Published in final edited form as:

Ann Thorac Surg. 2009 October ; 88(4): 1053–1061. doi:10.1016/j.athoracsur.2009.06.087.

Saving Lives Is More Important Than Abstract Moral Concerns: Financial Incentives Should Be Used to Increase Organ Donation

Benjamin Hippen, MD, Lainie Friedman Ross, MD, PhD, and Robert M. Sade, MD

Metrolina Nephrology Associates and Carolinas Medical Center, Charlotte, North Carolina; Departments of Pediatrics, Medicine, and Surgery, MacLean Center for Clinical Medical Ethics, University of Chicago, Chicago, Illinois; Department of Cardiothoracic Surgery and Institute of Human Values in Health Care, Medical University of South Carolina, Charleston, South Carolina

Ever since organ donation became clinically feasible, there have not been enough organs to go around. Figure 1 shows the rate of change from a base value in 1995 through 2008, of three variables: (1) the number of deceased donors, (2) the number of patients with end-stage organ failure who are waiting for an organ, and (3) the number of waiting list patients who either die before an organ becomes available (ie, death on the waiting list or after removal from the waiting list as “too sick to transplant”) [1]. The number of potential recipients on transplant waiting lists has more than doubled, and now stands at over 100,000, whereas the number of deceased donors has increased by only half. Meanwhile, the numbers of deaths related to the organ shortage, which is now greater than 9,000 a year, has grown in parallel with the waiting list. Thus, the gap between supply and demand has grown every year for the past 15 years.

Approximately two thirds of the waiting list patients suffer from end-stage renal disease. Because the kidney is a paired organ, living individuals can donate one kidney, and several thousand donate every year, mostly to relatives with whom they have an emotional bond.

The problem underlying the organ gap is not a lack of medically suitable organs from patients dying from severe brain damage; if all such patients became donors, the waiting list would shrink rapidly, yet only half of potential deceased donors actually donate, and many potential living donors are medically unsuitable or are unwilling to donate, so not enough organs are donated to satisfy the need for them.

How can we increase the number of donors? When a difficult or dangerous job has to be done, such as working on high-rise construction projects, we give workers an added incentive to take these jobs by offering them more benefits, such as salary supplements. Perhaps offering a financial incentive for organ donation would increase the number of willing donors. But if offering people financial incentives *could* increase the supply of organs, *should* we do it? Would it be morally appropriate?

Kidneys are by far the most common transplants and can come from either a deceased donor (two kidneys) or from a living donor (one kidney). Making the case for providing financial incentives to living donors is much more difficult than for deceased donors, so if that case can

Address correspondence to Dr Sade, Medical University of South Carolina, 96 Jonathan Lucas St, Suite 409, MSC 612, Charleston, SC 29425; sader@musc.edu.

Presented at the Forty-fifth Annual Meeting of The Society of Thoracic Surgeons, San Francisco, CA, Jan 26–28, 2009.

Disclosures

Dr Ross' work is funded by a National Library Medicine Grant of the National Institutes of Health to write a book on the Ethics and Policy Issues in Living Donor Transplantation. Dr Ross serves on the Ethics Committee of the United Network of Organ Sharing (UNOS). The views she expresses are her own.

be made, the arguments can cover virtually all donations, from both living and deceased donors. Although this is a cardiothoracic surgery journal, the current debate centers on living donors of kidneys. This is more appropriate than might be obvious at first, because the arguments for and against financial incentives for organ donation can be generalized easily to both living and deceased donors, and therefore these can apply to the therapies of most immediate concern to cardiothoracic surgeons (ie, heart and lung transplantations).

The debate is rendered more concrete by focusing on the case of a United States senator who has a decision to make.

The Case of the Conscientious Senator

Senator Alexis Murray is a member of the Senate's Committee on Health, Education, Labor, and Pensions, which is holding a hearing on a bill that will permit payment of up to \$10,000 plus in reimbursement for expenses to living kidney, liver, or lung donors. Senator Murray listened to testimony by a few individuals and by representatives of organizations that either support or oppose the bill. He is particularly struck by the story told by George Cranford, a computer repair technician.

Mr Cranford's 25-year-old daughter, Karen, has diabetic nephropathy and has suffered from end-stage renal disease for 5 years. On renal dialysis, she has had frequent bloodstream infections, several of which have been nearly fatal. She is currently hospitalized, recovering from her latest methicillin-resistant *Staphylococcus aureus* infection. The recurrence rate of such infections is high, and the mortality rate is between 50% and 75%. Karen is an only child; her parents and other relatives are unsuitable to donate a kidney. She is waiting for an organ from a deceased donor, but her place on the waiting list makes it likely that she will be among the 9,000 patients who die each year because of the shortage of organs for transplantation.

Mr Cranford has several friends and acquaintances who have said they have considered donating a kidney for Karen, but have decided not to do so because of concerns for lost income from time away from work, the possibility of losing their jobs, possible health consequences from having only one kidney, and the stress, pain, and physical risks of the donor operation. He expresses the belief that these concerns could be outweighed by the offer of an award of some kind, such as payment for health insurance, an income tax credit, or cash payment of a few thousand dollars. If some of his friends and perhaps many others around the country could be persuaded by such incentives to donate a vital organ, thousands of lives could be saved each year.

