

# CUSTOM, CONTRACT, AND KIDNEY EXCHANGE

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## ABSTRACT

*In this Essay, we examine a case in which the organizational and logistical demands of a novel form of organ exchange (the nonsimultaneous, extended, altruistic donor (NEAD) chain) do not map cleanly onto standard cultural schemas for either market or gift exchange, resulting in sociological ambiguity and legal uncertainty. In some ways, a NEAD chain resembles a form of generalized exchange, an ancient and widespread instance of the norm of reciprocity that can be thought of simply as the obligation to “pay it forward” rather than the obligation to reciprocate directly with the original giver. At the same time, a NEAD chain resembles a string of promises and commitments to deliver something in exchange for some valuable consideration—that is, a series of contracts.*

*Neither of these salient “social imaginaries” of exchange—gift giving or formal contract—perfectly meets the practical demands of the NEAD system. As a result, neither contract nor generalized exchange drives the practice of NEAD chains. Rather, the majority of actual exchanges still resemble a simpler form of exchange: direct, simultaneous exchange between parties with no time delay or opportunity to back out. If NEAD chains are to reach their full promise for large-scale, nonsimultaneous organ transfer, legal uncertainties and sociological ambiguities must be finessed, both in the practices of the coordinating agencies and in the minds of NEAD-chain participants. This might happen either through the further elaboration of gift-like language and practices, or through a creative use of the cultural form and motivational vocabulary, but not necessarily the legal and institutional machinery, of contract.*

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## INTRODUCTION

A series of related contrasts dominate public debate and academic research about organ donation. At the level of individuals, donors motivated by altruism contrast with suppliers motivated by self-interest. At the level of institutions, systems organized through gift exchange contrast with the prospect of a system organized as a market. And at the level of interactions, the relational qualities of giving contrast with the thin connection created through spot transactions. Underlying each of these contrasts is a deeper division between two modes of exchange: a customary type rooted in reciprocity and a formal type built on contract. When bundled together, this series of contrasts often becomes a broad critique of markets. The self-interested, price-driven, instrumental orientation associated with formalized, contractual kinds of social organization therefore contrasts unfavorably with the virtues of expressivity, warmth, and social solidarity that are taken to flow from exchange built on altruism and sharing.<sup>1</sup>

The norm of reciprocity—the obligation to give in return when one has been given something—has long been seen as amongst the oldest, most widespread, and most deep-seated of all human customs.<sup>2</sup> The fact that the norm of reciprocity is indeed a *norm*, however—a

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1. See, e.g., MICHAEL J. SANDEL, WHAT MONEY CAN'T BUY: THE MORAL LIMITS OF MARKETS 122–25 (2012) (discussing the commercialization of blood collection in the United States and noting that “the market values that suffuse the system exert a corrosive effect on the norm of giving”).

2. E.g., PETER P. EKEH, SOCIAL EXCHANGE THEORY 47–48 (1974); Alvin W. Gouldner, *The Norm of Reciprocity: A Preliminary Statement*, 25 AM. SOC. REV. 161, 171, 174 (1960).

prescription or expectation about how to act, rather than a description of the way things are—leaves room for slippage between a prescribed form of social organization and its operation in practice. Actual systems of exchange are often very complex. Although norms may set forth general rules about the motives of participants and the structure of their social relations, in practice the system's self-image may be decoupled from what really happens.<sup>3</sup> This slippage is common enough even in relatively simple systems of exchange. It is to be expected in a complex case like the exchange of human organs. Getting a kidney safely out of one body and into another is not a straightforward task. Each stage of the process is organizationally and logistically difficult. Although organ donation is by now a familiar practice, making these nominally straightforward exchanges happen at all—regardless of whether they are publicly coded as gifts or as sales—is a complicated business.

In this Essay, we examine how the organizational and logistical demands of a novel form of organ exchange create sociological ambiguity and legal uncertainty because those demands do not map cleanly onto the standard cultural schemas for either markets or donation. In a nonsimultaneous, extended, altruistic donor (NEAD) chain, an altruistic donor freely gives a kidney to a patient, initiating a chain of transplants among a series of donor-patient pairs. Each donor has a kidney that is incompatible with “her” patient, so instead each donates her kidney to the compatible patient of another donor-patient pair, forming the next link in the chain. NEAD chains are a relatively recent innovation in the transplant system, and they seem set to become more common in the future.

What sort of exchange is this? In some ways, a NEAD chain resembles a form of *generalized exchange*, an ancient and widespread instance of the norm of reciprocity that can be thought of simply as the obligation to “pay it forward” rather than the obligation to reciprocate directly with the giver. Generalized exchange has long been seen as an extremely effective customary means of generating commitment and solidarity in social groups, because everyone participates in the exchange of values, rather than in a system of

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3. Hence the classic structuralist treatment of social exchange, modeling a grammar of *norms* of exchange with little expectation that actual exchanges would smoothly conform to the model's elegant ideal structure. See *generally* CLAUDE LÉVI-STRAUSS, *THE ELEMENTARY STRUCTURES OF KINSHIP* (Rodney Needham, ed., James Harle Bell & John Richard von Sturmer trans., Beacon Press rev. ed. 1969) (1949).

directly reciprocated dyadic transfers.<sup>4</sup> This imagery of solidarity and collective commitment generated through a chain of gifts has been important to the success of NEAD chains. The most notable similarity between NEAD chains and true generalized exchange is the presence of a gap in time between exchanges, which introduces some standard elements of gift giving, especially the social obligation to reciprocate (pay forward) and the problem of trust that arises along with it. But these chains are an odd kind of generalized exchange. They do not cycle back on themselves as classical generalized exchange systems do; they occur between sets of pairs rather than between individuals; and, most importantly, they are to a large degree organizationally manufactured rather than locally emergent.

