If you can't sell your kidney, can you trade it?
Examining the morality of alternative kidney exchange institutions

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Revision date: May 21, 2019

1. Introduction

In nearly every country in the world (at the time of this writing only Iran is an exception) it is illegal for a person to donate a kidney in exchange for cash. Many people who need kidneys die before a suitable donor appears. At least some of these people would be willing to pay money to receive a kidney donation, and at least some people would be willing to donate a kidney in exchange for an amount of money the recipient would be willing to pay. Market arrangements of this type would save lives without coercing any participants, which is a powerful reason to permit them (Becker and Elias 2007, Cherry 2017). They remain illegal in almost all places because of even more powerful arguments against them, which lead many people to think such markets would be morally wrong despite the lives they could save.

In the absence of markets, other institutions have arisen that help find potential donors for people in need of kidney transplants. In what follows, I will refer to these as "alternative kidney exchange institutions." These institutions do not present the same kind, or same degree, of repugnance that kidney markets do (Roth 2007) which has helped many of them, though not all, win moral acceptance. But many of these institutions have at least some elements in common with commercial kidney markets (Menikoff 1998, Krawiec, Liu, and Melcher 2016). For example, the most common of these institutions is a paired kidney exchange. A paired exchange involves two patients in need of a transplant, each of whom has a person willing to donate a kidney to him, but whose kidney is medically incompatible with the intended recipient.[1] If each donor has a kidney that is suitable for the other's recipient, then each donor can agree to donate to the other's recipient, on condition that the other donor do likewise. Such arrangements save two lives, reduce total medical expenses by eliminating the need for dialysis for the recipients, and do no harm to anyone else as long as the donors would not have agreed to donate their kidneys to anyone else.

Paired donations and many other alternative kidney exchange institutions are legal in the United States, and generally not viewed as morally problematic. But most of the same arguments that are used to question the morality of markets for kidneys would, at least on the surface, also question the morality of these institutions. For example, one very common argument is that human organs should not be treated as commodities, as things that can be given away in exchange for other things. But a paired kidney donation does so; the arrangement is, in effect, a trade of kidneys in which each donor gives away her own kidney in exchange for something she wants, namely, a donation to her paired recipient which she cannot make herself. The kidneys are being bartered rather than sold – traded for goods rather than for money – but they are being treated as commodities, as instruments to be given up for other ends. All of the many other types of institutions to increase the number of kidney donations, such

[1] Throughout this paper, I will use female pronouns to refer to donors of kidneys and male pronouns to refer to recipients, so that the pronouns easily and naturally distinguish between donors and recipients.

as giving kidney vouchers for people who agree to donate, helping to pay funeral expenses of deceased donors, and more – are similarly subject to criticism on at least some of the same grounds that kidney markets are criticized.

In this paper, I review six common arguments against kidney markets, and apply them to thirteen alternative kidney exchange institutions. I ask whether the arguments that oppose kidney markets also oppose these alternative institutions for inducing kidney donations. If they do, but the other institutions are nonetheless morally acceptable, then I seek distinctions between markets and these other types of institutions that can explain why one is moral and one is not. I aim to address two important questions by doing this. The first is to understand the moral difference between markets and other types of exchange institutions. If barter, or some other form of kidney exchange, is morally acceptable but markets are not acceptable, then what is the key difference between the two that creates a moral distinction between them? Given a range of institutions, with undirected, altruistic donation on one extreme and commercial markets on the other, at what point in that range do moral objections begin to have force? The second question is whether, and how, we might regulate markets to address these moral objections. Which features of markets must we eliminate in order to create a morally acceptable institution for organ exchanges, and which features can we retain? The answers to these questions may enable society to construct market-like institutions for exchanging kidneys that would be morally acceptable and would save as many, or nearly as many, lives as full-fledged kidney markets might do.

I find that most of the arguments made against kidney markets also apply to most of the other kidney exchange institutions that society appears to deem morally acceptable. This implies that those arguments, though valid, are not strong enough to justify foregoing the opportunity to save lives that those institutions offer. If so, they should not be strong enough to justify banning kidney markets either, since markets would save more lives. In contrast, I find two arguments that apply only to markets and other exchange institutions that society has chosen not to use. Only these arguments can explain why some exchange institutions are morally acceptable and others, including markets, are not. They have a key common element, which is that they both examine the motives or circumstances of the person donating the kidney. This suggests that the possibility of donations by people with bad motives, or in bad circumstances, is the primary moral barrier to creating kidney markets. The key difference between acceptable and unacceptable exchange institutions is that the acceptable ones can be used only by people who are acting for a limited set of acceptable reasons, while the unacceptable ones might be used by people with a wider range of reasons for selling a kidney, some of which society cannot endorse. Regulation that could ensure that kidney donors had circumstances and motives for donating that society could endorse, if it were possible, could remove the moral barriers to allowing a form of markets in kidneys, and save the lives of many people who now die for lack of a kidney donor.

2. Alternative institutions for exchanging kidneys

In the absence of enough altruistic donors to provide kidneys for all recipients who need them, and the absence of a market in which kidneys could be readily purchased, a wide range of different institutions have been created, or proposed, to induce donations of kidneys without paying money to the donors. In this section, I review thirteen such institutions. I examine how they differ from the two extremes of purely altruistic donation and commercial markets, what incentives they provide for donors to offer kidneys to recipients, and what moral issues they might raise.

2a) Directed donation

The simplest variation on purely altruistic donation is directed donation, in which the donor does not make her kidney available to the recipient with the greatest need for it, but specifies something about who will receive the kidney. Some donors choose to specify a group of recipients, but allow the kidney to go to the recipient within that group in greatest need of the kidney. Ross (2006) describes cases of donations directed to any single mother, or to any African American on the grounds that African Americans have longer average wait times on the list of recipients. More commonly, donors direct that the kidney they donate go to a specific individual, usually a relative or close acquaintance, although occasionally a celebrity or other public figure (Hilhorst 2005). There is some moral difference between this and a genuinely altruistic donation. A directed donation is not purely altruistic; the donor is satisfying some preference of her own by having the donated kidney go to one recipient rather than another who may have a greater health need. This may open the donation to moral question, and particularly so when the donor is specifying a single recipient to whom she has a family or emotional connection. On the other hand, when someone makes a non-directed donation, with no relationship to the recipient, it is not clear whether she should be allowed to take a risk with her own health (even a small one) to benefit someone to whom she has no relationship. Donating to a relative or close acquaintance, to whom one might have a duty of rescue, would be less subject to question about motives because the emotional connection provides a good motive for accepting the risks of donation (Ross et. al. 2002, Hilhorst 2005, Steinberg 2011).

The next four institutions all involve inducing a person to donate a kidney by getting access to a different kidney, in one way or another, in exchange; in effect, trading one kidney for another.

2b) Paired exchange

As discussed above, a paired exchange occurs when two donors, each with a family or emotional connection to a recipient who can take the kidney of the other donor, makes a pair of directed donations. That is, there is a donor A, who has a connection to recipient A' but cannot donate her kidney to him, and a donor B with a connection to recipient B' who cannot donate her kidney to him. In a paired exchange, A donates to B' in exchange for B donating to A'. Like any other directed donation, the motives of the donors can be questioned since they are presumably benefiting from the fact that their donated kidney is going to a specific recipient of their choice, rather than to a person they do not know. However, in this case the donors are not receiving any benefit directly from their own; they benefit by giving up their kidneys primarily - perhaps solely - because their donation induces another donation from which they do benefit, through the health of the recipient to whom they are connected. A paired exchange is thus essentially a trade of kidneys; each donor is giving a kidney in exchange for another one being given to her recipient. Although it remains in some sense an altruistic exchange, since neither donor is receiving direct benefit, the bilateral agreement makes a paired exchange look substantially more like a market transaction than does a single directed donation.