Senator Murray is impressed by the story, but is concerned about potential negative consequences of permitting a market in human organs. After the hearing, he seeks the advice of two thoughtful physician-ethicists, Benjamin Hippen, MD, and Lainie Friedman Ross, MD, PhD.

Pro

Benjamin Hippen, MD

The number of people with kidney failure in the United States is increasing. By 2010 it is expected to be 591,000, with more than 80,000 patients waiting for a kidney transplant [2]. Incremental improvements in immunosuppression have rendered kidney transplantation a superior therapeutic modality for more and more patients with kidney failure. Unfortunately, despite our best efforts, the supply of transplantable kidneys has not and will not keep up with the growing demand.

The current state of affairs is responsible for several unintended, but foreseeable, consequences. Longer waiting times for transplant candidates result in patients who are sicker at the time of transplantation. This factor, combined with an increased reliance on extended criteria donors (ie, marginal donors), results in inferior graft survival. Longer waiting times also serve to increase emotional pressure on any available living donor. Longer waiting times and few available options have contributed to an upsurge in international organ trafficking. This combination of factors erodes trust in the transplant community as a whole. In 2006, the federal government spent \$22.7 billion dollars on end-stage renal disease, of which only \$2.2 billion was spent on kidney transplantation, yet the 5-year survival with a successful kidney transplant is more than double the survival conferred by dialysis.

Various solutions to this problem have either proven to be inadequate or are unlikely to succeed. The majority of people with kidney disease die from cardiovascular complications before reaching end stage; therefore, improvements in preventive strategies that increase survival after heart attacks and strokes will permit more people to live long enough for their kidneys to fail, which in turn will increase the demand for transplantable organs [3]. Despite the aggressive efforts of the Organ Donor Collaborative to increase the number of available organs, the total number of procured organs during the last 10 years has been flat relative to the growing demand and a sizeable fraction of “new” organs, which are from extended criteria donors. These organs afford shorter graft survival, increasing the likelihood that recipients of these kidneys will return to dialysis. A policy of involuntary organ conscription is morally problematic, and countries that have such policies enshrined in law have not been able to successfully procure more organs than countries that rely on consent for donation [4].

The costs of this public policy failure is high, measurable in the unnecessary loss of human life, the vast expenditure of public treasure on a suboptimal therapy (dialysis), and the spread of desperation among waiting recipients and their families. This state of affairs supports arguments in favor of pilot trials of incentives to increase organ procurement from living donors.

The central argument in favor of incentives is patient autonomy. Free societies typically do not interfere with competent adults making choices that affect their lives and do not significantly harm themselves or others. Free societies rely on this principle for ethically defensible uncompensated living donation and (rightly) look askance at those who would abridge this liberty. Opponents of a regulated market in organs encourage us to view this proposal through the lens of the manifest harms to vendors and recipients who participate in underground organ trafficking, without lingering on the fact that organ trafficking in developing countries would not be economically sustainable, except for the shortage of available organs in developed countries. Because organ trafficking continues unfettered by existing laws prohibiting the practice, those who are authentically committed to reducing organ trafficking can find the most straightforward solution in reducing the incentive for recipients in wealthy, developed countries to economically support trafficking. Our public policy failure merely ensures the continued health of international organ trafficking abroad.

Regulated organ markets also may be safer than the current system of living donation. It is true, but trivially so, that organ donors become, in some sense, a patient. The obligations that physicians have to their patients would not change because some donors are compensated and others are not. The existing literature on donor outcomes, however incomplete, nonetheless, supports the premise that donating a kidney is safe for the long term [5]. By vastly expanding the number of potential living donors, one can cherry-pick to identify people who everyone agrees would be at the lowest risk for long-term harm from donation. Incentives would also helpfully eliminate the psychological pressures brought to bear on living donors, borne of their

recipient's desperate plight. Far from suppressing altruism, the authentic altruism of those who still choose to donate (uncompensated) would thereby be clarified and preserved.

In itself, low socioeconomic status is an independent risk factor for the development of kidney disease over time, a fact which constitutes sufficient reason to exclude the poorest among us from participation in organ vending (or for that matter, in living organ donation). Exclusion of the very poor is justified not because poor donors and vendors are somehow incapable of autonomous judgment. For example, the poor should not be prohibited from voting in elections for political candidates who proffer the "coercive offer" of improving the economic lot of the poor. Rather, exclusion is justified because the purpose of a regulated market in organs is to increase the number of available organs without increasing harm to others. The "right to sell" does not impose an "obligation to buy," and the interests of all involved entail an exchange that benefits recipients without harming sellers.

Any system of incentives requires regulation and oversight, and it is a caricature to suppose that there is a contradiction between free exchange and the strictures of law. Law outlines the conceptual space for articulating obligations to donors and vendors, and the law explains the means whereby the legitimacy and enforcement of these obligations are possible. Among the necessary protections to be included would be the assurances of *safety* for both donors and recipients; *transparency* in regard to the risk of a living kidney donation for both the compensated and uncompensated donors; *institutional integrity* to protect donors, recipients, healthcare providers, and institutions who choose to participate or abstain from compensation arrangements; and the *rule of law*, to define how the arrangements for exchange could take place for mutual benefit [6].

