the case is cited⁸⁴ for the proposition that "the corpse is 'quasi-property over which the relatives of the deceased have some right,'" this is dictum at best because elsewhere the *Simpkins* court in finding for the defendant continues:

Our concern in the question here raised is *not* as to *quasi*-property right in the dead body. This is *not* an action for the willful and negligent mutilation of a corpse. The gravamen of the complaint is the alleged lack of regard for the plaintiff's feelings, her humiliation, and embarrassment, and the alleged trespass on and against *her rights* in having an autopsy made upon the body of her dead husband over her objection.⁸⁵

The court held that since the complaint was cast in terms of "alleged trespass on and against her rights" she was "the proper person to maintain the action if she [had] a cause of action."⁸⁶ It was held that she did not. Thus the *Simpkins* court's characterization of the "no property in dead bodies" rule of *Griffith* as dictum could be called by the same name.

So what is the state of the law in this state? The answer is probably "confused." The only case granting relief was *Osteen*, and as the *Simpkins* court said:

That action involved the question of whether or not the plaintiff could maintain an action for injury to his rights and feelings as a passenger brought about by a threat to breach the contract in making an unlawful and unjust demand for fare that had already been paid. This did not involve the question as to who is a proper party to bring an action for mutilation to a corpse.⁸⁷

It can be said, then, that the court has never held who is a proper party to bring action for wrongful mutilation of

83. 200 S.C. 228, 20 S.E.2d 733 (1942).

84. Karesh, *Wills and Trust, Survey of S.C. Law*, 9 S.C.L. REV. 160, 181 (1956).

85. 200 S.C. 228, 237, 20 S.E.2d 733, 737 (1942) (emphasis added).

86. *Id.* at 237, 20 S.E.2d at 737.

87. *Id.* at 233, 20 S.E.2d at 735-36.

a dead body, but only who is not. And though it has never reversed *Griffith*, by way of dictum, it was limited to its holding.

The point of this review of the status of property rights in dead bodies is that, in its application to the rights and liabilities arising from single vital organ donation, it is a two-edged scalpel. It may cut off the rights of wronged surviving relatives or it may cut off the ability of the donor to acquiesce in the use of his body after death.

The second half of the problem assumes that the plaintiff could properly bring an action for wrongful mutilation of the body of the deceased. What can the willing donor do to give parts of his anatomy to medical research or to a prospective donee? What can the doctor do to avoid possible liability while carrying out the wishes of the deceased? In other words, can a prospective donor bequeath parts of his anatomy irrespective of the wishes of his surviving spouse or next-of-kin? Would the court, by the same reasoning it used to deny that any property in a body passes to the administrator, likewise deny that there is any property to pass by means of a will? This question was raised by Professor Karesh commenting upon the passage in 1956 of an Act for Donating Eyes for Restoration of Sight.⁸⁸ "Whether the negation of a corpse as property would likewise entail the discountenancing of a testamentary disposition is problematic."⁸⁹ In the case of cornea donations, Professor Karesh concludes that the statutory authorization of dispositions by will would be conclusive of the matter. As to other parts of the body the eye donation statute may, by negative inference, imply that without such statutory authorization bequests will be ineffective. On the other hand, as Professor Karesh points out, the court in *Simpkins* had said: "It is generally conceded by text writers on the subject that the surviving spouse has a primary right to the possession of the body and to control the burial thereof, *unless the decedent has by will or otherwise made a different disposition.*"⁹⁰ According to Professor Karesh: "No question arose under any will, and the italicized quoted words are *dicta*, but entitled to some weight."⁹¹ It is

88. S.C. CODE ANN. §§ 32-701 to -706 (1962).

89. Karesh, *Wills and Trusts, Survey of S.C. Law*, 9 S.C.L. REV. 160, 181 (1956).

90. *Simpkins v. Lumbermen's Mut. Cas. Co.*, 200 S.C. 228, 234, 20 S.E.2d 733, 736 (1942) (emphasis added).

91. Karesh, *supra* note 89, at 181 n.54.

doubtful whether the most Samaritan-like surgeon would care to risk a mutilation law suit on dicta which Professor Karesh says in a footnote are entitled to "some weight." Indeed, it has been said there are only a few jurisdictions which do, in fact, permit testamentary dispositions of this sort, and in each case the right is statutory in origin.⁹²

How then should valid acquiescence be arranged? Of course the release⁹³ of the next-of-kin could be obtained, but this will usually be difficult because the donor is frequently the victim of an accident or other emergency and the next-of-kin may be unavailable. In securing Dr. Blaiberg's heart, Dr. Barnard is reported to have been able to secure only the mother's consent because his bride of three months "was distraught at the time."⁹⁴ Thus lack of availability of one or more of the next-of-kin and possible lack of capacity for informed consent may be difficult barriers in this country.