In addition to improving health for the recipients, paired exchanges can reduce medical expenditures, because like all donations, they eliminate the need for costly dialysis. Rees et. al. (2017) observe that it is cheaper to identify a donor-recipient pair in a developing country who have no access to dialysis, fly them to a developed country, and conduct a paired exchange, than it is to pay for multiple years of dialysis for the developed-country recipient. The developed country's health system would save money even if it paid all expenses for the developing-country pair's transport and medical expense. They argue

that a system of global kidney exchanges like this would allow citizens of developing countries access to developed-country medical care at no cost to themselves, and benefit the developed country as well.

2c) Unbalanced exchange

An unbalanced exchange is a type of paired exchange, in which one of the donors could have donated directly to her recipient, but chooses to participate in the exchange instead. That is, A can donate her kidney directly to A' or to B', but B cannot donate to B', only to A' (Ross 2006). Neither A nor A' derives more benefit from the exchange than they would from A donating to A', and may derive less if B's kidney is not as good a match for A' as A's kidney would be (which may be the case if A is genetically related to A' and B is not). Attempts should be made to ensure that A' gets a kidney as least as good as the one he would have gotten from A (Steinberg 2011). An unbalanced exchange saves only one life rather than two, since the life of A' would be saved by A's donation without the exchange.

2d) Three-way exchange (balanced or unbalanced)

There can be cases where a paired exchange is impossible but a three-way exchange is possible. In such a case, A has a kidney she cannot donate to A' or C' but can donate to B', B has a kidney she cannot donate to A' or B' but can donate to C', and C has a kidney she cannot to donate to C' or B' but can donate to A'. Three-way exchange is essentially the same as paired exchange except that there are more participants. They are more complicated to carry out, primarily because all the surgeries must be carried out simultaneously (to prevent one pair from reneging on the agreement after that pair has received its kidney but before it has donated) and the more people are involved, the more difficult it is to find a facility to handle the surgeries. Exchanges with more than three pairs are possible and morally similar to three-way exchanges, but very difficult to perform because they require a large number of simultaneous surgeries. Three-way exchanges can also be unbalanced if one of the donor-recipient pairs could have donated directly but instead choose to participate in the exchange in order to allow more transplants to take place.

2e) Cascade

A cascade, also called a chain, is similar to an exchange except that it involves one donation from a donor with no corresponding recipient, and one recipient who has no corresponding donor. That is, recipient A' (who does not have a corresponding donor A) receives a kidney from B. B', who cannot receive a kidney from B, gets one from C. C' gets one from D, and so on until a final donor Z, who does not have a recipient Z', donates a kidney to Y' (Ross 2006). Cascades can be much larger than exchanges because they do not need to be carried out simultaneously. Each donor makes her donation before her recipient receives a kidney, with the unpaired recipient getting the first kidney and the unpaired donor (whose donation may be non-directed, or may be directed for the purpose of enabling the cascade) making the last donation (Tenenbaum 2016). Cascades of up to 30 transplants have taken place (Sack 2012). Cascades feature a combination of people who are effectively trading kidneys and two people (the unpaired donor and recipient) who are not trading (because one gives nothing and one gets nothing in return).

The next three institutions involve inducing a kidney donation, not by giving a kidney in exchange now, but by giving priority for one at a later time.

2f) List-paired exchange

A list-paired exchange is similar to a paired exchange, except that it involves a pair making a trade, in effect, with the list of patients awaiting kidneys instead of with a particular donor-recipient pair (Ross 2006, den Hartogh 2010). In a list-paired exchange, donor A, who cannot donate directly to A’, agrees to make a non-directed donation which will go to the patient on the list with the highest priority for A’s kidney, and in exchange A’ receives the next available non-directed donation of a kidney he can receive. Unlike a paired exchange, it involves donations that are not directed by the donors. In particular, A’s donation goes to the recipient on the list with the greatest need. However, it requires that a kidney from a non-directed donor who is not party to the exchange must be given to A’ rather than to someone who has a greater need than A’.

2g) Opting in

Sternberg (2004) proposes an arrangement called opting-in, in which a person agrees to donate a kidney upon their death (if possible) in exchange for receiving increased priority for getting a kidney while alive if she should need one subsequently. Sternberg argues that opting-in “would simulate the reciprocal altruism observed in nature that sociobiologists believe enhances group survival.” Only one person is (immediately) involved in opting-in, and person who opts in makes a non-directed donation after death. It does require ensuring that the person who opts in does not withdraw from the arrangement at the end of her life; the decision to donate postmortem has to be irrevocable. An opting-in system, which also allowed first-degree relatives of deceased donors to have priority, was adopted in Israel in 2008. Stoler et. al. (2016) found that this increased the authorization rate for organ donation.

2h) Kidney vouchers

A kidney voucher is given to a person who makes a non-directed donation today, in exchange for allowing someone else to get priority for a transplant in the future. It is similar to a list-paired exchange, except that the person who gets priority need not be on the waiting list at the time of the donation; the priority is used later. It is also similar to opting-in, except that the priority goes to someone other than the donor. The Advanced Donation Program, which offers such arrangements, allows the donor to name up to five people who can receive a kidney (Ross et. al. 2017). The first use of kidney vouchers was by a donor whose grandson was likely to need a kidney in the future (Taylor 2017). Allowing a donation today in exchange for priority in the future has the advantage that it produces the donation earlier, so that no one dies while waiting for it. Also, receiving the kidney today means that the arrangement cannot fall through if the donor subsequently develops a medical issue that would make the kidney unusable. The voucher does not guarantee that one of the named beneficiaries will get a kidney; it only guarantees some degree of priority for a kidney if a suitable one is available at the time the voucher recipient needs one.

The remaining institutions induce a donation by giving something in exchange that is not a kidney nor priority for a kidney, but not quite cash. Some of these have only been proposed and not implemented.

2i) Mixed-organ exchange

This arrangement is the same as a paired exchange, except that one pair needs some other donation rather than a kidney. Samstein et. al (2018) describe exchanging a kidney for a lobe of a liver. From a moral standpoint it is very much the same as a paired exchange except the exchange is not like-for-like;

it is the exchange of a kidney for something other than a kidney. There are some morally significant differences; notably, the risks are greater for some organ transplants than others, which raises questions about the fairness of the exchange, and makes it harder to ensure that all parties have validly consented (Samstein et. al. 2018). An exchange for a different type of organ could be interpreted as a precedent for allowing exchanges for objects that are more different than a lobe of a liver.

2j) Exchange for medical treatment

Roth (2007) and Satz (2008) both raise the possibility that people who need medical treatment that they cannot afford to pay for might volunteer to donate a kidney in exchange for the care they need; in particular, if the care they need is surgical, they are already in the operating room. This goes a step beyond trading an organ for a different type of organ, but keeps the exchange within the realm of medical care – a kidney donation in exchange for a heart bypass, for example.

2k) Exchange for financial considerations

Roth and Satz also both raise the possibility that people might use a kidney donation in other types of financial transactions; as collateral on a loan, or for debt repayment. These types of arrangements, if permitted, would be a large step beyond exchange for medical treatment, because they would allow the donor to receive a broad range of things in exchange for her organ, not just another organ or medical services. In that way, they would be very similar to exchanging a kidney for cash, since the cash could be used to buy a broad range of other things.

2l) Reduced registration fees for donor registry

Until 2005, the state of Georgia offered drivers a financial discount (less than $10) on fees for driver's license registration if they agreed to register as postmortem organ donors. According to Howard (2007), "In 2005 Georgia had one of the highest registration rates for organ donation in the country." However, it was unclear whether people who had been given discounts on registration in exchange for donation had a genuine desire to donate or had registered only to get the discount; for this reason, such people were not always considered to have truly consented to participate in donation (Childress and Liverman 2006, Howard 2007).