Looked at from a different point of view, though, a NEAD chain is not like gift exchange at all. Instead, it resembles a string of promises and commitments to deliver something in exchange for some valuable consideration—in short, a series of contracts. After the first free donation, each donor-patient dyad in the chain in effect promises to pay the donor's incompatible kidney forward upon receipt of a compatible kidney for the patient. But again, the fit is not perfect. These chains are an odd kind of contract. For one thing, of course, contracting for the sale of human organs is illegal, and NEAD-chain professionals explicitly disavow any role of formal contract. At the same time, it *does* seem as though each NEAD-chain pair offers something of value (a healthy, but incompatible, kidney) explicitly in exchange for something else of value (a healthy, compatible kidney) by mutual agreement at each point in the chain. Isn't this the essence of contract?

This Essay argues that, although both generalized exchange and formal contract can be thought of as culturally available schemas for governing the exchange of kidneys in NEAD chains, both are

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4. Toshio Yamagishi & Karen S. Cook, *Generalized Exchange and Social Dilemmas*, 56 SOC. PSYCHOL. Q. 235, 237 (1993); *see also* EKEH, *supra* note 2, at 48, 52, 56 (“[A]s compared to restricted exchange, generalized exchange engenders a high degree of social solidarity.”); BRONISLAW MALINOWSKI, ARGONAUTS OF THE WESTERN PACIFIC: AN ACCOUNT OF NATIVE ENTERPRISE AND ADVENTURE IN THE ARCHIPELAGOES OF MELANESIAN NEW GUINEA (1922); Peter Bearman, *Generalized Exchange*, 102 AM. J. SOC. 1383, 1413 (1997) (“In chain generalized exchange . . . social solidarity is protected from subgroup cleavage and free riding, yielding a more secure form of social solidarity.”); Robb Willer et al., *Structure, Identity, and Solidarity: A Comparative Field Study of Generalized and Direct Exchange*, 57 ADMIN. SCI. Q. 119, 143 (2012).

imperfect fits for the intricate realities of NEAD-chain exchange. Following Charles Taylor, we call these “social imaginaries” of exchange to emphasize their somewhat idealized form and their potentially loose connection with actual social organization.<sup>5</sup>

As a practical matter, professionals in the transplant community seek to recruit and motivate donors, generate moral commitment and practical compliance from participants, and connect compatible donor-patient pairs to one another to accomplish actual transplants. If participants understand what they are doing in terms of a kind of gift exchange, this mindset may (or may not) help get things done. Similarly, if the exchange is understood as a kind of market transfer or contractual obligation, this view may make the actual accomplishment of transplants easier or more difficult. NEAD chains are interesting because different social imaginaries of exchange predominate at different points in the system. For purposes of recruiting and motivating donors, the imagery of generalized exchange is prominent, and the language of contracts is anathema and perceived as corrosive to the moral commitment associated with the act of donation. When it comes to listing patients as candidates for transplant, however, contract imagery is not uncommon. For example, doctors often draw up “contracts” with their patients to motivate compliance with diet, drug, or treatment regimes required to qualify for transplant candidacy.<sup>6</sup>

The public aspect of NEAD chains emphasizes the individual moral qualities of the donors and the interpersonal bonds generated by participation in the chain. Here again the imagery of formalized commitment is rejected in favor of solidaristic feeling. Institutionally, however, the logistical back end of the exchange requires a considerable degree of formalization of procedure, ranging from the elaboration of cost-accounting formulae to mutually agreed-upon record-sharing arrangements that seem to be designed to ensure a fair

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5. See CHARLES TAYLOR, *MODERN SOCIAL IMAGINARIES* 23 (Dilip Gaonkar et al. eds., 2004) (“By social imaginary, I mean something much broader and deeper than the intellectual schemes people may entertain when they think about social reality in a disengaged mode. I am thinking, rather, of the ways people imagine their social existence, how they fit together with others . . .”).

6. See, e.g., John D. Scandling, *Kidney Transplant Candidate Evaluation*, 18 *SEMINARS DIALYSIS* 487, 492 (2005) (discussing the use of pre-transplant dialysis contracts that spell out the dialysis prescription and specify that noncompliance will disqualify the patient from transplant candidacy).

and quantifiable balance of exchange in good-quality organs between organizations.<sup>7</sup>

Although NEAD-chain professionals leverage the available social imaginaries of gift exchange and contract at different points of the transplant process, neither perfectly meets the practical demands of the NEAD system. The result, we argue, is that the actual operation of NEAD chains has, so far, tended to fall back onto relatively simple forms of simultaneous direct exchange.

We suggest that if NEAD chains are to realize their full promise of true large-scale, non-simultaneous, extended exchange, these ambiguities will need to be finessed in practice by the coordinating agencies and the participants themselves. Exchange of awkward goods—for example adoptive children, gametes, human tissue, and so on—is often accompanied by a considerable amount of practical and symbolic work that signals the transaction’s social meaning and dictates the basic principles by which the exchange is governed.<sup>8</sup> In many such cases, change comes with growth. Expanding exchange systems often formalize. In the case of NEAD chains, growth is likely to increase the probability that some participants will renege on their promise to donate. Formalization of the exchange relation through contract may seem like a solution to this problem. It is important to note, however, that it is also possible for contract to be introduced in a primarily *symbolic* manner decoupled from institutional enforcement. The social meaning of NEAD chains (as understood by participants) may in the future be expressed through either the further elaboration of gift-like language and practices, or through contract-like language and interactions. But any contractual formalization of NEAD chains need not be accompanied by a proper institutional shift to the legal and institutional machinery of enforced contracts.