These protections morally distinguish a regulated system of incentives for organ procurement from the significant harms generated by organ trafficking, and they would provide a useful guide to the construction of pilot trials for incentives in this country, as well as a means of assessing the conditions in other countries. Along these lines, the United States has something to learn from Iran, which is the only country in the world with a legal pseudo-market in organs from living donors, and the 24-year legacy of that institution provides useful lessons and cautionary tales [7]. No evidence is perfect, but the peer-reviewed evidence we have from several sources supports the following facts: (1) for the last decade, Iran has not had a waiting list for transplantable kidneys; (2) the long-term outcomes of recipients of purchased organs is not significantly different from the outcomes of recipients of donated kidneys (a useful surrogate marker for the health of organ vendors); (3) the existence of a flourishing market has not resulted in attrition of the number of kidneys donated by biological relatives; and (4) uncompensated organ donation from the deceased has increased 10-fold since 2000, when laws recognizing brain-death as death were approved by the Iranian Parliament. On the other hand, the following is also true: (1) organ vendors are disproportionately impoverished and poorly educated; (2) the data on long-term outcomes for organ vendors is conflicting and mixed, but at any rate it is substantially incomplete. It does not follow that a system of incentives inexorably leads to bad outcomes for vendors. What does follow is that a defensible system of incentives must offer plausible assurances that the long-term consequences for organ vendors are at least as safe as for organ donors.

A broader view of what might constitute "compensation" will be instrumentally useful in beginning to provide some of these assurances. Compensations need not be limited only to cash payment. Providing a nonfungible, lifelong, comprehensive healthcare benefit for donors would intersect with the desire of the transplant community for a long-term, prospective study of outcomes after donation. Compensation might take the form of a deposit in a donor's health savings account, retirement account, favorite charity, or any number of possible permutations. The specific nature of the incentive is less important than the following: (1) a successfully

functioning incentive by making more organs available, and (2) an incentive that would not give rise to further harms [8].

The point is that our current system brings harm to recipients who are dying by the thousands every year on a waiting list, harm to donors who (correctly) understand the dire consequences of their choice not to donate for their recipient, and harm to legions of victims of organ trafficking who silently shoulder the true costs of our ongoing public policy failure. Incentives can be structured in a way to decisively answer moral objections. Whether the transplant community and our political leaders see fit to understand this point in practice, or whether the needless suffering and economic boondoggle of the status quo will simply continue, remains an open question.

Con

Lainie Friedman Ross, MD, PhD

We are posed with the hypothetical case of a senator who is considering a bill that will permit payment for living donors. The case may not be purely hypothetical, since the bill was introduced into the United States' Senate in 2008 [9]. Our hypothetical senator is particularly struck by the story told by George Cranford, a computer repair technician whose 25-year-old daughter, Karen, has end-stage renal disease and is currently doing poor on dialysis while waiting for a deceased donor organ. According to Mr Cranford, several friends and acquaintances would donate a kidney for Karen, but they have declined to do so because of concerns of lost income from time away from work, the possibility of losing their jobs, the possible health consequences from having only one kidney, and the stress, pain, and risks of the donation. Mr Cranford expresses the belief that these concerns could be outweighed by the offer of a financial reward of some kind.

Karen's story is sad, but so is the story of every individual in end-stage renal disease on dialysis. In addition, there are many such cases, because the demand for solid organs for transplantation greatly exceeds the supply. Despite two decades of attempts to increase the organ donor supply, the gap is growing [10]. This gap is growing despite some real increases in the deceased donor supply due to policies, such as required request policies, first-person consent registries, the acceptance of expanded criteria donors, and donation after cardiac death [10]. For some organs, a significant increase in supply has occurred with the greater acceptance of the role of living donors. Although the number of kidneys available for transplantation has grown significantly since 1988, (ie, in 1997, there were 7,774 deceased donor kidneys and 3,929 living donors compared with 10,588 deceased donor kidneys and 6,041 living donors in 2007) [11], the demand is still growing faster. Although there were 35,526 patients listed at the end of 1997, there were 66,961 at the end of 2006 [12]. The waiting list surpassed 100,000 in 2009 [13]. This growth in the waiting list can be explained by: (1) the success of modern medicine to keep people alive long enough for their kidneys to fail; (2) an inadequate supply of deceased donor organs; (3) an expanded criteria for eligibility onto the organ waiting list; (4) our aging population; and (5) very significantly, some of our lifestyle choices (the obesity epidemic has contributed to a dramatic rise in diabetes and hypertension, which are the two main risk factors for renal failure).

Although the National Organ Transplant Act made it illegal to buy or sell organs in the United States in 1984 [14], and the World Health Organization recommended a similar ban in 1991 [15] (that was reaffirmed in 2008) [16], support for a kidney market has blossomed in the past decade [17–23]. In this article, I argue that the market is not an ethical solution to the organ shortage. I argue this position using the bioethical framework developed by Beauchamp and Childress [24]. Although Matas [21] has used these principles to argue why a market is ethical, I show why he and other pro-marketers have misrepresented these principles.

The Four Principles

In the book titled the *Principles of Bioethics*, Beauchamp and Childress [24] explicate four fundamental principles of bioethics: (1) autonomy, (2) beneficence, (3) nonmaleficence, and (4) justice. The principle of autonomy (or more accurately, the principle of respect for autonomy) refers to the right of self-determination. In medical ethics, we say that the competent patient (an individual who has decision-making capacity) has the right to accept or refuse medical care, even lifesaving medical care. The principle of beneficence addresses the obligation of physicians to act in their patient's best interest, whereas the principle of nonmaleficence states that physicians should avoid, when possible, harming a patient. Neither of these principles is absolute in that we often cause some harm with our treatments, with chemotherapy for cancer being a case in point. Rather, these principles are understood to mean that the benefits should outweigh the risks of harm.

