

# An "Opting In" Paradigm for Kidney Transplantation

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Almost 60,000 people in the United States with end stage renal disease are waiting for a kidney transplant. Because of the scarcity of organs from deceased donors live kidney donors have become a critical source of organs; in 2001, for the first time in recent decades, the number of live kidney donors exceeded the number of deceased donors. The paradigm used to justify putting live kidney donors at risk includes the low risk to the donor, the favorable risk-benefit ratio, the psychological benefits to the donor, altruism, and autonomy coupled with informed consent; because each of these arguments is flawed we need to lessen our dependence on live kidney donors and increase the number of organs retrieved from deceased donors.

An "opting in" paradigm would reward people who agree to donate their kidneys after they die with allocation preference should they need a kidney while they are alive. An "opting in" program should increase the number of kidneys available for transplantation and eliminate the morally troubling problem of "organ takers" who would accept a kidney if they needed one but have made no provision to be an organ donor themselves. People who "opt in" would preferentially get an organ should they need one at the minimal cost of donating their kidneys when they have no use for them; it is a form of organ insurance a rational person should find extremely attractive.

An "opting in" paradigm would simulate the reciprocal altruism observed in nature that sociobiologists believe enhances group survival. Although the allocation of organs based on factors other than need might be morally troubling, an "opting in" paradigm compares favorably with other methods of obtaining more organs and accepting the status quo of extreme organ scarcity. Although an "opting in" policy would be based on enlightened self-interest, by demonstrating the utilitarian value of mutual assistance, it would promote the attitude that self-interest sometimes requires the perception that we are all part of a common humanity.

## THE MOTIVATING FORCE OF SCARCITY

Life expectancy and quality of life are improved with kidney transplantation compared with maintenance dialysis (Port et al. 1993; Gatchalian and Leehey 2000); however, there is a severe shortage of kidneys for transplantation. In June 2004, 58,666 people were listed as waiting for a kidney (Data 2004); and, during 2002, 3,396 people died while waiting for a kidney (The Scientific Registry of Transplant Recipients 2003). Scarcity has prompted the development of new strategies for retrieving more kidneys for transplantation. These include the use of older donors, simultaneously transplanting two "marginal" kidneys instead of discarding both (Gridelli and Remuzzi 2000) and declaring death using "Non-Heart-Beating Organ Transplantation" protocols that permit the declaration of death by cardiopulmonary criteria prior to the onset of ir-

reversible ischemia (Institute of Medicine 1997; 2000).

Transplants using organs from live donors are now common, especially in kidney transplantation where the use of live donors has become a critical source of organs. In 2001, for the first time in recent decades,<sup>1</sup> the number of live kidney donors exceeded the number of deceased donors (UNOS 2004). Although live donors have also provided a lobe of liver, a lobe of lung, and pancreatic and small intestinal tissue, live kidney donation was more than ten times as common as the live donation of all other organs combined. Long- and short-term outcomes using

1. In 2001, there were 5,528 deceased kidneys transplanted and 6,039 living donor kidneys transplanted. There was a total of 543 other live organ donations: liver (504), lung (37) and pancreatic (2) transplants.

## Keywords

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living kidney donors are superior to those with deceased organs (Hariharan et al. 2000).

The vast majority of live organ transplants have been between genetically or emotionally bonded individuals such as brothers and sisters and husbands and wives. Paired exchanges permit a couple with incompatible blood types to exchange kidneys with another suitable couple. Tissue incompatibility is surmounted because the donor in couple A gives a kidney to a compatible recipient in couple B and the donor in couple B simultaneously gives a kidney to a compatible recipient in couple A (Ross et al. 1997). A similar exchange program rewards the intended recipient of a willing but incompatible donor with the next available matched kidney after that donor gives a kidney to a compatible stranger on the transplant waiting list. In these exchanges organs are donated to strangers, but the *quid pro quo* aspect of the arrangements makes them different than organ donation by altruistic strangers.