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7. See, e.g., D.A. Mast et al., *Managing Finances of Shipping Living Donor Kidneys for Donor Exchanges*, 11 AM. J. TRANSPLANTATION 1810, 1810 (2011) (“The financial sustainability of such programs depends, in part, on consistent billing mechanisms that capture appropriate costs . . . and minimize financial and regulatory barriers to recipients, donors and institutions.”).

8. See generally VIVIANA A. ZELIZER, *THE PURCHASE OF INTIMACY* (2005) (discussing “how people and the law manage the mingling of what sometimes seem to be incompatible activities: the maintenance of intimate personal relations and the conduct of economic activity”).

## I. NEAD CHAINS

The demand for kidneys for transplantation far outstrips supply. As of October 5, 2012, the Organ Procurement and Transplantation Network reported 94,005 candidates on the kidney transplant waiting list,<sup>9</sup> many of whom will die due to lack of available donors. In 2008 alone, 4,573 kidney patients died while waiting for an organ transplant.<sup>10</sup> In an attempt to close this gap between supply and demand in the face of restrictions on compensation for organ donation, which limit the number of transplants from unrelated donors, the medical community has developed innovative exchange mechanisms that seek to overcome barriers to related-party exchange stemming from immune-system or blood-type incompatibility.

Consider two patients in need of kidney transplants, each of whom has found a living donor (a spouse, perhaps, or another relative, or a friend). Within each patient-donor dyad, the donor's kidney is incompatible with the patient's immune system—yet it is suitable for the patient in the other pair. There are thus two donor-patient pairs, each incompatible internally but compatible with their counterparts. The obvious solution is a straightforward, simultaneous swap of kidneys between the two dyads. With the right combination of compatibilities across dyads, simultaneous swaps of three or four or even more pairs are possible in principle. In swaps of this sort, parties to the exchange cannot back out in the middle of things—either everything happens at once, or nothing does. Although multi-way pairings are possible in principle, they are rare in practice because the logistical demands of organizing simultaneous swaps grow rapidly as the number of pairs increases. Each individual in the swap requires her own surgical theater and team, either to remove the donor kidney or to transplant it into a recipient. Doing all of this at once is very difficult. As a result, simultaneous kidney exchanges typically involve only a limited number of swaps.<sup>11</sup>

A NEAD chain converts the simultaneous, cyclical exchange of kidneys amongst two or more donor pairs into a chain of donations

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9. *Current U.S. Waiting List Organized by Organ*, ORGAN PROCUREMENT & TRANSPLANTATION NETWORK, U.S. DEPT OF HEALTH & HUMAN SERVS., <http://optn.transplant.hrsa.gov/latestData/step2.asp?> (choose the “Waiting List” category; select “Candidates” and “Overall by Organ” radio buttons) (last visited Oct. 27, 2012).

10. Nat'l Kidney Found., *25 Facts About Organ Donation and Transplantation*, UNC KIDNEY CTR., <http://www.unckidneycenter.org/25facts.pdf> (last visited Oct. 27, 2012).

11. Itai Ashlagi et al., *The Need for (Long) Chains in Kidney Exchange 2* (Nat'l Bureau of Econ. Research, Working Paper No. 18202, 2012).

and transplants. The process begins with a kidney from an altruistic donor, who gives a kidney *without* having a particular recipient in mind. With this “extra” kidney in the system, the transplants do not need to take place all at once. Instead, a patient can have her donor pay it forward later—say, when another suitable patient-donor pair is found. In the meantime, the donor in the last dyad affirms her commitment to give, and awaits her turn to donate.<sup>12</sup>

It is important to note that, in practice, efficient matching across even moderately large pools of patient-donor pairs is a difficult problem to solve computationally.<sup>13</sup> Important complications include the constraints placed on possible swaps by the rules of blood-group compatibility and the immunological sensitivity of the patient (that is, how difficult it is to find good matches net of blood-group compatibilities).<sup>14</sup> There is an ongoing technical debate about whether very long chains are necessary to clear large pools of incompatible patient-donor pairs.<sup>15</sup> The answer depends on how the situation is modeled, and in particular on how immunologically sensitized patients are assumed to be. In general, short chains (of three or fewer pairs) are sufficient if patients are not too sensitized. A large increase in the number of undirected donors would also help clear the pool quickly and reduce the average chain length, though such an increase is quite unlikely empirically.<sup>16</sup> Conversely, patients who are hard to match due to compatibility issues will tend to benefit from chains of longer length.<sup>17</sup>

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12. See Michael A. Rees et al., *A Nonsimultaneous, Extended, Altruistic-Donor Chain*, 360 *NEW ENG. J. MED.* 1096, 1096–98 (2009) (describing this process).

13. See David J. Abraham et al., *Clearing Algorithms for Barter Exchange Markets: Enabling Nationwide Kidney Exchanges*, 8 *PROC. ACM CONF. ON ELECTRONIC COM.* 295, 297 (2007) (describing algorithms used in kidney exchange).