The fourth principle, the principle of justice, is the most complicated one, because it refers to obligations beyond the doctor-patient relationship. Jonsen and colleagues [25] discuss the importance of justice in policy decisions, but that it should not be used to make distribution decisions at the bedside. There are two main competing conceptions of justice in medical ethics: (1) utilitarian justice and (2) deontological or principle-based justice [24,26]. Utilitarian justice focuses on utility or efficiency. A distribution scheme of organs is just if it maximizes the number of lives or the number of life-years gained. That is, the focus is on maximizing the well-being of the greatest number. In contrast, egalitarian justice focuses on equity and a fair distribution of resources, even at the expense of efficiency. In general, in the realm of organ transplantation, the practice has been to use policies and practices that balance equity and efficiency [26]. For example, the current deceased donor allocation system focuses on ABO blood type matching (efficiency) and on waiting time (equity).

Consider then how the supporters of a market for kidneys would use the four principles to justify the position that Mr Cranford's colleagues should receive a \$10,000 incentive to serve as Amy's kidney donor. First, they would argue that the principle of autonomy means that individuals have the right to do as they please with their own bodies. As long as a vendor sells his kidneys voluntarily, without coercion, he should be free to do so [27,28]. Beneficence also supports a market because thousands of individuals die each year on the kidney transplant waiting list so physicians are acting in their patient's best interest by allowing the sale of kidneys [29]. Although the principle of nonmaleficence may argue against kidney sales, the supporters of a market note that we allow emotionally-related living donors to donate their kidneys. If the risks to kidney donors are considered acceptable when given voluntarily, then the risks do not change when money is involved [21]. Finally, they point out that a utilitarian conception of justice would support any means to increase organ procurement and save lives. Therefore, if the market will reduce the organ shortage and there are good reasons to believe it will [30,31], then a market is moral. They do not deny that inequalities exist, but argue that the market will allow individuals with fewer resources to try to improve their situation by vending their kidneys through a voluntary market [29,32].

So where is the fallacy in their arguments? First, let us look at the principle of autonomy. The principle of autonomy is not absolute, as with all guiding bioethics principles [24,33]. There are moral constraints on autonomy. As Oliver Wendell Holmes remarked, "The right to swing my fist ends where the other man's nose begins [34]." That is, one moral constraint on autonomy is harm to others. But the harm to the organ vendor is to himself, not to others, except insofar as one believes that we as a society are worse off if we allow vulnerable individuals to sell their body parts on the grounds of commodification [35]. The argument from commodification holds that market valuation has a degrading effect on certain goods and practices if they are bought and sold, even if fair bargaining positions exist (a most unlikely position).

But we do place limits on autonomy to protect individuals from themselves. For example, we do not allow individuals to sell themselves into slavery. Part of the argument is the moral dignity of the individual [36,37], part of the argument is the concern that the individual is not acting voluntarily or is being coerced due to circumstances that are unjust [35]. Respect for autonomy, which is the real principle articulated by Beauchamp and Childress [24], permits one to challenge an individual's decision when it is contrary to the individual's best interest. There are many reasons why an individual may make a decision that is contrary to their interests: misinformation, miscalculation, coercion, or even undue influence (an offer that seems too good to be true). Thus, to the extent that one believes that individuals who are willing to sell their kidneys are not acting voluntarily, it would be morally imperative to prohibit them from doing so.

Another moral constraint on the vendor's autonomy is the need for third party participation. Even if an individual were to argue that he has the right to sell his kidney, the transplant surgeon is also a moral agent who has the right to say that I am not willing to harm you for financial ends. Yes, I may be willing to perform the same procedure if you were giving it to your brother freely without constraints, but my personal integrity prohibits me from maiming your body purely for economic gain [38].

What is interesting about the autonomy debate, however, is that all of the market supporters do not discuss a free market. The debate in the United States regarding a market in organs assumes the current financing of transplants to ensure that this debate does not become one in which only the rich can buy organs [39]. That is, the government buys kidneys from poor people to pay for kidney transplants for the rich and poor alike! It is economically savvy of the government to do this because under the End-Stage Renal Disease program of the Medicare Act of 1972, the government extends Medicare coverage to greater than 90% of Americans if they have permanent kidney failure and require dialysis or transplantation to live. Becker and Elias [40] have shown that a price tag of \$20,000 is fair in the United States, given the risks of morbidity and mortality, but a reward of up to \$90,000 would still be cost-saving [41].

Ignoring the financing, the proponents of an organ market reject a free market (on grounds of its potential to be exploitative) and focus instead on a regulated market, and then often a regulated market restricted to United States citizen vendors [23,42–44]. It is not clear if those who promote this believe they are protecting recipients or vendors. The answer is probably both. They are protecting recipients because of the greater risks of infectious diseases in potential vendors abroad [45,46]. They claim to be protecting the vendors because a market price of \$10,000 in the United States would bring hundreds of thousands, if not millions, of individuals from third-world countries for whom the dollar amount would be undue inducement. If vendors were not restricted to citizens of the United States, then the market value could fall to less than \$1,000 [30]. This may not be a large enough incentive for Mr Cranford's friends, but \$1,000 could go a long way in China and India. In addition, if this is the only way for the individual to escape poverty, it is not clear how our protection helps them. The same arguments regarding the opportunity to escape poverty should hold true for citizens in the United States who are poor and for poor citizens of China and India.