2m) Paying funeral expenses for postmortem donations

Although it is impossible to pay people for donations after death, it is possible to compensate heirs for making the decision to donate the organs of the deceased. Howard (2007) raises the possibility of making an in-kind exchange; offering assistance with funeral benefits for the deceased in exchange for organ donation. Pennsylvania proposed to pay $300 for such donations in 2000; the program was changed to pay for food and lodging costs for the donor's family in order to avoid legal conflicts with the National Organ Transplant Act, but was abandoned in 2002 on the belief that this benefit was not desired by donor families (Menikoff 1999, Snowbeck 2002). These avoids the stigma of paying cash for the donation and ensures that the benefit that is given for the donation goes, in some sense at least, directly to the deceased. Those are the only significant differences between this arrangement and a cash market for organs of the deceased.

3. Elements of Markets in Alternative Exchange Institutions

The question of whether goods should be traded in markets or not is usually presented as a binary choice – there is "markets" and there is everything else, with no overlap in the categories or blurriness in the boundaries, and society must pick "markets" or "no markets". However, as the previous section shows, the reality is that many institutions lie somewhere along a continuum between a pure market system of allocating goods, and a system of purely altruistic donation. They incorporate some elements of gift-giving with some elements of market exchange (Koplin 2017). If market exchange is morally problematic, then we would expect the institutions that include more elements of market exchange to be more problematic than the ones that include fewer. Or if the moral problems with markets spring from some features of markets and not others, then institutions that include the problematic features of markets will be problematic and those that include the non-problematic features of markets will be acceptable. I focus on three differences between an undirected kidney donation and kidney sales that could be a source of moral problems with exchange institutions that have similarities to markets.

The first difference I consider is whether the kidney is given in exchange for something else. In a market sale, the donor is using her kidney purely as a means to obtain cash, which she can then use to obtain anything else she may want to have. In an undirected donation the donor receives nothing at all in exchange for the kidney. Figure 1 shows the institutions listed above, ordered from least exchange to most exchange. Directed donations include only a small element of exchange – all the donor gets is the ability to designate the recipient of her donated kidney, either an individual or a member of a group.

Figure 1. Kidney exchange institutions, ordered from least exchange-like to most exchange-like

	Institution	
Least exchange	Undirected donation, unbalanced exchange	No exchange
	Directed donation	Right to select recipient
	Paired (or more) exchange, list-paired exchange, mixed-organ exchange, opting in, vouchers	Exchange for kidney
	Medical treatment exchange, *other goods exchange*	Exchange for something else
Most exchange	*Donor registration payment,* *payment of expenses for deceased donors,* *market sale*	Exchange for cash or or nearly-cash

Notes: Institutions that have not been used, or have been used and been stopped, are in *italics*. Cascades are the same as paired donation for the pairs involved and the same as undirected donation for the initial donor. Unbalanced exchange refers to the pair that could donate directly; for the other pair it is the same as paired exchange.

Designating a member of a group, such as a single mother of children, produces no tangible benefit to the donor, and is almost equivalent to making an undirected donation. Donating to a specific individual, particularly when the individual has a family or emotional connection to the donor, is a step closer to getting something in exchange for the kidney. The benefit doesn't go directly to the donor, but she surely benefits indirectly from extending the life of the recipient. Paired exchanges have a much stronger element of exchange; each donor gives up her kidney on condition that the other donor do likewise. The donor still doesn't receive anything except indirectly from extending the life of her partner; but with a directed donation that benefit comes from the kidney she is giving up, whereas in a paired exchange, it comes from someone else's kidney, obtained only on condition of giving up the donor's kidney, from which the donor now receives no benefit at all. In the case of opting in, the exchange is still more direct because it involves the donor directly; she agrees to make a postmortem donation in exchange for kidney priority if she needs it later in life. It is not the same as an exchange for cash, because the donor does not know if she will ever need that priority, but she receives something that has, at least, option value. Vouchers similarly exchange a postmortem donation for priority, this time for someone other than the donor. They are less like a cash exchange than opting-in is, in that the donorwill not benefit except indirectly; they are more like a cash exchange in that it is much more likely that the priority will be used in the near future when the agreement is made. Mixed-organ exchange is much like paired exchange, except that the exchange is not kidney-for-kidney, but something else. Exchange for medical treatment is a known benefit to the donor in exchange for the kidney now; it differs from a cash exchange only in that the exchange is in-kind rather than for money. Paying people to donate, and paying funeral expenses of deceased donors, are the closest of all to cash exchanges for organs. They differ only in that in the former case the donation is postmortem rather than immediate, and in the latter case that the donor's heirs, rather than the donor, gets the benefit (or perhaps, the seller is selling someone else's kidney rather than her own).

A second difference between the extremes of undirected donation and market sales is the extent of control that the donor has over the arrangement. In the case of an undirected donation the donor has no influence over what is done with the kidney once she donates it, nor can she gain control over anything else as a result of the donation. In a market sale, the donor can control which buyer gets the kidney or in less restrictive ways can control what is done with the kidney if she chooses to, and she takes control over the money she gets in exchange. Figure 2 shows the institutions listed above, ordered by how much control the donor gets; the list is separated into two groups; institutions that give the donor control over the donated kidney, and those that give the donor control over something else, either a different kidney, other goods, or cash. Intermediate institutions offer varying degrees of control to the donor. Directed donation, paired exchanges, cascades, and mixed-organ exchanges all allow the donor to determine who gets the kidney she gives up, except for the one unpaired donor in a cascade. Opting in and vouchers do not give the donor any control over the kidney she gives up, but give her some form of control (in terms of a higher priority) over some other kidney. Donor registration and payment of funeral expenses also do not give the donor any control over the donated kidney but give control of money. Exchanges for medical services are closest to undirected donations in that the donor gives up control over the kidney and has little control over what she receives in exchange; she gets whatever medical care she needs but the decision about what care she gets remains largely with her doctor. Exchanges for other goods are similar except that the donor usually has somewhat more control over other goods than she would have over medical services.

Figure 2. Kidney exchange institutions, ordered from least control to most control

Institution

	Control of the kidney		Control of other	
Least control	Undirected donation	None	Undirected donation	None
			Opting in, vouchers	Other kidney
	Directed donation, unbalanced exchange, paired (or more) exchange, list-paired exchange, mixed-organ exchange, *market sale*	Choose recipient	*Medical treatment exchange*	Medical services
			Other goods exchange	Goods
Most control			*Donor registration payment, payment of expenses for deceased donors, market sale*	Cash

Notes: Institutions that have not been used, or have been used and been stopped, are in *italics*. Cascades are the same as paired donation for the pairs involved and the same as undirected donation for the initial donor. Unbalanced exchange refers to the pair that could donate directly; for the other pair it is the same as paired exchange.

The third difference I consider is the range of motivation that the donor can have. An undirected donor, if acting rationally, must necessarily be acting out of altruism towards the recipient. A kidney seller could be acting from any motivation that she could satisfy using the cash she receives in exchange for the donation, which includes an extremely wide range of possible motivations. Figure 3 shows the institutions listed above, ordered by the size of the range of motivations that the donor might have. Similarly, paying for donor registration or funeral expenses will attract donors with any motivation that can be satisfied with cash. Paired donations and mixed-organ exchanges, by contrast, can only be motivated by altruism towards the donor's paired recipient (as well as towards the recipient of the donor's kidney, which is always a possible motivation) and by any motive the donor has that can be satisfied by prolonging the paired recipient's life. In unbalanced donations, the donor-recipient pair which could donate directly can only be motivated by altruism towards the pair which cannot do so, since they could achieve other goals by direct donation. Directed donations to a recipient not connected with the donor must be motivated purely by altruism, although the altruism is limited to a specific individual or group rather than to humanity as a whole. Vouchers, like paired donations, are motivated by altruism towards the likely recipient or recipients of the vouchers, while opting in is motivated by the desire to protect one's own health. Medical exchanges similarly are motivated by the desire to protect one's health, while exchanges for other goods are motivated by whatever motives can be satisfied with the goods received in exchange.