14. See Ashlagi et al., *supra* note 11, at 3 (“[H]ighly sensitized patients are those for whom finding a transplantable kidney will be difficult, even from a donor with the same blood type, because of tissue-type incompatibilities.”).

15. Compare, e.g., S.E. Gentry & D.L. Segev, *The Honeymoon Phase and Studies of Nonsimultaneous Chains in Kidney Paired Donation*, 11 *AM. J. TRANSPLANTATION* 2778, 2778 (2011) (contending that, in mature registries, domino-paired donations “give[] an equal or greater number of transplants than NEAD”), with Ashlagi et al., *supra* note 11, at 3 (“[L]ong chains increase the number of transplants that can be achieved, by increasing the number of highly sensitized patients who can receive transplants.”).

16. John P. Dickerson et al., *Optimizing Kidney Exchange with Transplant Chains: Theory and Reality*, 11 *PROC. INT’L CONF. ON AUTONOMOUS AGENTS & MULTIAGENT SYS.* 711, 715–16 (2012).

17. Ashlagi et al., *supra* note 11, at 3.



These recent analytical advances in the understanding of the dynamics of kidney swaps and chains are substantial. For this Essay's purposes, though, it is worth noting that current models necessarily take for granted the pool of patient-donor pairs. That is, they start from a state in which the patients have already found an incompatible donor willing to give a kidney and, by assumption, do not examine the possibility that a participant in the chain might renege on the promise to donate once her coregistered patient has received a kidney. This approach is of course quite reasonable given the matching problem that this work is trying to model. In terms of the pragmatics of the system, however, NEAD chains introduce the real possibility of renegeing as the chain develops, and this is of great interest from the perspective of both customary obligation and formal contract, as each relies on quite different mechanisms to control renegeing on promises.

## II. CUSTOMARY OBLIGATION AND GENERALIZED EXCHANGE

The social imaginary of generalized exchange is explicitly about discharging an obligation by giving to another later, when needed. The idea of generalized exchange is useful here because of the way it cuts across perhaps more familiar distinctions between giving and selling. Some ideal-typical forms of exchange are shown schematically in Figure 1.<sup>18</sup> Restricted and generalized exchanges are the two main kinds, each with two subtypes. Restricted exchanges always involve a transfer between dyads. The first subtype, direct (or negotiated) exchanges, can be thought of as simple barter. Items or values are swapped simultaneously to the mutual satisfaction of the transactors. The second subtype, reciprocal exchange, involves an exchange of values in a dyad that unfolds over time. This is typical of many kinds of gift exchange between friends, such as the informal back-and-forth of favors, meals, or birthday presents. The time element in conjunction with the expectation of reciprocity in the back-and-forth of exchange is one of the things that allows the dyad (for example, a friendship) to have a real social existence.<sup>19</sup>

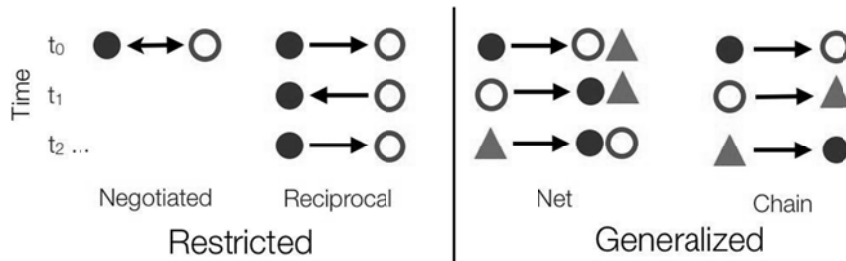
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18. For further discussion of the distinctions made here, see EKEH, *supra* note 2, at 52–56; Bearman, *supra* note 4, at 1388–92; and Nobuyuki Takahashi, *The Emergence of Generalized Exchange*, 105 AM. J. SOC. 1105, 1106–09 (2000).

19. The back-and-forth of gift exchange is often thought of as being at bottom a utilitarian calculation of credits and debits. This was the view of anthropologist Bronislaw Malinowski. James Carrier, *Gifts, Commodities, and Social Relations: A Maussian View of Exchange*, 6 SOC. FORUM 119, 120 (1991) (“Malinowski put forward a model that portrayed exchange ‘as essentially dyadic transactions between self-interested individuals, and as premised on some

Generalized exchange involves more than a dyadic relation. In the *net* form of this exchange, the individual exchanges with the group. This may involve giving something to everyone and later, as a group member, receiving something from another individual in return (as in a car pool, for example). Or it may be the reverse: receiving something from everyone and then giving to another individual later as part of the group (as in a rotating credit association). Note that, in principle, the net form of generalized exchange can be analyzed as a kind of dyadic, restricted exchange in which the two exchange partners are the individual and the group.<sup>20</sup>

Figure 1. Four modes of exchange.



Finally, the classic form of *chain-generalized* exchange is a cycle in which each individual gives something of value to another, but reciprocation is not dyadic. Instead, a chain of exchanges unfolds that ultimately cycles back to the original giver, as she receives some value from another recipient in the chain. A final subtype, not shown in Figure 1, is sometimes known as pure generalized exchange. In this

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kind of balance'." (quoting Jonathan Parry, *The Gift, the Indian Gift and the 'Indian Gift,'* 21 MAN 453, 454 (1986)). But the force of the norm of reciprocity in gift exchange is not simply a matter of calculation:

Doubtless, if one party to a gift relationship feels regularly and unjustly slighted, he or she will consider ending the relationship. But this does not mean that the transactor is calculating debts and credits . . . Instead, the repeated imbalance itself marks a repeated violation of the obligation to give, receive, and repay in that relationship, and hence marks the end of the relationship as it had been.