Yet there is something offensive to the United States government buying kidneys abroad. We exploited Asia and Africa for its natural resources of gold and oil in the 20th century, and we could exploit them for their kidneys and liver lobes in the 21st century. However, if the argument were about unconstrained autonomy, we may not have a good counter argument. The fact is that the debate is not about unconstrained autonomy. Rather, autonomy must be understood within a social context, and now we must be concerned about exploitation [35, 47]; when people buy and sell things under conditions of severe inequality, the selling is not voluntary. The reason to restrict the market to legal residents in the United States is the

acknowledgement of global economic injustices that exist. In a global market, we can not ensure that the organ sale respects the autonomy of the vendors because of the high risk of exploitation. Although, once it is legal to buy and sell organs in the United States, it will be difficult to prevent sales across borders [45].

It is also the case that autonomy must be understood within a social context. In a society in which great disparities exist in wealth and opportunities, the claim that poor people should have the right to sell their kidney as one more option to escape poverty [32] denies any social responsibility we may have to prevent such a tragic option. Rivera-Lopez eloquently explains, “When we feel that the rest of us are (even minimally) responsible for that behavior [willingness to sell a kidney because of poverty], we have lost the moral authority to justify the permission of that behavior by appeal to an alleged concern for the autonomy of the individual or for the well-being of the community” [48].

The argument that beneficence requires physicians to help treat the thousands of patients in organ failure at any price also fails. First, we must remember that in transplantation with living sources, the vendor or donor becomes a patient as well [49]. It is not the case that taking an organ in a setting of exploitation is acting in the vendor’s best interest. This argument also ignores the fact that the whole focus of organ failure is about how to procure more organs without consideration of our failure in the public health and preventive health mission to reduce organ failure in the first place. In Iran, where kidney vendors are legal, supporters acknowledge that there is no long-term follow-up of the kidney vendors and that the program, as Ghods and Savaj explain, “neither has enough life-changing potential nor has enough long-term compensatory effect, resulting in long-term dissatisfaction of some donors” [31].

The concerns of harm (nonmaleficence) can not be pushed aside on the grounds that we take kidneys from family members and view the harms as acceptable. As previously explained, the principles of beneficence and nonmaleficence must be understood in tandem and evaluated as benefit-to-harm ratio. Then, here is why there may be a difference between exposing a paid kidney vendor to the risks of surgery and long-term psychological and clinical risks of unilateral nephrectomy compared with the altruistic donor. That is, we believe that the altruistic donor gains significant psychological benefits by aiding an emotionally related family member or friend [50,51]. In contrast, data (from Iran and India) show that the paid vendors do not reap the benefits they expected (improved financial circumstances) [52,53]; in fact, data show they experience many emotional and social harms in the stigma that they face for having sold a part of their body [52,53].

Those who support an organ market argue that it is consistent with a utilitarian conception of justice that seeks to maximize the greatest good for the greatest number. It is consistent, however, only if we assume that the current crisis in end-stage renal failure is inevitable. A utilitarian conception of justice could be interpreted to require a greater focus on prevention to maximize benefit (prevention or delay of renal failure) and minimize harm (by obviating the need to have living donors in the first place).

Even if we assume the current state of affairs, many justice theorists reject utilitarianism because of a theory limited to maximizing good consequences that could allow for significant harm to specific subpopulations. That is, it could be allowed for one adult to sacrifice himself to serve as an organ donor for 10 individuals on the waiting list for financial gain to his next of kin. Worse yet, it might justify lotteries in which individuals were sacrificed to maximize the well-being of 10 individuals per sacrifice! Rather, most justice theorists would argue that in organ transplantation, as in many areas of medicine, we need to consider the distribution of goods and not just the maximization of goods [26,54]. One widely accepted theory of egalitarian justice was developed by John Rawls [54]. It would permit policies that increase

organ transplantation using living vendors if this policy would be accepted behind a veil of ignorance where one was not aware of one's personal traits but did have knowledge of the social and political state of affairs. Behind the veil of ignorance, an individual would know that demand for organs greatly outstripped supply. Behind the veil, the rational Rawlsian individual would adopt policies to increase organ transplants provided that the new policies were not harmful to those who are already "worse off" [54]. A market in organs would be most attractive to those who are poor without other alternatives. Then, Rawlsian justice would judge those who are willing to vend as some of the "worst off" members of society. Such a market would be exploitative and not permissible [54]. The market proponents who seek to restrict the kidney market to citizens of the United States are conceding this point. They are failing to acknowledge that if this practice were to be legalized in the United States, then other countries could quickly follow suit, and it would be hard to restrict trade across borders. Even if we could restrict border trades, we could be doing great harm to the "worst off" in countries that follow suit, which could allow the poor to sell their organs to their fellow citizens in end-stage renal disease.

Furthermore, distributive justice in organ allocation must not only account for fairness in this generation but in future generations. An organ market may take away many of the incentives that we have (and already fail to use) to focus on prevention. Therefore, although a market may achieve society gains by improving the life-years of those individuals already on dialysis, society may be harmed overall if more people end up with end-stage renal disease. This includes the vendors, the recipients who no longer fear loss of an organ because there is an abundance of organs, and society at large who fail to use the preventive methods that are known to be effective (eg, control of diabetes, hypertension, and obesity).