### THE ALTRUISTIC STRANGER

Organ donation by altruistic strangers has become accepted practice in the United States. It is approved in the live organ donor consensus statement (Live Donor Consensus Group 2000); case reports have been published (Gohh et al. 2001; Steinberg 2003) and major transplant centers have retrieved organs from strangers (Matas et al. 2000). Although donation by altruistic strangers can be expected to increase as this type of organ donation is publicized, it is currently uncommon and constitutes less than 1 percent of all live kidney donations.<sup>2</sup>

Donation by altruistic strangers exists in two forms. Donors and recipients may locate each other, often using the Internet. When they approach a transplant center they have established a relationship and may be classified by the transplant center as emotionally bonded. However, because they would have remained strangers were it not for the sole stimulus of organ transplantation, it is more accurate to consider these donors altruistic strangers. The second form of donation by altruistic strangers exists when the donor permits the transplant center to select any recipient on their waiting list ("non-directed donation").

A variant of the second form of donation allows the selection of any donor, but with restrictions; in

one case a Buddhist donor did not want her kidney given to anyone in a killing profession such as a fisherman, a hunter, or a soldier (Gohn et al. 2001). Restrictions placed by altruistic strangers on who can receive their organ have been controversial. Genetically and emotionally bonded individuals are permitted to precisely specify their recipient; with the exception of offensive religious or racial groupings it is reasonable to accept donor restrictions. No one is hurt by the stranger's donation, and everyone below the designated recipient moves up the list (Veatch 1998).

Donation by altruistic strangers is not universally approved. In the United Kingdom the Human Organ Transplant Act of 1989 forbids transplants between living persons who are not genetically related unless permission is obtained from the Unrelated Live Transplant Regulatory Authority (ULTRA). ULTRA requires documentary evidence substantiating a relationship, such as marriage, when donor and recipient are not genetically related (ULTRA 2004). Organ donation by strangers is also prohibited in other countries, such as Germany and India (Broyer and Affleck 2000; Biller-Andorno et al. 2001).

Two aspects of organ donation by altruistic strangers should be influential. By not selecting a genetically or emotionally bonded specific individual as their recipient, the altruistic stranger expresses a solidarity with all humankind.<sup>3</sup> The altruistic stranger is willing to help anybody, even someone they don't know, because they are sensitive to all suffering without distinction to specific persons. Altruistic strangers consider themselves part of a common humanity and probably have a broader sense of relationship than the rest of us.

Our embrace of altruistic strangers as kidney donors creates a moral dilemma because most people, if they required dialysis, would accept a donated kidney if that would improve the quality of their life or, as is occasionally the case, save their life; yet most people have made no provision to donate a kidney after they die. That some people give a live kidney with no expectation of a return in kind whereas others would take a kidney without ever having committed to giving when they are deceased should disturb our sense of fairness.<sup>4</sup> By taking organs from altruistic strangers we place in

2. Data as of September 6, 2002, as reported to the Organ Procurement and Transplantation Network (OPTN) and provided by the United Network for Organ Sharing (UNOS).

3. This is less true in the occasional donation with recipient restrictions.

4. This distinction is not as sharp in genetically or emotionally related donation where, because of moral

sharp relief a distinction that pervades the field of organ transplantation: the existence of two classes of persons, “organ takers” and “organ givers.”

A person who would accept a deceased donor kidney if they needed one for relief from the burdens of dialysis, or perhaps to save their life, is an “organ taker.” An organ taker should acknowledge that a donated kidney, in view of its benefits, is a valuable gift. Because the deceased donor will have given the kidney free to relieve another person’s suffering, the donation can be considered a morally valuable act.

