

Buying and selling implies financial negotiation between recipient (buyer) and donor (seller), suggests higher or lower prices in the face of variations in value and quality, may involve brokers and middlemen, and so on. Certainly this is not desirable. We need a government-regulated, scrupulously supervised program in which a person or his or her estate receives a fixed valuable enhancement or reward for organ donation. No less a personage than Paul Terasaki suggested that donors be rewarded with a valuable gold medal — the implication being that it could be kept or sold according to the donor's wishes.⁸ I envision a scheme in which a government insurance trust fund is established and administered by a federal agency or commission. A fixed-amount specific reward or honorarium for organ donation would be provided to living organ donors or to beneficiaries of estates of deceased donors. The reward would be disbursed by the federal agency in essentially the same manner as the payment of an insurance policy. Payment would be implemented after notification and certification of the donation by accredited transplant programs, and confirmation of the donation by the United Network for Organ Sharing or government health agencies. Again it must be emphasized that this would not be the buying or selling of organs; it would be a specific, fixed-amount reward for organ donation. Interestingly, a reward of \$40,000 to \$80,000 has been suggested as financially feasible,^{9,10} with enough savings possibly generated by reduced dialysis costs to make the system self-sustaining. Obviously, this very limited description of this concept is an extreme simplification of what would be a complex system necessary to assure accurate and honest implementation of rewards that should encourage both living-donor and deceased-donor organ donation.

One final note: There is concern in both major American political parties that any government effort to pay rewards for organ donation could be interpreted as advocating a policy that is directly exploitive of the poor. There is obvious reluctance to take a strong leadership role in this effort on the part of both parties. The government should establish a nonpartisan federal commission to study all aspects of

the organ shortage and recommend ways to remedy it, with particular emphasis on a system to provide financial and/or other types of valuable rewards for organ donation. Establishment of such a nonpartisan commission would be a critically important initial step in seeking a solution to this vexing problem of shortage of solid organs for transplantation.

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Voluntary reciprocal altruism: a novel strategy to encourage deceased organ donation

DW Landry¹

New strategies are needed to encourage organ donation. Altruism, the impulse that underlies our present system, is undermined by proposals that provide tangible inducements to improve donation which are, in their own subtle ways, coercive. I propose a new strategy based on implementing an option to donate that reinforces the strong reciprocity which drives anonymous altruism.

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The Friedmans' proposal¹ (this issue) to pay for deceased organs underscores the failure of the current system to provide adequate numbers of donations.

Delmonico's critique² (this issue) concludes with an argument for public health initiatives to reduce the demand for donations, but he too seeks new strategies to

increase supply and favors incentives as long as they are ethical.³ The ethics and effectiveness of incentives to next of kin, such as priority points should any need a transplant, are subject to debate. The most benign of the ethical incentives — a gold medal commemorating the donation — is unobjectionable, but this inducement is also unlikely to be compelling for many. Another approach would increase the donor pool by presuming consent unless it is actively revoked by the prospective donor, but this is vastly unpopular, because it is seen as coercive and failing to respect the individual.⁴

¹Department of Medicine, Columbia University, New York, New York, USA

Correspondence: DW Landry, Division of Nephrology, Columbia University, P&S Building, 10-445, 630 West 168th Street, New York, New York 10027, USA.

E-mail: DWL1@columbia.edu

Clearly, we need to develop a new strategy to encourage the donation of deceased organs. Many factors must be considered in the design of such a strategy, but I would emphasize the following few.

Donor over next of kin

The prospective donor must be the focus of the strategy, not the next of kin. Although donation must be assented to by the next of kin, whether they do assent depends critically on whether the donor ever expressed the preference to donate.⁵ Thus, the successful strategy must persuade potential donors to state a preference for donation. Effective implementation requires public policy consideration of donor awareness and recognition of donor status. A national campaign to publicize the problem of inadequate organ donation and to promulgate the details of a new system would promote donor participation and assent of next of kin. A uniform standard for recognizing donor status could be achieved through a federal standard for the current declaration on the driver's licenses of some states.

Self-interest over disinterest

The strategy must engage the self-interest of the prospective donor in order to overcome the natural reluctance to face one's mortality. A significant effort may be required to overcome paranoia about the possibility of a premature harvesting of organs or to transcend squeamishness at the thought of personal dissection. Even altruistic decisions, which by definition are without direct reward, must be reinforced by some personal utility — a subjective preference shaped by the possibility of reward or the risk of punishment — if they are to reoccur reproducibly in large populations. But, beyond the absence of tangible consequence, organ donation provides scant psychological or spiritual reward for most, and the utility curves are skewed far from donation. An effective system must engage self-interest to create a new bias in favor of donation.