*Id.* at 124–25 (1991). It is worth noting that this distinction has some force in the organ-donation case. As discussed below, the current interpretation of kidney donation by the United Network for Organ Sharing (UNOS) explicitly rejects the idea that there is some kind of consideration, and, by extension, a utilitarian cost-benefit calculation, at work in the exchange. See *infra* notes 54–55 and accompanying text.

20. See PETER M. BLAU, EXCHANGE AND POWER IN SOCIAL LIFE 259–60 (1964) (providing examples of exchanges that occur among members of a group and between a member of the group and the group itself); Bearman, *supra* note 4, at 1389.

type of exchange individuals give, but person-to-person giving and reciprocation is not embedded in some larger pattern or structure. Individuals know there is an obligation to give and have an expectation that they will receive from others, but they do not have a rule about whom in particular to give to or get from.<sup>21</sup>

In gift exchange generally, the time delay between the initial service and its reciprocation is crucial to making the exchange interpretable *as* a gift. As a rule—outside of specific festivals or rituals—a gift that is immediately reciprocated is not a gift at all.<sup>22</sup> If done deliberately, immediate reciprocation is probably an insult.

To reiterate, these patterns of gift exchange can be seen as ideal-typical possibilities that actual systems of exchange approximate more or less closely. When social relations are complex and multilayered, as when there are many participants and kinds of actors, gift exchange is less about actual relations between concrete actors and more an orienting cultural logic that helps make sense of things. The version of gift exchange adopted and extended by the transplant community since the 1970s, the “gift of life,” emphasizes the personal satisfactions of giving and the social and moral obligations people ought to feel when it comes to participating.<sup>23</sup> Its main benefit in the case of organ donation generally is its ability to frame and motivate the goodwill necessary to participate in a difficult exchange that often takes place in tragic circumstances. It is a testament to the power of this social imaginary of exchange that it remained plausible even as both the organizational underpinnings of organ procurement and the algorithms governing organ allocation became ever larger in scope and more difficult to understand in their fine detail.

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21. See Takahashi, *supra* note 18, at 1113 (“In pure-generalized exchange, each actor gives resources to a recipient(s) that he chooses unilaterally.”).

22. See PIERRE BOURDIEU, *PRACTICAL REASON: ON THE THEORY OF ACTION* 94 (Randall Johnson trans., Polity Press 1998) (1994) (“[I]n practically all societies, it is tacitly admitted that one does not immediately reciprocate for a gift received . . . .”); PIERRE BOURDIEU, *THE LOGIC OF PRACTICE* 105 (Richard Nice trans., Polity Press 1990) (1980) (“[I]f it is not to constitute an insult, the counter-gift must be deferred and different, because the immediate return of an exactly identical object clearly amounts to a refusal.”).

23. See KIERAN HEALY, *LAST BEST GIFTS: ALTRUISM AND THE MARKET FOR HUMAN BLOOD AND ORGANS* 23–35 (2006) (describing the role of ideals of gift exchange in the creation of a socially legitimate transplant system in the 1970s and 1980s).

### III. NEAD CHAINS AS GENERALIZED EXCHANGE

The NEAD chain also harnesses the logic of the gift, but in a slightly different way from the case of cadaveric donation. In particular, the power of generalized exchange to generate feelings of group solidarity and commitment—to keep chains going—is important to participants and coordinators. Although the logistics of multicenter, multiperson transplant chains are complex, the moral imperative to “pay it forward” is easy for patients and donors to grasp, and this concept allows transplant centers to draw on well-established tropes associated with the “gift of life” to generate and maintain the trust required to see the chain through to its final link.<sup>24</sup>

As in the case of cadaveric donation, however, the real organization of NEAD chains does not fit perfectly with the idealized model. Notwithstanding its power to create moral commitment and solidarity, the sense of obligation encouraged by the injunction to “pay it forward” has sometimes proven insufficient in circumstances in which people have time to consider, and reconsider, their voluntary commitment to pay forward in a trying and perhaps frightening surgery once their own recipient has received a kidney from someone else.

Media coverage and debates within the transplant literature on the costs and benefits of simultaneity and long chains—not to mention several cases in which donors have actually reneged on their promises—all support the view that the risk of donor reneging is a real constraint on the generalized-exchange structure of NEAD chains. For example, commentators debate the benefits of nonsimultaneous transplants, weighing the flexibility afforded by nonsimultaneity against the risk of reneging donors.<sup>25</sup> Others employ models to determine whether, given the heightened risk of donors reneging as chains become extended or the time between surgeries becomes longer, longer chains provide benefits that outweigh

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24. See, e.g., *Gift of Life's First Multi-Site Paired Kidney Exchange*, GIFT OF LIFE DONOR PROGRAM (June 24, 2011), <http://www.donors1.org/about/media/press1/pairedkidney> (describing a successful transplant chain which resulted in kidney transplants for five people); *Living Donors*, NAT'L KIDNEY REGISTRY, [http://www.kidneyregistry.org/living\\_donors.php](http://www.kidneyregistry.org/living_donors.php) (last visited Oct. 27, 2012) (invoking the “gift of life” and also noting that “Good Samaritan donors participating in the Registry will be assured that: . . . [the national kidney registry] will work hard to create the longest chain which maximize[s] [a donor's] gift by facilitating as many transplants as possible”).