An “organ taker” should recognize that other persons are also entitled to moral respect and might have a valid need for a donated kidney. Nagel (1970) claims that “the principle underlying altruism requires all reasons to be construable as expressing objective rather than subjective values.” Reasons, according to Nagel, should express values that apply to all persons. If it is morally valuable for me to receive a kidney, objectivity requires that the donation of a kidney to someone else also be considered morally valuable. The “organ taker” must decide whether they would be willing to perform the same morally valuable act they would want and accept from others and become an “organ giver” by agreeing to donate their kidneys when they die. An ethical position is contaminated by subjectivity if it applies only to oneself and not to other similarly situated people.

There is also a practical contradiction in adopting the position that people can choose to be “organ takers” with no obligation to also be “organ givers.” An ethical position that cannot be generalized should be suspect. If everyone could decide they wanted a kidney should they develop end stage renal disease and everyone could also decide they would not donate a kidney themselves, this would contradict the interests of “organ takers” because no one would receive a kidney.

### RECIPROCAL ALTRUISM

In contrast to pure altruism, the behavior characterized by a willingness to accept the benefits of altruism that is balanced by a willingness to similarly be altruistic when the circumstances are reversed has been called *reciprocal altruism*. In primi-

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obligation, if roles were reversed, the donor wife could have hopefully anticipated receiving a kidney from her husband. In donation by strangers, no assumption of unspoken reciprocity can be made.

tive societies lacking commerce and currency, gift giving was not a generous unilateral gesture but an act that brought the obligation of reciprocity. Marcel Mauss (2000), in his classic work, *The Gift*, noted that people in archaic societies gave so that others would give to them. Gifts, though apparently voluntary, were not, because failure to reciprocate could bring severe sanctions.

Sociobiologists have noted “the evolutionary value of mutual assistance” and that cooperation between animals is advantageous and “maximizes genetic proliferation.” Wright (1994) describes vampire bats who feed regurgitated blood to hungry bats because they know the recipient bats will eventually return the favor in a “tit for tat” exchange that benefits them both. Wright notes that reciprocal altruism to promote itself has generated feelings such as affection, guilt, compassion, sympathy, obligation and gratitude that serve as “logic executors” of the “proper strategy” out of “genetic self-interest.” Gratitude is a measure of the benefit received that helps determine the repayment owed. Justice is interpreted as the human way of “guarding against exploitation” in the system of reciprocal altruism.

Reciprocal altruism in deceased donor kidney transplantation is beneficial for humankind in a manner similar to bats feeding each other. A tolerable sacrifice is made for a significantly greater good to the group. If everyone donated a deceased kidney they no longer needed, more people would be relieved of the burdens of dialysis, some of them would live longer, and the cost to humankind considered as a group would be minimal and far outweighed by the benefits.

Any new paradigm for kidney transplantation not only should take into account the problems inherent in a system with organ givers and organ takers; it should also aim to decrease dependence on live kidney donors. I will review the flawed nature of the reasons commonly used to justify live kidney donation to explain why we should, to the extent possible, decrease our dependence on live organ donation. I will then discuss an “opting in” paradigm, which mimics reciprocal altruism and has the potential to advance this goal.

### THE PARADIGM FOR LIVE KIDNEY DONATION

The paradigm most commonly used to justify live kidney donation rests on several premises: the low risk to the donor, the favorable risk/benefit ratio, the psychological benefits to the donor, altruism,

and autonomy coupled with informed consent (Caplan 1993; Singer et al. 1989; Spital 1998). Although these premises are partly valid, each requires significant qualification and that weakens the entire paradigm.

### Low Risk to the Donor

In a three-year period from 1999 to 2001 of 15,782 kidney retrievals from live donors seven deaths were reported for a rate of one death for every 2255 donors (0.04%).<sup>5</sup> Other reports list an operative mortality rate of 0.03% (Najatian et al. 1992) and short-term risks of wound infection, bleeding, collapsed lung, unexplained fever, pneumonia, and urinary tract infection (Liu et al. 2001). Although some donors have subsequently required a renal transplant themselves, no large series has demonstrated progressive deterioration of renal function. Donors also suffer pain, time lost from work, and, for altruistic strangers, forfeiture of the ability to donate a kidney should a genetic relative or emotionally bonded individual need one in the future.