All three figures suggest that, in general, the institutions that have more of the characteristics of markets are more likely to be unused, as markets are unused. This confirms the intuition that institutions that are more like markets are more likely to be morally problematic, and those that are less like markets are morally acceptable. Institutions that exchange nothing for a donation, or give

Figure 3. Kidney exchange institutions, ordered from narrowest motivations to broadest motivations

	Institution	
Altruistic only	Undirected donation, unbalanced exchange	General altruism
	Opting in, *medical treatment exchange*	Own health
	Directed donation, paired (or more) exchange list-paired exchange, mixed-organ exchange, vouchers	Relationship to recipient
	Other goods exchange	Desire for goods
Many motivations	*Donor registration payment,* *payment of expenses for deceased donors,* *market sale*	Desire for cash

Notes: Institutions that have not been used, or have been used and been stopped, are in *italics*. Cascades are the same as paired donation for the pairs involved and the same as undirected donation for the initial donor. Unbalanced exchange refers to the pair that could donate directly; for the other pair it is the same as paired exchange.

something very limited exchanges such the choice of the recipient or a different kidney in exchange, are acceptable, while those that permit more general exchanges, even if not exchanges for cash, are not acceptable. Institutions that allow a donor control over the use of her donated kidney are acceptable, but those that allow her to control anything other than the later use of another kidney are not acceptable. Institutions that allow donors to act only general altruism, their own health, or the health of a recipient with a family or emotional connection are acceptable, but those that allow donors to act out of broader motivations are not acceptable. In all cases, with just one exception in Figure 3, there is a clearly drawn line between institutions that are too much like markets and hence morally problematic, and institutions which are enough like altruistic donation to be acceptable.

4. Moral arguments against kidney markets

There are at least two separate reasons why the non-market kidney exchange institutions described in the previous section should be allowed. First, they save the life of a recipient while also increasing the well-being of the donor or her heirs (at least in the eyes of the person who voluntarily consents to the exchange). If both donor and recipient are better off because of the transaction, then it should be permitted, either on straightforward utilitarian grounds, or via the Pareto principle, which makes this recommendation without the need for any kind of aggregation of individual well-being. Second, if both the donor (or heirs) and the recipient genuinely desire to make this transaction, and no other person is

harmed by their doing so, then respect for their moral autonomy and/or their freedom requires that they be permitted to do what they deem best (Cook and Krawiec 2018).

Of course, these arguments also support allowing kidney markets. Since despite these arguments, kidney markets are widely believed to be immoral, there must be strong countervailing arguments about why kidney markets are morally problematic. In this section I review six such arguments, and ask whether they also apply to the exchange institutions described in the preceding section, and why they do or do not apply. The six arguments against kidney markets that I review are:

A. Kidneys should not be treated as commodities.
B. Kidney markets diminish the social value of altruistic donation and crowd out such donations.
C. Kidney markets would encourage people who do not understand the implications of kidney donation to agree to donate when, with full understanding, they would choose not to.
D. Kidney markets will encourage coercion of potential donors.
E. Kidney markets will exploit poor or otherwise disadvantaged donors.
F. Kidneys should always go to the recipient who receives the greatest health benefit from them.

I consider each one in turn to examine whether it makes a distinction between exchange institutions that are allowed to operate and those are not, that morally justify the one set and not the other. If an argument does not help us make that distinction, then it is not sufficient to explain why institutions, including markets, should or should not be allowed to operate. Those arguments that can explain which alternative institutions are acceptable are the ones that can also explain why markets are not acceptable despite the good they would do in terms of lives saved.

4a. Commodification

Probably the most common and most fundamental argument against kidney markets is that it is morally wrong for kidneys to be treated as commodities. This is argued even for postmortem donations (Childress and Liverman 2006) and even more in the case of a living donor. This argument can be made against most alternative kidney exchange institutions as well (for examples, see Menikoff 1999 on paired exchanges and opting-in arrangements, and Koplin 2017 on vouchers). While there is no problem with many goods being exchanged for money in markets, this argument claims that it is not right for people to be able to buy or sell kidneys. What makes it impermissible for kidneys to be exchanged in markets? And do those same factors make it impermissible for kidneys to be exchanged in alternative exchange institutions too?

According to Anderson (1993), goods should be traded in markets only if markets value those goods in a way that they can properly be valued. Anderson holds that value is pluralistic; different goods ought to be valued in different ways. Markets value goods according to use. Anderson writes (p. 144-45):

> The norms structuring market relations that govern the production, circulation, and valuation of economics goods have five features that express the attitudes surrounding use and embody the economic ideal of freedom: they are impersonal, egoistic, exclusive, want-regarding, and oriented towards “exit” rather than “voice.”

Goods should be traded in (largely unregulated) markets only if these five norms can correctly be applied to them. Where those five norms do not apply, we may have to limit markets, or not allow them at all. Looking at each of these five norms in turn:

1) Market exchange is impersonal because it permits goods to be exchanged between strangers who have no other relationship between them. This norm does not apply to goods if they should be exchanged only in the context of some other relationship between the buyer and seller. The canonical example of a non-impersonal good is sex, which should only be exchanged between two people who have a committed relationship to one another of some kind.
2) Market exchange is egoistic because each person acts solely according to his or her own interests without regard to the interests of other people. This norm does not apply to goods if they should be bought or sold only when the buyer or seller has given proper consideration to the interests of someone other than himself or herself. For example, one ought not buy an engagement ring for one's fiancé without some thought about whether the fiancé will like it.
3) Market exchange is exclusive because it requires only the agreement of the buyer and seller, not anyone else. This norm does not apply to goods that should not, or cannot, be exchanged without the consent of third parties. For example, police protection and other public goods should be purchased by the community on behalf of all members, not individually in markets.
4) Market exchange is want-regarding because it takes place whenever a buyer wants a good and a seller is willing to provide it, without considering what motivations the buyer and seller have. Goods that should only be consumed for certain reasons should not be sold in markets without some means of verifying the buyer's (or seller's) motive. For example, if it is acceptable to use marijuana for medical reasons but not for recreational ones, then marijuana sales must be limited to those buyers who have a medical need for it.
5) Market exchange is oriented towards "exit" rather than "voice" because a buyer who does not wish to transact a certain good at a certain price can do nothing except to refuse to transact with the seller (and similarly a seller who does not wish to transact at the current price has no alternative except to not sell). In a market, there is no way for a buyer to ensure that he or she has access to a good if no one is willing to sell it at an agreeable price, and conversely for sellers. This norm does not apply to goods if it is unacceptable for a buyer to be excluded from consuming them. For example, low-income housing may need to be provided by the government to avoid the problem of people being forced to be homeless because no one will sell, or rent, to them at a price they can pay.

Many authors have argued that one or more of these norms cannot apply to kidney sales. The first norm, impersonality, is not problematic for kidney donations. The ideal of anonymous undirected donation is also impersonal, and most other kidney exchange institutions are required to be impersonal. For example, in paired donations, the pairs are usually encouraged not to meet at all, or only until after the donations have been completed (Wallis et. al. 2011). However, the other four norms can be problematic.