25. S.E. Gentry et al., *The Roles of Dominos and Nonsimultaneous Chains in Kidney Paired Donation*, 9 AM. J. TRANSPLANTATION 1330, 1332, 1334–35 (2009).

reneging risks.<sup>26</sup> A much-discussed *New York Times* article on NEAD chains repeatedly emphasized the trade-offs in longer chains of lives saved versus donor-reneging risk.<sup>27</sup> Reneging is thus widely recognized as a serious issue by those within the transplant community, and this risk presumably shapes the structure, size, number, and type of participants, as well as other factors affecting the success of NEAD chains.

Reneging is no mere hypothetical. There is no national database or comprehensive set of NEAD-chain statistics, nor are donor-reneging rates known.<sup>28</sup> The NEAD-chain literature, however, contains several accounts of bridge donors who failed to perform on their promise to pay a kidney forward. In one case, the bridge donor, the husband of a kidney recipient, was unable to be matched with a suitable recipient after his wife's transplant. After one year of attempting a match, he withdrew from the chain. According to the published account, the donor would have lost his job by donating, causing the entire family to lose insurance coverage, including insurance for his recently transplanted wife.<sup>29</sup> Whether this potential job loss and resulting insurance problem was due to a change in circumstance or was a known consideration at the outset of the wife's transplant is not discussed, though the authors state that the husband withdrew "owing to changes in the economy."<sup>30</sup>

In a separate case of reneging in this same NEAD chain, the transplant center was unable to reach the donor several months after his or her coregistered recipient received a transplant, despite numerous attempts at contact. No further information is reported about either the donor or recipient, or their relationship to each other.<sup>31</sup> Another reneging donor broke a chain at Johns Hopkins. The only detail reported is that there was "a long interval between the intended recipient's transplant . . . and the request for the bridge donor to participate in the next transplant."<sup>32</sup>

26. Dickerson et al., *supra* note 16, at 716.

27. Kevin Sack, *60 Lives, 30 Kidneys, All Linked*, N.Y. TIMES, Feb. 19, 2012, at A1.

28. Dickerson et al., *supra* note 16, at 716 ("[N]o reliable quantification of a renege rate exists due to the infancy of kidney exchanges.")

29. David B. Leiser et al., *Living Donor Kidney Paired Donation Transplantation: Experience as a Founding Member Center of the National Kidney Registry*, 26 CLINICAL TRANSPLANTATION E213, E217 (2012).

30. *Id.*

31. *Id.*

32. Gentry et al., *supra* note 25, at 1335.

These examples demonstrate both the strengths and possible limitations of the gift-exchange model for NEAD chains. NEAD chains currently operate under that model and, together with paired exchanges, accounted for 429 transplants in 2010.<sup>33</sup> The bulk of those transplants, however, were simultaneous or nearly so. NEAD chains are still new and relatively untested on a large scale.<sup>34</sup> At present the number of NEAD-chain transplants remains well below the two- to four-thousand per year that models estimate could eventually be achieved.<sup>35</sup>

Reaching that goal will depend on a number of factors, including managing the risk that donors will renege. As previously discussed, the presence of an altruistic donor at the front end of the chain allows all other chain members to pay a kidney forward, thus removing the simultaneity constraint. This increased flexibility may allow more and better transplants, particularly among highly sensitized patients, but it carries with it the risk of donor renegeing. This risk is considered tolerable because no individual in the chain is irreparably harmed—no pair has lost a kidney prior to receiving one, and each thus always retains the “bargaining chip” of the donor’s kidney, enabling them to participate in future swaps and chains.<sup>36</sup> But renegeing risk, if sufficiently high, threatens the existence of NEAD chains. In a system based on trust, donor defections must be contained.

#### IV. OBLIGATION AND CONTRACT

If the informal bonds of custom break down and the solidarity of generalized exchange is not sufficient to bind participants throughout the NEAD-chain process, then what about the alternative social imaginary of contractual exchange? Though the time delay between the initial service and its reciprocation is crucial to making an exchange interpretable as a gift, time delay also invites consideration of the machinery of contract. In fact, the very purpose of contract is to facilitate the exchange of goods or services *over time*, because simultaneous exchange is easily carried out without reliance on contract. Only when it is useful to exchange goods or services

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33. Sack, *supra* note 27.

34. *Id.*

35. *Id.*

36. Rees et al., *supra* note 12, at 1098–99.

sequentially, such that a reliance on promises of future performance becomes necessary, does contract law become relevant.<sup>37</sup>

Although the specter of contract haunts the NEAD process, formal contracts have not been employed to address the risk of renegeing that arises from nonsimultaneous performance in NEAD chains. Patients sometimes seek clarification about whether they are required to sign a binding contract when they agree to join a chain, and are assured that no written obligation will be sought.<sup>38</sup> NEAD-chain transplant surgeons and administrators raise the possibility of having patients sign written contracts, only to dismiss the prospect as overly legalistic and detrimental to the trust and moral commitment that motivates NEAD-chain participation. As stated by one group of physicians and administrators when describing an early NEAD chain in which their respective hospitals participated:

The possibility of other donors backing out in a multicentered chain such as this one must be addressed. No one involved in this chain was required to sign a contract. Live organ donation is strictly voluntary; donors always retain the right to change their minds and must never feel coerced by signed contracts. We relied on donors' honesty and good will to follow through as planned. We maintain that the basic principle of organ donation is based upon selfless generosity and faith in the human spirit, rather than contractual obligations. We would discourage future participants from becoming mired in legal arguments and lengthy debates that would only cause interminable delays.<sup>39</sup>