Transplant centers can accurately note that individual donors face a statistically low risk of death; however, until the mortality of donor nephrectomy becomes zero, the global enterprise of live kidney transplantation will continue to be a form of human sacrifice because, although it cannot be known which donors will die, it can be known with statistical inevitability that some healthy donors will die. For perspective, the likelihood of death in living kidney donation is about 400 times higher than the risk of death from smallpox vaccination (Lane et al. 1969). The premise that the risk to the donor is low requires qualification because some healthy donors will inevitably die leaving behind stunned families who could effectively dispute the characterization of risk as low when it includes death.

### A Favorable Risk/Benefit Ratio

Calculating the risk/benefit ratio in live organ transplantation is problematic because the risks and benefits can be qualitatively different and the entity that accepts the risk is not the entity that reaps the benefit.

The use of live kidney donors makes utilitarian sense if we simply count and compare those who

benefit and those who suffer. The retrieval of a kidney from 2500 live donors, assuming a one-year graft survival of 95 percent, would eliminate the need for dialysis for 2375 patients. The approximate cost of this benefit would be the death of one healthy donor. (I am ignoring the lesser risks previously noted.) Live kidney donation makes utilitarian sense because many more people benefit than are harmed. However, this analysis ignores a crucial issue. Most patients do not die without a kidney transplant because they can be sustained on dialysis.<sup>6</sup>

Unlike most medical and public health interventions, in live kidney donation the person who accepts the risk has no probability of a medical benefit. Unless risk and benefit are apportioned among the same entity, risk/benefit calculations are problematic. This difficulty should become more troubling when the risk is higher, as it is in live liver transplantation.

Nagel (1970) has suggested that when confronting situations in which one entity accepts risk and another obtains the benefits, we consider living consecutive lives with no seepage of good or bad from each life. This imaginary thought exercise would give us empathy for both donor and recipient but nothing close to a mathematic model for a risk/benefit calculation. Nagel also suggests the option of calculating total good independent of individual persons; but this type of utilitarian reasoning has apparent limits. We might increase the total good by removing all salvageable organs from one healthy person and, at the cost of one life, save several; however, most of us would find this morally repugnant.

### The Psychological Benefit to the Donor

Live kidney donation may benefit the donor because, except in the case of most altruistic strangers, they will have the companionship of a healthier recipient. They will also avoid feelings of guilt that might accompany a refusal to donate. However, more sweeping claims of psychological benefit, such as improved self-esteem and a heightened sense of well-being, warrant scrutiny for several reasons (Levinsky 2000; Liu et al. 2001; Matas et al. 2000). Not all donors will benefit psychologically;

5. Data as of April 19, 2002, reported to the Organ Procurement and Transplantation Network (OPTN) and provided by the United Network for Organ Sharing (UNOS).

6. For some patients, for example those who lack access to the circulatory system, transplantation can be life-saving; also, survival with a transplant exceeds survival on dialysis.

donors who die will not benefit psychologically. In a quality-of-life follow-up study, kidney donation was associated with an increase in self-esteem and sense of well-being; but not everyone benefited (Johnson et al. 1999). Four percent of respondents said they wished they had not donated, and 3% were unsure whether they should have donated. Donor suicide following transplant failure and the death of the recipient has been described in a few cases (Weizer et al. 1989).

If a donor wants psychological enhancement, it has not been shown that other less dangerous means, such as earning an advanced degree or doing charity work, would not be just as effective. Claims of a psychological benefit to the donor can be used to justify exposing a donor to risk because they allow us to believe the donor is getting something in return for their donation; but that return entails risk, and alternative and safer means for achieving psychological enhancement exist.