Virtue from self-interest

The strategy must yield a structure in which the pursuit of self-interest leads to just results. The obvious injustice in the current system falls on recipients who

languish on waiting lists while organs are discarded that could have been donated, and this will be redressed if the strategy effectively increases donation. Another is embodied in the lack of fairness of the many recipients who at one time refused to agree to donate but now receive organs ahead of those who bore the burden of agreeing. John Rawls's *A Theory of Justice* provides criteria for evaluating institutions and social structures for the extent to which they promote justice as fairness.⁶ His simple exposition on "perfect procedural justice" illustrates how an ideal system reinforces justice: If two people agree to divide a pie evenly and the one who cuts chooses his or her piece, fairness will depend on good will overcoming self-interest; in contrast, the system in which one cuts and the other chooses will always give a just result, because self-interest is aligned with a fair outcome. The result is just, not despite but especially because of each party's pursuit of his or her own self-interest. The strategy for promoting donations must align the self-interest of the prospective donor with the fair and just decision to agree to donate.

Reciprocity despite anonymity

The possibility of reciprocity must be emphasized despite the anonymous relationship of donor and recipient. Organ donation is the quintessential charitable act, a literal 'gift of self'. The altruistic impulse must be reinforced not undermined by compensation. But what then can be given? EO Wilson's *Sociobiology* provides an insight.⁷ Altruism can be conceived as an adaptive strategy that is reinforced the greater the possibility of reciprocity. Altruism, if supported by "strong reciprocity" that incorporates a propensity to reward altruists and punish the violators of altruistic norms,⁸ can operate anonymously in social structures to favor cooperation. Reciprocity must be highlighted in the strategy and an element of strong reciprocity incorporated.

Flexibility over efficiency

A strategy involving persons that regards efficiency as the sole good to be optimized devalues the individual and affronts human dignity. The strategy should not be coercive or exclusive. It must incorpo-

rate flexibility. For example, participation in any novel element must be voluntary. Participants must be able to change their minds without undue penalty.

But can these sometimes conflicting considerations be harmonized on the back of a driver's license? I propose a synthesis based on providing an option that reinforces the strong reciprocity that bolsters anonymous altruism. The resulting strategy, *voluntary reciprocal altruism*, is embodied in two questions:

- (1) I would want an organ transplant to save my life. Check one:
 - yes
 - no
- (2) In the event of my death, I agree to the donation of my organs. Check one:
 - yes
 - no
 - yes, with a preference to donate to those who agree to donate their organs

The first resolution in one stroke moves the issue of reciprocity front and center: to do unto others as you would have them do unto you. This resolution is non-binding but is designed to arouse the conscience.

The second resolution raises a doubt in the mind of the respondent: Is there a penalty for choosing "no" (selfishness) rather than the unqualified "yes" (altruism) or the qualified "yes, but reciprocally" (strong reciprocity)? And there is a penalty for a negative response: in the event that the "no" responder needs an organ, perhaps the strong reciprocators will have restricted enough of their organs to affect adversely the possibility of transplantation. Conversely, the unqualified affirmative response obtains a reward in the form of access to a new pool of organs created by the strong reciprocators. The drive found in many for strong reciprocity may by itself increase the numbers of donors, because "yes, but reciprocally" now becomes a mechanism to reward social cooperation and punish the violator of norms. Game theory allows us to sketch utility curves, but a quantitative analysis is not needed to appreciate how self-interest biases the decision and shifts the preferences toward donation. The

novel element in the system, the third choice, is voluntary, and those who aspire to pure altruism can shun it.

Note that the preference accorded the recipient who is also an avowed donor need only tip the scales if the clinical priority for competing recipients is balanced. The subtlety of the preference is important because giving an organ to a non-critically ill avowed donor rather than a critically ill non-donor would offend the conscience as a violation of mercy. Also, generosity would extend the priority to all individuals without driver's licenses, thereby covering minors, the elderly, and the profoundly impoverished.

Finally, the ill could participate in the program even if the likelihood that their organs would be accepted for transplant were vanishingly small. In fact, initially everyone on the recipient list would be eligible to simply declare themselves donors to avoid exclusion. No one would want to be on the waiting list and not be eligible for additional organs. Someone who ini-

tially chose "no" for the second question could reconsider at any time and move to a "yes" category but with the stipulation that priority status would lag 5 years to avoid 'sickbed conversions'. Those who fail to choose would be classified, as now, as a "no," and thus the 5-year lag in changing status would penalize procrastinators and encourage a timely decision.

Could such a simple paradigm really succeed?

An unscientific survey argues yes.

A sample of 115 first-year medical students were told that a new strategy to encourage donations was under consideration. When question 1 as above ("I would want an organ transplant to save my life") was presented, 100% responded yes; no one would decline transplantation in this population. When question 1 was followed by question 2 as above ("In the event of my death, I agree to the donation of my organs," the total yes votes for question 2 rose to 94% (74% unqualified yes, 20% yes but reciprocally, 2% no, 4%

no decision). The baseline agreement to donate by this group was 59%. The increase in both unqualified and qualified affirmative responses suggests that voluntary reciprocal altruism could be a robust strategy to increase donations.

A pilot study is needed.

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