Others simply assume that contracts are legally unenforceable in the NEAD-chain setting.<sup>40</sup> Understanding the roots of this view

37. ERIC A. POSNER, *CONTRACT LAW AND THEORY* 19 (2011).

38. See, e.g., *Living Donor Kidney Center*, DEP'T OF SURGERY, WEIL CORNELL MED. COLL., <http://www.cornellsurgery.org/patients/services/livingdonor/faq-kpd.html> (last visited Oct. 27, 2012) (including "Are There Donor Agreements?" in the frequently asked questions section of the website and informing prospective bridge donors that "[d]onors who choose to enter a [Kidney Paired Donation (KPD)] registry are not obligated to sign an agreement" but that they "are asked to make a firm decision to participate" because "[i]f a donor were to back-out at the last minute, this would 'break the chain'").

39. F.K. Butt et al., *Asynchronous, Out-of-Sequence, Transcontinental Chain Kidney Transplantation: A Novel Concept*, 9 AM. J. TRANSPLANTATION 2180, 2183 (2009).

40. See, e.g., Dickerson et al., *supra* note 16, at 2 n.1 ("[I]t is illegal to contract for an organ in most countries."); Tayfun Sönmez & M. Utku Ünver, *Market Design for Kidney Exchange 2* (Apr. 25, 2011) (unpublished manuscript), available at <https://www2.bc.edu/~sonmeztk/kidney-exchange-survey-2011-04-25.pdf> ("Since kidney donations are gifts, . . . it is not legal to contractually bind a donor to make future donations.").

requires a familiarity with the National Organ Transplant Act (NOTA),<sup>41</sup> its legislative history, and the requirements of contract law. This analysis also nicely illustrates the NEAD chain's uneasy position as neither fully gift nor fully contract, but rather as possessing elements of the imagery of each.

NOTA forbids the knowing acquisition, receipt, or transfer of any human organ for "valuable consideration for use in human transplantation if the transfer affects interstate commerce."<sup>42</sup> Superficially, NOTA's mandate appears to stand in direct contrast to the common-law requirements of contract. To rise to the level of legal enforceability, contracts must be supported by legal consideration—that is, a bargained-for exchange, such as a promise for a promise, or a promise for a performance.<sup>43</sup>

The social imaginary of gift exchange adopted and extended by the transplant community to facilitate traditional organ donation maps nicely onto the legal distinction between gift and contract: a living donor who simply donates her kidney to an intended recipient, as under a traditional living-donor arrangement, receives only the satisfaction of helping another. The donation is a gift rather than an exchange. Therefore, NOTA's prohibition against the exchange of "valuable consideration" is not implicated,<sup>44</sup> nor is contract law's requirement of valid consideration satisfied. In the case of traditional organ donation, the gift imagery thus fluidly tracks the legal regime, framing and motivating the goodwill necessary to participate in organ donation.

The NEAD-chain community also harnesses the logic of gift to generate feelings of group solidarity and commitment.<sup>45</sup> Yet, organ donations through NEAD chains or paired exchanges are not gifts in either the colloquial or legal senses of that term. When a bridge donor promises to transfer her kidney to a designated recipient in exchange for the organ-matching program's promise to allocate a kidney to her loved one, both the bridge donor's promise and that of the matching program are undertaken for the purpose of inducing the

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41. National Organ Transplant Act (NOTA), 42 U.S.C. §§ 274–274e (2006 & Supp. IV, 2011).

42. *Id.* § 301(a), 42 U.S.C. § 274e(a).

43. ROBERT E. SCOTT & JODY S. KRAUS, *CONTRACT LAW AND THEORY* 41 (4th ed. 2007).

44. NOTA § 301(a), 42 U.S.C. § 274e(a).

45. For a discussion of reliance on the "gift of life" metaphor, see *supra* notes 23–24 and accompanying text.



other party's promise. Such a bargained-for exchange satisfies the common-law contract requirement of consideration and, because the bridge donor receives a benefit in exchange for her kidney, which raises the question of whether "valuable consideration" has been received in violation of NOTA section 301. It was precisely the fear that such exchanges were *not* mere gifts that prompted congressional clarification, under the Charlie W. Norwood Living Organ Donation Act (Norwood Act),<sup>46</sup> that NOTA's prohibition against the exchange of valuable consideration for human organs does not extend to simultaneous kidney swaps (Kidney Paired Donation, or KPD).<sup>47</sup> The Norwood Act, however, did not specifically address NEAD-chain donations, which were a new and rare method at that time.

The existence of legal consideration in NEAD-chain bridge-donor contracts, however, does not necessarily mean that such chains involve "valuable consideration" in violation of NOTA section 301. Neither the text of NOTA section 301, nor the provision's legislative history, define the term "valuable consideration." Both, however, provide insight into the term's meaning by suggesting a congressional concern with the buying and selling of human organs for profit, rather than an attempt to prohibit all transactions in human organs that involve some element of exchange.

Looking first at the language of the statute, the title chosen by Congress "can aid in resolving an ambiguity in the legislation's text."<sup>48</sup> The title of NOTA section 301—"Prohibition of organ purchases"<sup>49</sup>—suggests a congressional concern with organ purchases and sales for pecuniary gain.