### **Altruism**

The basic dictionary definition of altruism is the unselfish concern for the welfare of others (Websters 1983). An altruistic act benefits another person without any quid pro quo commensurate compensation; the donation of a kidney for free is an altruistic act. The paradigm of altruism conveys positive connotations because it is endorsed by many religions and most people would preferentially applaud actions that help others over those that are either indifferent or hurtful. Altruistic acts merit scrutiny because their altruistic nature does not guarantee that they are morally appropriate. The fact that live kidney donation is an altruistic act does not automatically entail its endorsement. A man who gives his assets to a poor elderly aunt has performed an altruistic act; however, if he were left destitute and unable to care for his young children, the moral appropriateness of his altruism would be doubtful. A healthy person would not be permitted to donate their heart because altruistic acts remain subject to other moral principles.

Live organ donation differs from other accepted acts of medical altruism such as blood, sperm, and bone marrow donation because those acts are associated with low risk. By calling it “the gift of life” and honoring live kidney donors as praiseworthy and noble heroes, altruism is employed to justify an intervention that may cause death. This extension of the permissible risk boundaries of altruism should make us wary of automatically equating altruism with justification.

Certain altruistic behaviors, as illustrated by the clarion caller who warns other animals of a predator and dooms himself by revealing his location, seem unlikely to promote individual survival and may evolve because they promote group survival (Sober and Wilson 1998). Even if man's behavior is capable of rising above these basic evolutionary instincts, the paradigm for organ donation should not neglect the considerations of reciprocity and group benefit that many scientists consider intrinsic to altruism.

### **Autonomy Coupled with Informed Consent**

Although donor autonomy has been used to justify organ donation (Caplan 1993) and patient autonomy has been advocated over “medical paternalism” (Spital 1998), decisions to donate an organ are not always made in strict accordance with the criteria for autonomous decision making (Beauchamp and Childress 1994). Many people make the decision to donate before they are given all the important facts (Fellner and Marshall 1970) and may be acting out of a sense of moral obligation or guilt. In one study, 23 of 76 (30%) potential donors said their decision to donate would not have been, to a great extent, a free one (Karrfelt et al. 1998). Spital has argued that respecting the dictates of total informed consent is impractical, that moral and emotional constraints are not restrictions on freedom, and that consent that is not fully informed may still be valid using an “ethic of care and concern” (Spital 1998; 2001). Although autonomy should be an essential requirement in organ donation it suffers because data suggests that it cannot be fully employed in organ donation. We must also remember that autonomy is not an absolute value and must compete with other values. Rackoff (2002) notes, “maximizing the social welfare function probably will require a price in autonomy.”

### **AN “OPTING IN” PARADIGM FOR KIDNEY TRANSPLANTATION**

We rely on live kidney donors because there are insufficient deceased donations. I have outlined both practical and conceptual problems in using live kidney donors. Is there a defensible paradigm that might bring the supply of cadaveric kidneys closer to demand and lessen the need for live donations? I will suggest one that responds to the unfairness inherent in the existence of “organ takers” and “organ givers” and also takes into account reciprocity and concern for the welfare of the group. This paradigm, which I will refer to as “opting in,” is based on utility and fairness.

## Utility

Although conceptual difficulties exist in calculating the net benefit of kidney transplantation, organs are transplanted because we believe that organ transplantation increases the total medical good. The dominant reason for kidney transplantation is utilitarian. Although some people may suffer because of transplantation, overall it is considered beneficial for the group. The starting premise in any justification of organ transplantation should be unabashedly utilitarian because that is the dominant motivating force.

## "Opting In" and Fairness

The current system of kidney allocation based on need combined with organ procurement based on voluntary donation has failed to satisfy the demand for kidneys. This failure has spawned discussion of plans to provide a financial incentive for kidney donation, an approach that would unfairly separate "organ givers" and "organ takers" by economic status (Gill and Sade 2002; Veatch 2003). In some parts of the world payment for organs has already become common practice. In China organs are taken from executed prisoners, most often without their consent—a practice that might in part be responsible for the large number of executions in China (Smith 2001a; 2001b).