1) It may be improper for someone to donate a kidney egoistically, solely in order to get money that would let them achieve some end of their own; perhaps someone should not donate an organ unless one is, at least partially, taking the needs of the recipient into consideration.
2) Organ donation is certainly not exclusive; all those who would be affected by the death of the recipient are also affected by a donation that preserves his life. (There is also the possibility that sales of kidneys reduce the non-monetary reasons that people have to donate altruistically; I will treat this as a separate argument since it has been widely advanced separately from arguments about commodification.)

3) Perhaps organ donation should not be want-regarding; people may have reasons to sell a kidney that are not acceptable to society. For example, someone who wishes to die should not be allowed to sell a kidney to weaken their own health, nor should someone in dire economic circumstances have to sell a kidney in order to survive.
4) Buyers of kidneys need to have some sort of voice – it is not acceptable that someone should die because they cannot get a kidney at a price they are able to pay.

However, most of these arguments also apply against at least some of the various non-market kidney exchange institutions that are operating. Taking these four arguments in turn:

Egoism. Allowing people who opt in for deceased donation to get priority for a kidney while alive if they need one is definitely egoistic; people might well do it without considering any needs other than their own. That is the only institution that is operating where the donor benefits directly. All of the other exchanges that are operating either do not benefit the donor, or only benefit the donor indirectly, by benefiting a family or emotional relative. Donors in exchange institutions, including mixed-organ exchanges, could participate without considering of the needs of any of the people involved in the transaction except for their paired recipient. Considering the preferences of their partners but not of the recipients of the kidney they are donating might be enough to satisfy this norm, or it might not. In an unbalanced exchanged, it is not a problem for the pair which could donate directly; their decision to participate in the exchange implies that they have the needs of the other pair in mind in their decision. It is a similar problem for all more complex exchanges, and for cascades except for the initial altruistic donor, who cannot be acting egoistically. Directed donations have this problem only if the donor is satisfying her own preferences by specifying the subgroup, although presumably she would still have the well-being of the recipient in mind as well. All of the institutions not in use fail this norm, for they all give some kind of compensation to the donor for donating, for registering to donate, or for consenting to a deceased donation of a relative, and a donor thinking only of her own interests might readily agree to them. Thus, if kidneys should not be commodified because people who exchange them as commodities might act egoistically, then at least some of the existing exchange institutions suffer from that problem as well; and if donating in order to benefit from a continued relationship with a partner counts as egoistic, then nearly all of them suffer from it.

Exclusivity. All of the other exchange institutions have a problem with the norm of exclusivity as well, because they all have the same external effect that they benefit anyone who benefits from extending the life of the recipient. (If we worry about crowding out of altruistic donations, they all have the potential to do that, as I will discuss below.) If this is a reason that we cannot allow commodification of kidneys in markets, it is also a reason why we cannot barter kidneys in paired exchanges, cannot allow people to be paid for agreeing to register for postmortem donation, and so on.

Want-regarding. With regard to the norm of being want-regarding, most of the operating exchange institutions are not problematic; they are useful only to people with a fairly narrow range of motives which are likely to be acceptable to society. They do not permit donors to act on a wide set of possible motives, some of which society may not be able to endorse. The motives of undirected donors are almost certainly acceptable, unless we think people might have bad reasons to donate altruistically. But altruism is normally viewed very positively, and it is hard to think that there might be bad reasons for altruistic donations. When undirected donations were first done, there was concern about whether people might have bad reasons for making such donations; but that concern has been alleviated by

experience (Hilhorst 2005, Ross 2006). Similarly, in all forms of paired exchanges, we are not normally concerned about the reasons of donors; they are presumably acting to assist their partner, which is an acceptable motivation. Donors who opt in in exchange for priority are acting to insure their own future health, which is also an acceptable motivation, and donors who donate in exchange for a voucher are acting to insure the health of the people they designate, also an acceptable motivation. This norm is, however, a problem for most of the exchange institutions that are not being used. People might have many reasons for taking money to register as an organ donor, and some of those reasons might not be ones society can endorse. It is less of a problem for cases where people get goods in exchange, such as medical care, or paying funeral expenses for the deceased. Although, since those expenses would presumably have to be paid out of pocket if a kidney donation did not defray the cost, allowing payment for those goods is in some sense equivalent to paying cash and hence could be problematic, depending on what reasons the donor had for wanting cash to be available for other purposes. Hence, this argument is able to explain why kidneys should not be commodified in markets, but using them in paired donations and other institutions where they can only be pursued for a limited number of reasons, all of which society could endorse, is acceptable.

Voice not exit. All of the other exchange institutions have the difficulty that they are oriented towards exit rather than voice. A donor-recipient pair that cannot find a compatible pair has no alternative except to do without a donor. Payments to people who register for postmortem donation do not guarantee that anyone will actually register. Directed donations allow for the possibility that a recipient will be left without a kidney because no one chose to donate to him, or to his group. Even undirected donation has a problem with this norm; it offers no guarantee that a recipient who needs a kidney will be given some kind of voice, some mechanism, that will ensure that he is able to find a compatible donor. So this cannot be the reason that kidneys should not be commodified in markets; we have no institutions of any kind that can satisfy this norm, because we are reluctant to compel a person who has two healthy kidneys to donate one against her will, only because of the recipient's need.

In summary, of the five reasons that Anderson offers for not allowing goods to be commodified for trading in markets, four are applicable to kidney markets. Of these four, at least two, and possibly a third, are also applicable to the other exchange institutions that are currently in use. They all plausibly fail the norm of exclusivity and the norm of voice not exit. Whether they fail the norm of egoism depends on whether acting for the benefit of a genetic or emotional relative is deemed egoistic or not. The one norm that the operating exchange institutions all pass, and the ones that are not in use do not, is the norm of want-regarding. According to this argument, people should be allowed to exchange kidneys for some form of compensation only when we do not need to examine their motives for doing so. In directed donations, all kinds of organ exchanges, opting-in, and vouchers, the scope of motives that people can have for donating are unlikely to need scrutiny. But in market sales, and also in some of the other unused institutions such as exchange for goods or for payment of funeral expenses, there could be grounds for concern that donors were donating for unacceptable reasons.

4b. Crowding out

A second reason that we might not want to allow sales of kidneys in markets, which is related to the question of exclusivity in the preceding section, is that allowing monetary incentives for the provision of goods can crowd out non-monetary incentives for providing them, such as the warm-glow effect of altruistic donation (Capron 2014). This effect was first documented by Titmuss (1970) in the case of

blood donation, and has since been found in a number of other cases; for a recent summary see Bowles (2016). There are two related reasons why crowding-out effects might occur. The first is that people who wish to donate a kidney because it perceived as a generous or self-sacrificing thing to do, might be less inclined to do it if kidney donation was not perceived in that way. Although a person could make an altruistic donation even if other people were paid for donations, the fact that other people were paid could change the donor's perception of the moral quality of an altruistic donation. Or, if a person wishes to be knows as someone who does altruistic things, they might not be able to achieve this through kidney donation if others know that they donated a kidney but do not know whether or not they were paid to do so. The second is that allowing kidney sales gives a kidney an exchange value in addition to its biological value. Someone who might have been willing to give up the kidney' biological value without compensation, might be unwilling to give up its monetary value without being compensated, particularly if it is known that other people are being compensated; donors may not want to be "suckered" into giving away something they might have sold for money.