Conclusion

Although proponents try to use the "Four Principles of Bioethics" to support a market in organs, I have shown that the four principles, when properly operationalized, do not support a market. Rather, I have shown that the pro-market interpretation fails to understand that the principles need to be understood within a particular conception of justice. In a liberal society that values human rights and the dignity of man, an egalitarian conception of justice is the most appropriate conception of justice for public policy. An egalitarian theory of justice must prohibit the sale of organs on grounds of exploitation! The concern of exploitation makes the vendor's autonomy suspect, and it clearly does not minimize the harms to which we expose any living source of organs nor does it ensure that they truly benefit from the procurement.

Bad cases make bad laws. I am sympathetic to Karen, but I am also sympathetic to all individuals with chronic renal failure, even if their illness is somewhat self-induced. A policy to pay Karen's father's friends may resolve the stress, pain and risks of donation, but they do not address the risk of death, which is a real but rare event. If Mr Cranford's friends really thought about the risk of mortality, they would realize that \$10,000 is too little, given the real but remote risk of death [11]. They should also realize that money should not fully resolve their reluctance. In fact, the risk of mortality should give us reason to pause and realize that the solution to our organ shortage should not be based on increasing the number of living donors. Rather, we need to focus on prevention, to maximize voluntary deceased donation, to develop alternative organ sources (such as therapeutic organ cloning), and even to promote research in xenotransplantation.

Concluding Remarks

Robert M. Sade, MD

Although our debaters' styles and lines of reasoning are quite different, they agree on a number of important points. They view the scope of the problem similarly: the demand for transplantable organs greatly exceeds the supply, the gap between the number of organs donated, and the number of recipients on the waiting lists grows continuously, so thousands of patients on transplant waiting lists die each year. Both authors reject an unregulated free market for organs (although Hippen supports a regulated market, whereas Ross rejects any form of financial incentives), and both view the idea of international organ trafficking as highly undesirable, and even evil. They both believe that an incentive to donate an organ for financial benefit would have its greatest appeal among poor people, but they draw starkly differing conclusions from that belief. Beyond those shared beliefs and facts, however, Hippen and Ross part company.

Hippen grounds his moral position in personal autonomy, stating: "Free societies typically do not interfere with competent adults making choices that affect their lives and do not significantly harm themselves or others." Opponents of a regulated market, he asserts, support their position by pointing to the harms international organ trafficking would be for both buyers and sellers of organs, while failing to acknowledge two critical issues: (1) such trafficking thrives because the organ shortage strongly motivates people on waiting lists in developed countries to buy organs where they can (ie, usually in third world countries), and (2) increasing the supply of organs will lead to reduction and eventually disappearance of organ trafficking. Hippen undercuts the central argument of opponents — exploitation of the poor — by excluding the poorest individuals from becoming paid donors, not on moral grounds, but for medical reasons: low socioeconomic status is a significant risk factor for donors, so excluding the poor is medically justified.

Ross bases her discussion on the four principles of the so-called Georgetown mantra of respect for autonomy, beneficence, nonmaleficence, and justice. The principle of respect for autonomy allows the challenging a patient's decision, she says, if the decision was not voluntary because of misinformation, miscalculation, coercion, or undue influence. To the extent that one believes that decisions by poor people to sell their organs are based on any of these factors, she asserts that the transaction is not voluntary and should be prohibited. Autonomy is also limited if an individual's action threatens to harm others, and the sale of body parts harms society by their "degrading effect on certain goods and practices." The principle of beneficence is violated because poor people might be exploited by financial incentives. A market for organs also violates the principle of nonmaleficence, because, on balance, harms resulting from such a market outweigh benefits. Ross expresses her belief that the appropriate theory of justice to guide public policy is Rawlsian distributive justice, which would view financial incentives for organ donation as unacceptable because they exploit the poor.

The conclusions readers should draw from these opposing positions, which start with mostly identical facts, but reach radically different conclusions, depend largely on how they weigh the two central facts of the issue at hand in the context of their own personal value systems. The central facts are: (1) in this country more than 9,000 patients in need of a transplant die each year because the number of available organs is inadequate; and (2) financial incentives in a regulated market would increase the supply of organs (a fact asserted by Hippen and not denied by Ross).

A reader will support Hippen's position if persuaded that people in a mature liberal democracy, such as the United States, should be allowed the freedom to choose among three options (in the context of a carefully regulated market that excludes poor people as donors and ensures safety for all participants): that is, to donate altruistically, to donate for financial benefit, or not to donate at all.

A reader will support Ross's position if persuaded that egalitarian (distributive) justice is the best guide for public policy, that financial incentives for organ donations must therefore be prohibited on grounds of exploitation of the poor, and that we should not attempt to increase the number of living donors but should pursue alternative strategies, including a greater emphasis on public health and preventive health measures that may reduce or retard the development of kidney failure.

The heat generated by the public debate on financial incentives for organ donors has been rising as more voices join each side. Congress has shown interest in this issue, including Representative James Greenwood in 2003 [55,56], and most recently Senator Arlen Specter by way of his proposed bill, the Organ Donor Clarification Act [57]. How public policy makers respond to the opposing views presented in this debate will have long-term effects on the quality and duration of the lives of many patients, and on the moral foundations of our society.