An alternate approach would preferentially distribute organs to people who have previously agreed to donate an organ. Currently, organ allocation considerations are essentially restricted to the time frame that begins after it is known who needs a kidney and who is an available and eligible donor. The process could begin earlier, at a time when potential recipients and potential donors are healthy and it is unknown who will need a kidney and who will be able to donate one—a time when, as noted by the late philosopher John Rawls, as far as our individual fate is concerned, we act behind "a veil of ignorance."<sup>7</sup>

Planning at this point could avoid the unfair separation of persons into "organ givers" and "organ takers." Jarvis (1995) has used the judgmental but colorful phrase "free riders," for people who would accept an organ if they needed one but would not donate one themselves and advocates that only those who have previously identified themselves as potential organ donors be allowed to receive organs.

Eaton (1998) favors a similar but less draconian social contract. She would not exclude "free riders" as organ recipients but would penalize them for their "uncharitable views." If there were equally needy recipients, the "free rider" would lose out; no one would be forced to donate their organs, but those who refuse would have to accept the practical consequences of being discriminated against in the allocation of organs.

Gubenats and Kliemt (2000) suggested a "solidarity rule" that would provide a nonmonetary incentive to donate. People who, prior to developing a disease, declare a willingness to donate their organs would be given priority in organ allocation. Kleinman and Lowy (1992) called for an advance directive organ registry. All persons over age 18 would voluntarily provide their advance directive to a central registry, agreeing to donate their organs at death. Those who registered would get priority in organ allocation. Daar (2000) similarly called for giving people who have signed a donor card preference to encourage "enlightened self-interest."

A pool of citizens who are potentially either organ donors or recipients, depending on their fate, exists in several countries, including Belgium, Spain, Norway, Italy, Switzerland, Denmark, and Austria. These pools have been created using minor variations on a doctrine often referred to as "presumed consent." Citizens are assumed to be organ donors unless they have specifically "opted out" and made it known they do not want to be an organ donor. Of note, in Belgium less than 2% of the population has "opted out." So-called "presumed consent" laws are similar to "opting in" programs because they both create a pool of citizens who, when they die, are destined to become organ donors. There is no preferential treatment given to members of the "presumed consent" pool, but they all benefit because the pool increases the likelihood a kidney would be available for anyone who needed one. Although fairness is better served when a citizenry that is willing to take an organ is also willing to give an organ, the prime motivation for systems of presumed consent is utilitarian. In Belgium and Spain there has been an increase in organ supply despite a decrease in potential donors (Kennedy et al. 1998).

A system of "presumed consent" with the opportunity to "opt out" would probably be unacceptable in the United States because of concerns over individual freedom. Veatch (2000) notes that a variety of surveys indicate no empirical basis for presuming consent, which leaves many "presumed

7. Eaton (1998) astutely notes "the contingent interdependence of recipients and donors."

consent” laws tantamount to the “routine salvaging” of organs. Laws that presume consent have been claimed to be at odds with Western liberalism because they place the state in a position of primacy over the individual (Veatch 2000). By forcing individuals to protect themselves from government-supported violations of their bodily integrity, “presumed consent” laws, despite the opportunity to “opt out,” would create the perception that individual liberty was compromised. This would not be the case in systems based on voluntarily “opting in.”

Veatch (2000) has proposed a system of “required response.” People would be asked in a variety of settings to state whether they did or did not want to be an organ donor; they could also state they did not know whether they wanted to be an organ donor. Veatch suggests posing this question on the application for a driver’s license that would be considered incomplete without an answer. He also suggests that the question be asked on income tax returns, though he doesn’t propose a penalty for failure to respond. Veatch’s attempts to get people to confront the question of whether they will donate their organs would likely make more organs available. However, I suspect the end result would be better if those requests were coupled with significant incentives.