It is not clear whether other exchange institutions would create crowding-out effects; indeed, it is not even clear if kidney markets would do so, as there is little empirical evidence on the question (Satz 2008). It is certainly possible that alternative exchange institutions might do so, for either of the two reasons that markets might do so. Directed donors, and all forms of organ exchanges, benefit a specific donor (or perhaps group of donors in the case of group-directed donations). The perception that one should donate a kidney in order to help a sick genetic or emotional relative might crowd out the perception that one should donate a kidney out of more general altruism. Opting-in conveys the message that one should donate in order to protect one's own future health, and vouchers similarly convey the message that one should donate a kidney in order to assist a relative. Hawryluk (2016) describes one of the first voucher donors, Howard Broadman, concluding that he should get something of value in exchange for his kidney. The exchange institutions that give the donor a more direct benefit, like paying for organ donation registration or exchanging medical treatment for kidney donation, imply even more strongly that a kidney is something one should use in exchange for some other benefit, not something one should donate for altruistic reasons. Howard (2007) suggests that requests for portmortem donation from heirs that appeal to altruism might reinforce incentives for altruistic donation rather than crowding them out. It is thus quite uncertain that these effects create substantial crowding-out; but it's also uncertain whether markets would do so. And even if markets did create crowding out, the price of kidneys would almost certainly be high enough to ensure a net increase in the supply of donated kidneys. So if the possibility of crowding out altruistic donations is a reason not to have kidney markets, it is probably also a reason not to have at least some of the other exchange institutions, including the ones that are currently in use.

4c. Lack of informed consent

The claim that a kidney donor benefits from making a donation (compensated or not) is based on the idea that the donor chooses what is in her best interest, and understands the consequences of her actions well enough to choose correctly. Institutions that accept donations from donors who do not understand what they are agreeing to do are morally problematic since it may not promote, and may harm, the well-being or interests of the donor. Any form of kidney donation may have this problem because the donors have to understand the medical risk that they are taking in undergoing the surgery to remove their kidneys, and the risk that they are taking in going through the remainder of their lives

with only one kidney rather than two.[2] They also have to understand the risks that the transplant may not be successful for the recipient. Before a person is allowed to make an undirected donation, they must receive a considerable amount of information about the consequences of their decision for them and for the recipient, and they must demonstrate that they understand this information and that they remain willing to donate.[3]

Markets may be a problem if they encourage people to make an uninformed decision to donate. There is reason to think that they might do so. Someone who is donating a kidney in order to receive money might focus on the consequences of receiving the money, which could distract them from understanding of the risks of the surgery and its aftereffects. However, society allows people to be paid for many other activities that entail medical risk, such as serving in the armed forces, working in nuclear power plants or playing violent sports (Becker and Elias 2007; Satz 2008; Cook and Krawiec 2018). And other kidney exchange institutions present similar distractions. A directed donor who is giving up a kidney in order to save the life of a relative (either donating directly, or as part of an exchange or cascade) might be distracted by the relative's condition and risk of death. If so, she might act without a full understanding of the risks to herself that the procedure entails. Someone who needs medical treatment might decide to solve their current medical problems without paying sufficient attention to the future medical problems that the donation might create. The problems of directed donation and exchange are much larger than they are for institutions like paying people to register for postmortem organ donation, or for paying for funeral expenses of deceased donors, where the payment is small and there are no health risks of any kind. Some of the more complex exchange institutions, such as cascades and voucher systems, create additional problems for informed consent because the donor must understand the details of the exchange institution (e.g. exactly what priority for a kidney a voucher recipient will receive) as well as the details of the medical procedure (Ross et. al. 2017). And in any event, any donor, even one acting purely altruistically, must be educated about the risks she is taking, and screened to be sure she understands those risks well enough to make an informed decision. A donor who is selling a kidney, but receives the same information as an altruistic donor and passes the same screen, should be equally prepared to make an informed decision about whether to donate or not (Cherry 2017). Hence, the need for screening is not a better argument against either markets or other exchange institutions than it is against any kind of donation at all. At most, donors who have substantial non-altruistic motives might require somewhat stronger screening than altruistic donors do, if it is more likely that they will be distracted by their non-altruistic motives from the risks that their decision to donate entails.

4d. Coercion

Respect for the autonomy of agents, or their knowledge of their own preferences, suggest that people should not be required to do things that they do not wish to do. Coercion becomes a problem when someone who benefits from an action is in position to induce the actor to act even if the actor would prefer not to (or induce the actor not to act when the actor would prefer to act). This might not

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[2] Becker and Elias find death rates of 0.03% to 0.06% for donors; donors usually lose about four weeks of work time to recovery from the surgery. They also present some estimates of QALY losses due to non-fatal complications that may occur.

[3] The U.S. Department of Health and Human Services offers a web site with guidance on how to secure informed consent of donors at https://optn.transplant.hrsa.gov/resources/guidance/guidance-for-the-informed-consent-of-living-donors/.

include threats or force; even suggesting that a potential donor might donate, when she would not have considered it on her own, can be deemed a violation of the autonomy of the potential donor (Taylor 2017). Because markets bring buyers and sellers into contact in a context where each one is expected to consider only his or her own interests, they create the possibility that buyers will attempt to coerce sellers, or vice-versa. In particular, someone who needs a kidney and is in contact with a potential donor might attempt to coerce her into donating even if she would prefer not to.

Undirected donation is immune from coercion because the recipient does not have any contact with potential donors. By contrast, all directed donations where the recipient and the donor know each other have a risk of coercion. Paired exchanges and more complex exchanges create additional opportunities for coercion if the members of each pair know each other, or if the possibility of benefiting a second recipient makes it easier for one recipient to coerce his partner into donating (Tenenbaum 2016). Kidney vouchers similarly create the problem that a potential voucher recipient might attempt to coerce a donor (Kerstein 2017). Opting in, donor registration payments, medical treatment exchanges, and other forms of exchange where the donor receives the benefit, or where other parties that benefit do not know the donor, are not vulnerable to criticisms on the ground of coercion. However, directed donations present at least as much risk that a donor will be coerced into donating as markets do. Markets may even reduce the risk of coercion, because a potential donor who might have been coerced into donating without compensation may be willing to donate for compensation and hence not need to be coerced. Thus, arguments about coercion make a stronger case against directed donations and other forms of exchange than they do against kidney markets. However, it might be well to arrange kidney markets in such a way that potential donors and recipients come into as little contact with one another as possible. For example, recipients willing to pay for a donation, and donors willing to donate for compensation, might be required to work through an anonymous clearinghouse rather than negotiate with one another directly (Capron 2014).

4e. Exploitation

People who are in a powerful position may be able to derive advantage from interacting with other people in ways that are not morally acceptable, even if those interactions are voluntary and hence do not run afoul of the arguments against coercion discussed in the previous section. There are multiple views about what constitutes exploitation and what circumstances bring it about. Wertheimer (1996) asserts that mutually beneficial exploitation occurs when two parties interact and one of them does not receive as much benefit as he or she is morally entitled to receive from the interaction. Goodin (1985) argues that exploitation comes from taking advantage of vulnerability. Sample (2003) argues that exploitation occurs when the interaction degrades one of the parties, even though that party may have consented to being degraded in that way. While these approaches have important differences, they all agree that exploitation occurs only when one party in the interaction, for some reason, lacks the power to avoid being exploited; either because they are vulnerable, or because they have no alternative which is not degrading, or no alternative which offers them a morally acceptable gain from interaction. Kidney markets could exploit potential donors in these ways (Satz 2008). The difficulty with such arguments is that it is the recipient, not the donor, who is in difficult circumstances, is most vulnerable, and is more likely to have to agree to a transaction that degrades him or forces him to pay a price for a kidney that is morally excessive. However, the literature on exploitation in kidney markets tends to focus on the donor (Koplin 2017). Potential donors may be exploited because they will be degraded by the act of selling a part of their body for money, or that they will not receive a fair price for the organ, or because donors

will tend to be vulnerable people in dire financial straits who are willing to do medically risky things for money. They are not exploited by the recipient, rather by a social structure which in one way or another takes advantage of their vulnerability, or degrades them, or does not properly compensate them for their donation.