Acknowledgments

Dr Ross thanks Walter Glannon, PhD, for his comments on an earlier draft of her manuscript.

References

1. Removal reasons by year; Removed from the Waiting List: January, 1995–March 31, 2009. OPTN: Organ Procurement and Transplantation Network. Available at <http://optn.transplant.hrsa.gov/latestData/rptData.asp>. Accessed June 16, 2009.
2. Gilbertson DT, Liu J, Xue JL. Projecting the number of patients with end-stage renal disease in the United States to the year 2015. *J Am Soc Nephrol* 2005;16:3736–41. [PubMed: 16267160]
3. Hippen B. Preventive measures may not reduce the demand for kidney transplantation. There is reason to suppose this is not the case. *Kidney Int* 2006;70:606–7. [PubMed: 16871262]
4. Healy K. Do presumed consent laws raise organ procurement rates? *De Paul Law Rev* 2006;55:1017–43.
5. Ibrahim HN, Foley R, Tan L. Long-term consequences of kidney donation. *NEJM* 2009;360:459–69. [PubMed: 19179315]
6. Hippen BE. In defense of a regulated market in kidneys from living vendors. *J Med Philos* 2005;30:593–626. [PubMed: 16396787]
7. Hippen, B. Organ sales and moral travails: lessons from the living kidney vendor program in Iran. *Cato Policy Analysis*. 2008 [Accessed July 31, 2009]. No 614 Available at http://www.cato.org/pub_display.php?pub_id=9273
8. Hippen, BE. The case for kidney markets; *The New Atlantis*. 2006 [Accessed July 31, 2009]. p. 47–61. Available at <http://www.thenewatlantis.com/archive/14/hippen.htm>
9. S110, 2nd session. Organ Donation Clarification and Antitrafficking Act of 2008. [Accessed August 1, 2009]. Available at http://fairfoundation.org/organdonation/specter_bill.pdf
10. Childress, JF.; Liverman, CT., editors. Report of the Institute of Medicine Committee on Increasing Rates of Organ Donation. Washington, DC: The National Academic Press; 2006. Organ donation: opportunities for action.
11. The Organ Procurement and Transplantation Network, data reports. [Accessed August 1, 2009]. Available at <http://www.unos.org/data/about/viewDataReports.asp>
12. OPTN/SRTR annual report: transplant data 1997–2006, chapter IV: kidney and pancreas transplantation in the United States, 1997–2006: The HRSA breakthrough collaboratives and the 58 DSA challenge. 2007 [Accessed August 1, 2009]. Available at http://www.ustransplant.org/annual_Reports/current/chapter_IV_forprint.pdf
13. National Kidney Foundation. Organ shortage needs multi-faceted approach. Jan 29 2009 [Accessed August 1, 2009]. Available at <http://www.medicalnewstoday.com/articles/137316.php>
14. National Organ Transplant Act Public Law 98–507. October 19, 1984.
15. World Health Organization (WHO). WHO Guiding principles on human organ transplantation. *Lancet* 1991;337:1470–1. [PubMed: 1675332]