A system that offered preference in organ allocation to those who chose to “opt in” would be a very attractive form of organ insurance. You would not be presumed to be a kidney donor until you voluntarily “opted in” and agreed to donate a kidney. If you became ill, you would more quickly receive an organ that would substantially improve the quality of your life or save your life, and at the minimal cost of promising to donate your organs after you die, have no use for them, and can no longer suffer. It is an opportunity a rational person should willingly accept as very attractive.

An “opting in” kidney transplantation system comes with a significant moral cost. Medical care based on factors other than need is problematic, especially if failure to “opt in” is considered morally blameworthy. Criminals and our enemies in mortal combat are entitled to medical care. Patients who brought on their illness because they smoked or drank too much are entitled to medical care. The unavailability of medical care, including transplants, for those in need simply because they lack money or cannot afford health insurance is deplorable. Gillon (1995) notes the important moral tradition in medicine that treatment should be given on the basis of medical need and “scarce resources should

not be prioritized on the basis of a patient’s blameworthiness.” I am sympathetic to Gillon’s concern that if we discriminate against the sick who are considered blameworthy because they did not choose to “opt in,” then what other fault might next be used to deny health care.

Organ allocation based on factors other than need currently exists. UNOS lists waiting patients only for transplant centers that are part of UNOS. Geography is a determining factor because organs are first distributed within a specific geographic region. Patients are denied transplants because they lack insurance or adequate funds. UNOS gives preference to prior organ donors by assigning four points to a person who has previously donated a vital organ or a segment of a vital organ within the United States (UNOS 2002). The distribution of healthcare based on factors other than need requires justification. In the case of an “opting in” organ transplantation system, justification would be based on the promise of making more organs available for transplantation, with an increase in overall health and a diminished requirement for living donors; nonetheless, we should acknowledge this moral transgression with regret and be reluctant to repeat it in other situations. Unfortunately, whatever mechanism is chosen to reduce the scarcity of kidneys will entail compromise. Criticisms of an “opting in” system should be evaluated in comparison with other options for increasing organ availability or maintaining the status quo of extreme organ scarcity.

An “opting in” system avoids many of the moral problems associated with living organ donation. One inequity would be resolved because the entity assuming risk<sup>8</sup>—the members of the “opting in” pool—would also be the entity that incurred the benefit. Because everyone in the pool is potentially both an “organ giver” and an “organ taker,” that unfair distinction would disappear, and within the pool there would be no “free riders.” The conundrum of when altruism<sup>9</sup> is appropriate would become irrelevant because those who donate a kidney would get something in return: the promise of a lesser wait for a kidney were they fated to need one. Autonomy would be respected because entrance to the transplantation pool would be voluntary. Each

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8. Since donation would occur after death there would in fact be no medical risk.

9. Because of the intimate link between altruism and reciprocity, the “enlightened self-interest” of joining an “opting in” transplantation pool and altruism may in practice not differ greatly.

member could make risk/benefit calculations according to individual values before they joined the pool. Members of the pool would be expressing solidarity with each other, though with a greater degree of self-interest than the altruistic stranger.

### PRINCIPLES OF AN "OPTING IN" PROGRAM

The details of an "opting in" system for deceased organ donation would have to be devised by a panel with technical expertise; nonetheless, some basic principles can be defined:

1. The "opting in" pool should be integrated with the current UNOS waiting list until it becomes sufficiently large—if it ever does—to be self-sufficient and meet the needs of its members. The absolute number of retrievable organs in an "opting in" system will be limited because the number of eligible deceased donors is limited<sup>10</sup>.
2. The definition(s) of death used would have to be precisely stated because some people would not "opt in" if they considered the definition(s) of death used unacceptable. For example, brain death might be an unacceptable criterion for Orthodox Jews.
3. The preference given to those who "opt in" should be sufficient to motivate people to join the pool; initially it should probably be credited in the form of added allocation points.
4. A relatively simple means should be devised to determine that everyone entering the pool is at a reasonably equal and low risk for needing a kidney. For example, a person who did not choose to join the pool until they developed diabetes, hypertension, or proteinuria should not be permitted to join, because they are significantly more likely to need a kidney. The need to join while you are healthy should encourage more healthy people to join the "opting in" pool lest they wait until they develop a problem and are no longer eligible for the benefits of being in the pool. Healthy people who have signed organ donor