Other kidney exchange institutions are generally immune from criticism on the grounds of exploitation. An altruistic donor cannot be exploited because she always has the alternative of not donating; she is not vulnerable in any way, and she could refuse to donate at no cost to herself if she found the prospect of donating an organ degrading. Participants in exchanges may possibly be vulnerable to exploitation because they might feel that they have to agree to donate in order to save the life of their paired recipient, whose vulnerability transmits in part to the donor through the emotional bond that ties them together. However, given the much greater vulnerability of the recipient, it would be hard to argue that the recipient is exploiting his paired donor. If the exploitation is coming from society or the medical system, then there is not much to distinguish a participant in a paired exchange from an altruistic donor; from the standpoint of the system, the only difference between the two cases is the link between donor and recipient, which does not have a broader effect. In an unbalanced paired exchange, the donor who has the option of donating directly to her paired recipient is less vulnerable than the donor who does not have that option, since she can save the life of her paired recipient without participating in the exchange. Exploitation is more likely to take place when the donor is in a vulnerable position, is receiving something of value in exchange for the donation, and is not compensated sufficiently or is likely to agree to a donation that she would not agree to in the absence of the vulnerable position. Like markets, donation in exchange for medical service or other goods, or donation of the kidneys of a deceased relative in exchange for funeral expenses, will tend to attract the poorest and most vulnerable members of society who do not have alternative means of getting goods or services that they need. And these are the exchange institutions that generally are not allowed to operate. It is less of a problem for paying people to register for postmortem donation, because the amount of money is so small that vulnerability is unlikely to induce people to accept the payment when they would not agree in a less vulnerable position. In general, exploitation is an argument against markets that is also able to explain which alternative exchange institutions are acceptable and which, like markets, are not.

4f. Priority on the basis of medical need

It may be socially desirable, or morally obligatory, that kidneys always be given to the person who has the greatest medical need for them, regardless of whether that person has money to spend on a kidney purchase, or has an emotional connection to a potential donor. Such a rule can be easily motivated by utilitarian theories (at least of the act-utilitarian variety), or by a theory of a human right to medical care, or by a number of other moral justifications. Kidney markets violate this priority because a person who has the money to buy a kidney will get one when a sicker person without money will not receive one. This fear that the supply of available kidneys will be taken over by the rich who can pay for them, leaving the poor without access, is a very common argument against kidney markets (Satz 2010).

However, most of the other kidney exchange institutions violate the priority rule as well (Steinberg 2004). Even a group-directed donation, such as donating a kidney to a single mother, will violate the rule of priority by need unless the neediest person happens to be a single mother. Donations directed to an individual, including all forms of paired exchange and cascades, will even more certainly violate the rule

of priority by need, unless the individual chosen happens to be most needy person. Vouchers likewise direct a kidney to a person who is most likely not the neediest recipient, even if the priority they give is only relative and not absolute (Ross et. al. 2017). The exchange institutions that do not cause problems for priority by medical need are those in which the donor has no control over the identity recipient of the kidney. Opting in, paying funeral expenses for deceased donors, paying people to register for postmortem donation, and exchanging kidneys for medical treatment do not require the donated kidney to go to someone other than the neediest recipient. It would also be possible to create a quasi-market for kidneys that would not violate the priority rule, in which a hospital, an insurance company, or the state, rather than the recipient, paid donors for kidney donation, and then the purchaser then gave the kidney to the person with the most need for it.

The reason why directed donations are permitted, even though they violate priority by need, is because they make an extra kidney available. Although the person with the most need does not get a kidney from a directed donation, in the absence of the direction, that donation would not have been made at all. Thus the recipient with the greatest need loses nothing when a directed donation is made – he was not getting a kidney in either event - and the recipient who does get this kidney benefits. The directed donation is justified by the Pareto principle, in that it makes at least one person better off and no one worse off. Even more so, in the case of paired exchanges and cascades, the exchanges create one or more donations of kidneys that would not have happened if only altruistic donation was permitted. But the same principle applies to markets; paying for kidneys induces donations that would not otherwise have happened. If this harms no one, then it seems like a valid justification for violating a priority-by-need rule.

It may not, however, be the case that no one is harmed by some of these institutions. If markets were widespread, then some people who would otherwise have donated altruistically will instead sell their kidneys. Those sales will go to people who can buy them; the neediest recipients, if they cannot afford to do so, will lose out on a kidney that might otherwise have come to them altruistically. Some of the other exchange institutions also have the problem that they do harm to some people by altering the distribution of kidneys even while they increase the supply. The most widely discussed example of this involves list exchanges (den Hartogh 2010). A donor-recipient pair are unlikely to take part in a list exchange when the recipient can use the donor's kidney; list exchange usually takes place when the recipient and donor are incompatible for transplant. The most common cause of this is blood group incompatibility. A type O recipient cannot receive a kidney from anyone other than type-O donor. Conversely, a type O donor is always blood-group compatible with her partner (though other incompatibilities can still prevent the donation) and consequently type O donors very rarely need to participate in list exchanges. Accordingly, when a kidney is donated to the list, the donated kidney is often type A, B, or AB, while the recipient who gets priority for a kidney is often type O. List exchange will thus tend to shorten the waiting list time for type A, type B, and type AB recipients, who can use the kidneys that are donated due to the list exchange. But it may lengthen the waiting time for type O recipients, who lose out when a type O recipient with lower priority gets a kidney ahead of them. den Hartogh argues that this violates the requirement of formal justice, which is that people who are similarly situated should be treated equally; an institution that favors people from one blood group over people from another is unjust. This harm may be mitigated, at least in part, by encouraging type O donors with non-type O recipients to participate in unbalanced exchanges, which increase the supply of type O kidneys and reduces the supply of other types. However, the morality of encouraging pairs that

can make direct donations to do unbalanced exchanges instead is debatable - Ross (2006) concludes that pairs that can donate directly should not be asked to participate in unbalanced exchanges, while Steinberg (2011) argues that unbalanced exchange should be encouraged.

The argument that kidneys should always go to the recipient with the greatest need for health is thus a problem not only for markets but also for other types of kidney exchange institutions, including many that are operating. Many exchange institutions that operate are justified because they increase the total number of organs available. This can happen even when the exchange institution may crowd out undirected donations that would otherwise have gone to a higher priority recipient and hence may make some possible recipients strictly worse off. In the case of those institutions, the increase in kidney supply apparently has enough moral value to accept the violation of the medical need priority rule. If so, markets would also be justified if they induced enough additional donations to justify the distortions of medical priority they would create. If the large majority of kidney sellers are people who would not have donated unconditionally without compensation, as seems likely to be the case, then the distortions this would create are no worse than the distortions that paired exchanges and similar institutions create. One difference is that they distort donations in favor of the rich, as opposed to distorting donations in favor of people who have emotional connections to potential donors, or people with favorable blood types. It is not immediately obvious why one reason for violating the medical priority rule would be morally worse than the others. Satz (2012) argues that broad concerns about wealth inequality and its effect on society are a primary reason that kidney markets are seen as morally problematic when exchange institutions like cascades are not seen that way. However, if health insurance would pay for the cost of purchasing a kidney, as it does for other costs of the transplant operation, then inequality between rich and poor would be reduced to the level that health insurance markets create inequality between rich and poor. In the United States this level is deemed morally tolerable; in countries where national health insurance would pay the costs, there would be no asymmetry between rich and poor. Thus, wealth inequality is an argument against kidney markets that can be answered by the same means that are used in any country to ensure that that rich and poor citizens have equal access, or only morally acceptable inequality of access, to health care generally.