16. World Health Organization (WHO). WHO Guiding principles on human organ transplantation. May 262008 [Accessed August 1, 2009]. Available at http://www.searo.who.int/LinkFiles/BCT_WHO_guidingprinciples_organ_transplantation.pdf
17. Cherry, MJ. Kidney for sale by owner: human organs, transplantation and the market. Washington, DC: Georgetown University Press; 2005.
18. Taylor, JS. Stakes and kidneys: why markets in human body parts are morally imperative. Hampshire, England: Ashgate Publishing Lmted; 2005.
19. Goodwin, M. Black markets: the supply and demand of body parts. New York, NY: Cambridge University Press; 2006.
20. Richards JR. Nephroarious goings on. Kidney sales and moral arguments. *J Med Philos* 1996;21:357–73. [PubMed: 8899538]
21. Matas AJ. The case for living kidney sales: rationale, objections and concerns. *Am J Transplant* 2004;4:2007–17. [PubMed: 15575903]
22. Gill MB, Sade RM. Paying for kidneys: the case against prohibition. *Kennedy Inst Ethics J* 2002;12:17–45. [PubMed: 12211265]
23. Hippen BE. In defense of a regulated market in kidneys from living vendors. *J Med Philos* 2005;30:593–626. [PubMed: 16396787]
24. Beauchamp, TL.; Childress, JF. Principles of biomedical ethics. Vol. 5. New York, NY: Oxford University Press; 2001.
25. Jonsen, A.; Siegler, M.; Winslade, W. Clinical ethics. a practical approach to ethical decisions in clinical medicine. Vol. 6. New York: McGraw-Hill Companies Inc; 2006.
26. Veatch, RM. Transplantation Ethics. Washington DC: Georgetown University Press; 2000.
27. Friedman EA, Friedman AL. Payment for donor kidneys: pros and cons. *Kidney Int* 2006;69:960–2. [PubMed: 16482095]
28. Friedlaender MM. The role of commercial non-related living kidney transplants. *J Nephrology* 2003;16(suppl 7):S10–5.
29. Satel, S. Organs for sale. *The American*. Oct 142006 [Accessed February 2, 2009.]. Available at <http://american.com/archive/2006/november/organs-for-sale>
30. Adams AF, Barnett AH, Kaserman DL. Markets of organs: the question of supply. *Contemp Econ Policy* 1999;17:147–55.
31. Ghods AJ, Savaj S. Iranian model of paid and regulated living-unrelated kidney donation. *Clin J Am Soc Nephrol* 2006;1:1136–45. [PubMed: 17699338]
32. Radcliffe-Richards J, Daar AS, Guttman RD, et al. The case for allowing kidney sales. *International forum for transplant ethics. Lancet* 1988;351(9120):1950–2. [PubMed: 9654279]
33. Levine DZ. Kidney vending: “Yes!” or “No!”. *Am J Kidney Dis* 2000;35:1002–18. [PubMed: 10793043]
34. Holmes, OW, Jr. Quote. [Accessed August 1, 2009]. available at http://thinkexist.com/quotation/the_right_to_swing_my_fist_ends_where_the_other/217369.html
35. Sandel, MJ. The Tanner lectures on human values delivered at Brasenose College. Oxford: May1998 [Accessed August 1, 2009]. What money can’t buy: the moral limits of markets; p. 11-12. Available at <http://www.tannerlectures.utah.edu/lectures/documents/sandel00.pdf>
36. Lawler PA. Is the body property? *The New Atlantis*. Fall 2006:62–72.
37. Kass, L. Life, liberty, and the defense of dignity: the challenge for bioethics. San Francisco CA: Encounter Books; 2004.
38. Crouch RA, Elliott C. Moral agency and the family: the case of living related organ transplantation. *Camb Q Healthc Ethics* 1999;8:275–87. [PubMed: 10388928]
39. Barnett W, Saliba M, Walker D. A free market in kidneys: efficient and equitable. *Indep Rev* 2001;V: 373–83.
40. Becker, GS.; Elias, JJ. Introducing incentives in the market for live and cadaveric organ donations; *J Econ Perspect*. 2007 [Accessed August 1, 2009]. p. 3-24. Available at <http://www.atyponlink.com/AEAP/doi/pdf/10.1257/jep.21.3.3?cookieSet=1>
41. Matas AJ, Schnitzler M. Payment for living donor (vendor) kidneys: a cost-effectiveness analysis. *Am J Transplant* 2004;4:216–21. [PubMed: 14974942]

42. Monaco AP. Rewards for organ donation: the time has come. *Kidney Int* 2006;69:955–7. [PubMed: 16528242]
43. Erin CA, Harris J. An ethical market in human organs. *J Med Ethics* 2003;29:137–8. [PubMed: 12796428]
44. Brennan T. Markets in health care: the case of renal transplantation. *J Law, Med Ethics* 2007;35:249–55. [PubMed: 17518850]
45. Jha V, Chugh KS. The case against a regulated system of living kidney sales. *Nat Clin Pract Nephrol* 2006;2:466–7. [PubMed: 16941033]
46. Rizvi SNS, Zafar M, Ahmed E, et al. Health status and renal function evaluation of kidney vendors: a report from Pakistan. *Am J Transplant* 2008;13:453–76.
47. Radin, MJ. Contested commodities: the trouble with trade in sex, children, body parts an oher things. Cambridge, MA: Harvard University Press; 1996.
48. Rivera-Lopez E. Organ sales and moral distress. *J Appl Philos* 2006;23:41–52. [PubMed: 16683325]
49. Danovitch GM. The doctor-patient relationship in living donor kidney transplantation. *Curr Opin Nephrol Hypertens* 2007;16:503–5. [PubMed: 18089961]
50. Frade IC, Fonseca I, Dias L, et al. Impact assessment in living kidney donation: psychosocial aspects in the donor. *Transplant Proc* 2008;40:677–81. [PubMed: 18454984]
51. Johnson EM, Anderson JK, Jacobs C, et al. Long-term follow-up of living kidney donors: quality of life after donation. *Transplantation* 1999;67:717–21. [PubMed: 10096528]
52. Goyal M, Mehta RL, Schneiderman LJ, Sehgal AR. Economic and health consequences of selling a kidney in India. *JAMA* 2002;288:1589–93. [PubMed: 12350189]
53. Zargooshi J. Quality of life of Iranian kidney “donors. *J Urol* 2001;166:1790–9. [PubMed: 11586226]
54. Rawls, John. A theory of justice. Cambridge, MA: Belknap Press of Harvard University Press; 1971.
55. Assessing initiatives to increase organ donations: hearing before the Subcommittee on Oversight and Investigations of the Committee on Energy and Commerce, House of Representatives. Jun 32003 [Accessed June 16, 2009]. Available at <http://archives.energycommerce.house.gov/reparchives/108/Hearings/06032003hearing946/print.htm>
56. Robeznieks, A. Bill would allow studies on organ donation incentives. *AMNews*. Aug 112003 [Accessed June 16, 2009]. Available at <http://www.ama-assn.org/amednews/2003/08/11/prsb0811.htm#w1>
57. Pitney, JJ. Incentives for organ donation *Politicalmavens.com*. Dec 22008 [Accessed June 16, 2009]. Available at <http://politicalmavens.com/index.php/2008/12/02/incentives-for-organ-donation/>

Fig 1. Relative change (from 1988 baseline data) in the number of patients on organ waiting lists, deaths on the waiting list, and number of donors each year, 1988–2008. Graph derived from Organ Procurement and Transplantation Network data [1].