cards under the current voluntary system should be given the option of joining the "opting in" pool. Religious objection to either the definition of death employed or organ procurement from the dead should not be a common problem (Veatch 2000); however, some adjustment should be made to lessen discrimination against potential organ recipients who were unable to join the "opting in" pool because of established religious views. Similar concessions should be made for children and for adults unable to join the pool because they are not capable of decision making.

5. There should be a central registry, possibly at UNOS, where their social security numbers would identify those who "opt in." All deaths would warrant a mandatory check against this listing. Organs would automatically be retrieved from those who had "opted in" and were eligible donors at the time of death. Legislation would be needed to prevent renegeing by the next of kin. Although the sensibilities of the next of kin warrant respect, greater respect should be given to the declared wishes of the deceased who have "opted in"; also, this program wouldn't work if the next of kin could renege. Legislation that would violate the sanctity of the dead body for organ retrieval would not greatly differ in nature from laws that require an autopsy under certain circumstances and should be acceptable.
6. Anyone in the "opting in" pool who subsequently becomes ineligible as a donor because of illness will retain their preference points.
7. To the extent reasonable, people on the UNOS waiting list who do not have "opting in" preference points should not be allowed to die or suffer permanent disability. A kidney should not go to someone with "opting in" preference points who is able to survive without a kidney if there is an alternate recipient who will otherwise die. The greater the disadvantage of not joining the pool, the more likely it is that the pool will successfully recruit members; at the same time, regretfully, nonmembers will suffer more. However, if the "opting in" pool is successful and the total number of available organs increases, total suffering and organ waiting lists will decrease. Experience and trial- and -error adjustments will be required to fine-tune the program.
8. People who have "opted in" are guaranteed to become organ donors. The identity of people who have "opted in" should either be hidden or the medical profession must clearly state they will

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10. An Association of Organ Procurement Organizations (AOPO) national death record review study for 1997–1999 based on potential brain-dead organ donors indicated a consent rate (consents/approaches) of 54% and a conversion rate (donors/potential donors) of 42%. Although the number of deceased donors may be limited, these data indicate the potential for a significant increase in deceased donors. This increase would be even higher if deaths declared using cardiopulmonary criteria were included.

receive optimal medical treatment and their families will not be encouraged to withdraw treatment because of any ulterior motives. Joining the “opting in” pool should not be perceived as a hazard to your health.

9. People who “opt in” should agree to donate all salvageable organs, and preference programs for the allocation of organs other than kidneys should also be developed.

Arguments could be made to justify an “opting in” organ transplantation pool for live kidney donation. However, retrieving a kidney from a live donor would remain undesirable. At this time, I would restrict “opting in” programs to deceased organ donation.

### CONCLUSION

Ideally, everyone should agree to donate their salvageable organs at death. Since that has not happened, an “opting in” program becomes a reasonable option. Although an “opting in” program mimics altruism, it is based on enlightened self-interest. The emotions that foster reciprocal altruism have been conserved in nature because they confer an evolutionary survival advantage. Cultural evolution works faster than genetic evolution and can be used to take advantage of the lessons of nature. An “opting in” policy, despite being rooted in enlightened self-interest, would be a cultural meme that simulates reciprocal altruism. If an “opting in” program is successful it might ironically, by demonstrating the utilitarian value of reciprocal altruism, promote the attitude that self-interest sometimes requires the perception that we are all part of a common humanity. ■

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The author declares that he has no competing financial interests.

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