5. Implications for the morality of kidney markets

In the previous section, I claimed that many of the arguments commonly made against kidney markets should also apply to other kidney exchange institutions, some of which society has deemed morally acceptable and some not. In this section, I examine the characteristics of those arguments to see which ones can distinguish between morally acceptable and unacceptable alternative kidney exchange institutions and which ones cannot. Any argument that criticizes morally acceptable exchange institutions in the same way it criticizes markets is one that, presumably, does not have enough moral force to prevent the creation of those other institutions, and thus should not prevent the creation of kidney markets either. Conversely, a moral argument that can credibly explain which other exchange institutions are morally acceptable and which ones are not is also credible as an argument against markets. Markets could be morally acceptable only if they could modified in a way that would respond to the objections that those arguments make against them.

Of the six arguments commonly made against markets, the large majority cannot explain why some alternative kidney exchange institutions are acceptable and others are not. That does not mean that

those arguments are wrong, but it does imply that the value of having additional kidneys available to save the lives of recipients is high enough to overcome the moral concerns that those arguments raise.

Commodification: Paired exchanges, including cascades and list-paired exchanges, mixed-organ exchange, opting-in arrangements, and voucher systems all treat a kidney as a commodity that can be bartered in exchange for some other object. Although the exchange is in most cases limited to another kidney or perhaps another organ, they are still exchanges of a bodily organ for something else the donor desires.

Commodification: Allowing people to barter kidneys for other kidneys or other organs challenges the social norm of altruistic donation, and could lead to the same kind of crowding-out effects that sales may do.

Lack of informed consent: Other exchange institutions are vulnerable to the possibility that people might agree to donate without fully understanding the consequences (and even altruistic undirected donation is vulnerable to this argument).

Coercion: Other exchange institutions are also vulnerable to the criticism that donors might be coerced into donating when the life of a genetic or emotional partner is at risk.

Priority by medical need: Other exchange institutions create situations where a donated kidney goes to someone who is not the potential recipient with the greatest need for it. This can be inequitable towards certain groups of donors – those with no compatible paired donors and those with type O blood - in the same way that markets can be inequitable towards the poor.

There are two arguments against kidney markets that are compatible with the patterns of which kidney exchange institutions are allowed to operate and which are not.

Exploitation: Kidney markets run the risk that people might feel no option but to donate a kidney for financial reasons, because they are poor or otherwise vulnerable. Other exchange institutions that pose the same risk, such as exchanging organ donation for medical treatment or paying funeral expenses of deceased donors, are generally not operating. The exchange institutions that do operate either do not benefit the donor at all, or do so only by allowing the donor to select someone to receive a kidney, which does not trade on poverty, vulnerability, or other difficulties of the donor.

Want-regarding: Donors might agree to donate for motives that society cannot endorse, and so kidney exchange institutions need to examine the motives of donors or at least limit the range of motives that donors could act on to an acceptable set. Paired exchanges and vouchers require that the donor be acting to save the life of a genetic or emotional partner, which is an acceptable motive; opting-in arrangements require that the donor be acting to protect her own health, which is also an acceptable motive. Exchanges of kidneys for other goods, or accepting payment of funeral expenses for a deceased donation, in which donors might have a much broader range of motivations as they might have in markets, are generally not allowed to operate.

Both of these arguments can be met if potential donors are screened to make sure that they are not in a condition of poverty or other vulnerability that would permit them to be exploited, and that their motives for donating are ones that society can accept. Since kidney donors already have to be screened to make sure that they understand the consequences of their choice to donate, it would not be conceptually difficult to add criteria to the existing screen in order to make sure that donors were acting on acceptable motives and not in a position of being exploited. There would be both theoretical and practical difficulties in establishing such screens. There would have to be agreement on what kinds of

conditions made a potential donor vulnerable to being exploited, and some means of determining whether those conditions held for a particular donor. There might also have to be some way to refer people who are motivated to donate by money to alternative places where they could get financial relief. For example, a student who was donating a kidney in order to raise money to pay off college loans might be referred to programs that secure debt relief from college loans instead. There would also have to be some agreement on what motivations kidney donors should not be allowed to have, and some means of establishing the reasons for which donors wished to donate. Since donors who admitted to donating for unacceptable motives would be turned away, donors with those motives would presumably be dishonest about their motives; there would have to be some independent method of determining what a donor's reasons for wishing to donate were. These problems are not trivial, as there is no agreement about which motives are acceptable, or which circumstances give rise to exploitation. However, if they can be solved, then a kidney market could be regulated so that donors with vulnerabilities or unacceptable motives for donating could be prevented from taking part. Such a market would not have to address any moral arguments that paired donations, vouchers, opting-in, and other operating kidney exchange institutions have already successfully addressed. And if so, many additional donations could take place and the lives of many recipients could be saved.

6. Conclusions

Allowing people to be paid cash in exchange for donating kidneys would save lives by increasing the supply of kidneys available for recipients. Such exchanges are nonetheless prohibited on the grounds that there is something morally problematic about them. In the absence of kidney markets, people have found other ways to induce potential donors to donate kidneys other than by offering them money. Many of these donations have features in common with markets. Some, in essence, barter kidneys for other kidneys. Some trade a kidney donation now, or after death, for a greater priority for a kidney now or in the future, either for the donor or for a person chosen by the donor. Because these institutions are all, in various ways, market-like, they are subject to many of the same moral criticisms that have been raised against kidney markets. But the majority of these institutions are allowed to operate. Society finds them morally acceptable when markets are not. If so, there must be some difference between them and kidney markets that is morally significant.

In this article I examined thirteen alternative kidney exchange institutions that lie somewhere between altruistic donation and market exchange. I looked at the extent to which they resemble markets, and asked how the moral arguments often made against markets apply to them. They differ from altruistic donation and from markets in three dimensions. First, they differ in the extent to which they create an exchange of a kidney for something else. Second, they differ in the extent to which they allow donors to control the use of the kidney they donate or some other good they receive in return. Third, they differ in extent to which donors can act from a broad range of motives. I find that most of the institutions that have been implemented lie closer to altruistic donation in these three dimensions, and most of the ones that have not been implemented lie closer to markets. This suggests that institutions become impermissible when they incorporate too much exchange, give the donor too much control over the consequences of the transaction, or allow donations by donors whose circumstances and motives are not acceptable.

I then considered six major arguments against kidney markets and asked how they applied to alternative kidney institutions. I found that most of these arguments apply to many of the operating alternative institutions for kidney exchange. This suggests that these arguments, though not wrong, are not strong enough to overcome the moral imperative to save lives that these institutions permit. Thus, they should not be strong enough to prevent society from implementing markets for kidneys either. There are two arguments that apply against kidney markets, and against those kidney exchange institutions that are not operating, but do not apply to those institutions that society has permitted. Those arguments are that markets do not investigate the motives of donors, and that markets may permit exploiting donors in dire circumstances. These arguments are able to correct differentiate between what society permits and what it does not permit. This suggests that they are the ones that have sufficient moral force to prevent the establishment of commercial kidney markets.

If markets were regulated in a way that satisfied the moral concerns of these two arguments, they would be as morally acceptable as other exchange institutions that society now permits. Kidney donors already are required to go through substantial screening in order to ensure that they are giving informed consent to the donation. If additional screening could also block donations from donors who are in circumstances that permit exploitation, and those whose motivations are not ones that society can endorse, then we might be able to regulate kidney markets in such a way that they would not violate these moral concerns. Doing so would increase the number of donated kidneys available and save lives.

* Thanks to Lewis Davis for the discussion and the question which inspired this project, and to Bob Baker and Leo Zaibert for helpful suggestions.

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