Perhaps the best approach to the problem would be a statutory authorization of testamentary type distributions. In 1963 South Carolina enacted a statute entitled Gifts of the Human Anatomy⁹⁵ which was designed to permit gifts primarily for research purposes but which, by its language, would permit gifts for any purpose specified by the donor, thereby including transplantation.

This act, as opposed to the cornea act, does not authorize the disposition by will but rather by a written, signed document executed before two competent witnesses.⁹⁶ The execution must be acknowledged before a person authorized to take acknowledgements,⁹⁷ and the document must be filed in the probate court in the county where the donor resides.⁹⁸ Revocation may be accomplished by a similarly executed and filed instrument,⁹⁹ and therein lies a basic difficulty with the act. Liability will lie if an organ is removed after a proper revocation.¹⁰⁰ Once again, the goal of speedy but reliable con-

92. Wasmuth & Stewart, *Medical and Legal Aspects of Human Organ Transplantation*, 14 CLEV.-MAR. L. REV. 442, 456 (1965).

93. For sample release forms see *id.* at 469-71.

94. Lear, *A Realistic Look at Heart Transplants*, SATURDAY REVIEW, Feb. 3, 1968, at 56.

95. S.C. CODE ANN. §§ 9-521 to -527 (Supp. 1967).

96. *Id.* § 9-522.

97. *Id.*

98. *Id.* § 9-523.

99. *Id.* § 9-524.

100. *Id.* § 9-526.

sent is not reached. The recently enacted Massachusetts statute is better in this regard and provides:

Whoever, in good faith and in reliance upon an instrument purporting to make a gift as provided in section seven, delivers the tissue, the organs or the whole body or any part of a donor to a donee, shall not be liable or accountable for having made such delivery.¹⁰¹

The proposed Uniform Anatomical Gift Act provides:

[I]f the gift is evidenced by a properly executed card or other writing carried on the donor's person or in his immediate effects, the attending physician at or following death may, in reliance upon the card or writing, accept and utilize the gift in his discretion as the agent of the donee. The agent possesses and may exercise all of the rights and is entitled to all of the immunities of the donee under this act.¹⁰²

Further discussion of the details of these and other acts is beyond the scope of this paper. However, some statutory authorization for reliable consensual disposition of vital organs is deemed essential for society to utilize the recent advances in transplantation surgery, and in today's highly mobile mode of living a uniform law would hopefully solve the complexities of situations such as the donee's death away from home.

B. Moral and Ethical Issues

It would indeed be presumptuous to delve into the substance of the moral and ethical consideration bearing on the recent medical developments. But the position is here taken, in opposition to that of Dr. Barnard, that the problems created are new and are the problems of everyone. And the fact that numerous organized groups have undertaken studies of the ethics is offered as evidence.

Somewhat typical was the recent Colloquium on Ethical Dilemmas from Medical Advances held by the American College of Physicians.¹⁰³ Admirably, the discussion group was

101. MASS. ANN. LAWS ch. 113, § 9 (Supp. 1968).

102. UNIFORM ANATOMICAL GIFT ACT § 4(c) (Tent. Draft No. 2, 1968).

103. Reported in 67 ANNALS OF INTERNAL MEDICINE Supp. 7, No. 3, part II (1967). Researchers in the field of medical ethics will find particularly helpful the bibliography at page 69-70 and the Oath of Hippocrates, The

composed of doctors, lawyers and philosophers among others. Commenting on the need for involvement outside medical circles, one speaker said:

The moral problems arising from biomedical progress are not the exclusive responsibility of biomedical scientists nor of members of the medical professions. They are the responsibility of all intelligent people and will require extensive social consideration before socially acceptable solutions to these problems may be agreed upon.¹⁰⁴

While there is more widespread acceptance of the need for public involvement than Dr. Barnard would have us believe, there is another side to the ethical coin. Should information be released to the news media while still possibly premature or should it be digested first? Traditionally the method was "quietly establishing facts through experimentation, reporting them in detail to a peer scientific society and *then* interpreting the results to the public."¹⁰⁵ Dr. Irvine H. Page, editor of *Modern Medicine*, then went on to say, "I am not prepared to accept the notion that the prime value judgments of medicine and its ethical standards should be left to public trial and judgment"¹⁰⁶ Dr. Barnard, as his frequent television appearances and news releases would indicate, again disagrees with the prevailing ethics. The consensus seems to be that the medical aspects of scientific advances should be discussed, digested, and accepted by physicians and then the agreed facts should be presented to the public for its consideration, use and involvement. Apparently, Dr. Barnard, on the other hand, would place all information instantly in the public's hands and then go no farther.

Some of this disagreement may stem from another ethical question. What is "therapy" and what is "experiment?" In-

Declaration of Geneva, the Nuremburg Code, the Declaration of Helsinki, the AMA Ethical Guidelines for Clinical Investigation, and Supervision of Experimental Subjects: Recommendations of the Royal College of Physicians all appended to the Colloquium. Reprints may be obtained from the Business Office, American College of Physicians, 4200 Pine St., Philadelphia, Pa.

104. Leake, *Technical Triumphs and Moral Muddles, Colloquium on Ethical Dilemmas from Medical Advances*, 67 ANNALS OF INTERNAL MEDICINE Supp. 7, No. 3, Part II, at 43, 49 (1967).

105. Page, *Instant Reporting—Is It Necessary?*, SATURDAY REVIEW, Feb. 3, 1968, at 59.

106. *Id.*

deed, Dr. Barnard might agree with reporting *experimental* results first to peer groups, for he considers heart transplants, beginning with the first, as *therapy*.¹⁰⁷ But again, the consensus is that it is *experimental*.¹⁰⁸ The Board of Medicine of the National Academy of Sciences has said that "the procedure cannot as yet be regarded as an accepted form of therapy, even a heroic one. It must be clearly viewed for what it is, a scientific exploration of the unknown"¹⁰⁹ The more important ethical, and perhaps legal, implications of this include the criteria for donee selection and obtaining his consent. He must consent, not to high-risk therapy, but to permitting the operation in the interests of scientific advancement. So while the therapy versus experiment question is considered a problem of medical ethics to the physicians, it could have a bearing on the legal issue of informed consent.

IV. CONCLUSIONS

Reflection upon the problem of how society may best take advantage of scientific advancements in vital organ transplantation yields ironic conclusions. The body, through its natural tendency of self-preservation, ironically fights off the foreign organ or tissue even though the use of the organ is the body's only chance for survival. Civilized society, on the other hand, insures its survival by a system of law, part of which is the largest barrier to full utilization of life-giving medical techniques.

At this moment there is a fully qualified competent surgical transplant team at the South Carolina Medical College.¹¹⁰ These miraculous technical achievements will soon be medically available at home rather than half way around the world. But first we need to get our legal house in order.

It is submitted that it is neither logical nor reasonable to deny each individual the choice of whether or not to donate part of his anatomy in order that another might live, and this right should prevail over the interests of his kinsmen. The Uniform Anatomical Gift Act provides a workable sys-

107. Lear, *supra* note 94, at 53.

108. *Id.*; SCIENCE NEWS, Mar. 9, 1968, at 233; SATURDAY REVIEW, Apr. 6, 1968, at 59.

109. SATURDAY REVIEW, Apr. 6, 1968, at 59.

110. However, transplant surgery will be undertaken only when a qualified back-up is available for each position.

tem under which this right is protected. In addition, of course, the concept of uniformity here, as elsewhere, is important in multistate situations. It is suggested, therefore, that South Carolina seriously consider its adoption at the earliest date.

The adoption of the concept of "brain death" will likewise facilitate vital organ transplantation. It is not only a more precise standard for determining at what point still useful organs may safely be taken, but it also provides the greatest protection for the patient-donor since it precludes any possibility that he might otherwise recover. In addition, this concept of death would sanction what physicians often do anyway—remove the mechanical supports after life has left the brain. It is submitted that to do otherwise would be to preserve what is now a useless fiction at tremendous cost both to the family and to other patients who perhaps could be benefitted by the machines.

Society, it is to be hoped, will take the necessary steps to remove the legal fetters from the transplant surgeons, but it may well not give the doctors the unbridled freedom to practice their art guided only by their own whim. The choices and problems in exercising this newly found skill concern the public, and the public will not be excluded from their consideration: "[A]fter all, they not only are the final arbiters of the moral standards in our society—they are the patients"¹¹¹—and the voters.

EMIL WALD

111. Elkinton, *When Do We Let the Patients Die?*, 68 ANNALS OF INTERNAL MEDICINE 695 (1968).