NOTA's legislative history suggests a similar congressional concern with for-profit commerce in human organs. For example, the accompanying Senate report states that the bill "[p]rohibits the interstate buying and selling of human organs for transplantation" and "is directed at preventing the for-profit marketing of kidneys and

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46. Charlie W. Norwood Living Organ Donation Act (Norwood Act), Pub. L. No. 110-144, 121 Stat. 1813 (2007) (codified at 42 U.S.C. §§ 273b, 274e (2006 & Supp. IV 2011)); ERIN D. WILLIAMS ET AL., CONG. RESEARCH SERV., RL 33902, LIVING ORGAN DONATION AND VALUABLE CONSIDERATION 4 (2010) (observing that the Norwood Act relieved concerns that paired donations violate NOTA).

47. See Norwood Act § 2, 121 Stat. at 1813 (codified at 42 U.S.C. § 274e) (stating that the prohibition against transfer of organs for valuable consideration "does not apply with respect to human organ paired donation").

48. *INS v. Nat'l Ctr. for Immigrants' Rights*, 502 U.S. 183, 189 (1991).

49. NOTA § 301, 42 U.S.C. 274e.

other organs.”<sup>50</sup> It further states that “[i]t is the sense of the Committee that individuals or organizations should not profit by the sale of human organs for transplantation,” and that “human body parts should not be viewed as commodities.”<sup>51</sup> Similarly, the House conference report states that “[t]his Title intends to make the buying and selling of human organs unlawful.”<sup>52</sup> These facts, among others, caused the U.S. Department of Justice’s Office of Legal Counsel to opine in March 2007, pursuant to a request by the general counsel of the U.S. Department of Health and Human Services, that the “term [valuable consideration] as used in section 301 does not apply to an LDDD [Living Donor/Deceased Donor] Exchange or a Paired Exchange, because neither involves the buying or selling of a kidney or otherwise commercializes the transfer of kidneys.”<sup>53</sup>

This discussion is not to imply that NEAD chains’ place within contract law is unproblematic, or even to suggest that NEAD-chain organizers *should* rely on contract law to induce performance, even if they are legally entitled to do so. As will be seen, the contract imaginary, like the gift imaginary, also fails to fully capture the needs and realities of NEAD-chain organization. But this analysis shows that the requirements of contract law do not necessarily conflict with NOTA’s prohibitions. Legitimate arguments could be made on behalf of the contract model if NEAD-chain professionals chose to invoke them.

But they have not. Instead, NEAD-chain professionals specifically reject the contract model. In particular, before the Norwood Act’s clarification of the legal status of paired exchange, a 2006 United Network for Organ Sharing (UNOS) associate general counsel’s memorandum analyzed the applicability of NOTA section 301 to KPD and list donation. The UNOS memorandum began by rejecting (consistent with our analysis) NOTA’s applicability to kidney swaps, stating: “[v]aluable consideration’ under NOTA § 301 is a monetary transfer or a transfer of valuable property between donor, recipient and/or organ broker in a sale transaction. It is not familial, emotional, psychological or physical benefit to the organ

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50. S. REP. NO. 98-382, at 2, 4 (1984), *reprinted in* 1984 U.S.C.C.A.N. 3975, 3976, 3978.

51. *Id.* at 16–17, 1984 U.S.C.C.A.N. at 3982.

52. H.R. REP. NO. 98-1127, at 16 (1984) (Conf. Rep.), *reprinted in* 1984 U.S.C.C.A.N. 3989, 3992.

53. Legality of Alt. Organ Donation Practices Under 42 U.S.C. § 274e, 31 Op. O.L.C. 1, 2 (2007).

donor or recipient . . . .”<sup>54</sup> In its zeal to advocate for KPD and list-donation exemptions from section 301, however, UNOS went further, erroneously concluding that such transactions were necessarily gifts, lacking any legal consideration:

In fact, there is no “consideration” at all in a living organ donation arrangement because the donation is a “gift” . . . .

A gift is different from a contract. A contract does not involve donative intent. “Consideration” and the mutual agreement of the parties are required to make the contract legally binding. A gift, on the other hand, involves a gratuitous transfer by the donor and no transfer of money, property or services or agreement not to exercise rights or to suffer material detriment (“consideration”) by the beneficiary. For that reason, no “consideration” is present in a gift. A mere promise alone to make a gift of an organ is not intended to be legally binding.<sup>55</sup>

As already noted, however, this analysis conflates the gift exchange of traditional living donors with the bargained-for exchange of paired exchanges and NEAD chains. As the discussion in this section has illustrated, the unavailability of contract in the NEAD-chain setting is not a forgone conclusion. Thus, given two culturally available models for governing the exchange of kidneys in NEAD chains—gift and contract—NEAD-chain professionals have opted for the imaginary of gift, explicitly rejecting the imaginary of contract.

## V. CHAINS AND CONTRACTS

Just as NEAD chains imperfectly reflect the gift model, so too is contract an imperfect fit. This is perhaps most clear with respect to damages and enforcement. Specific performance is not available—that is, no court would order that a person’s kidney be taken involuntarily—but monetary damages are the common alternative to judicially enforced performance. As a result, the experimental literature on “crowding out” is potentially relevant to the workability of contract in the NEAD-chain context in a number of ways.

The theory behind crowding out is that extrinsic incentives can, under certain conditions, effect individual motivation and the framing

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54. WILLIAMS MULLEN, POSITION STATEMENT: KIDNEY PAIRED DONATIONS, KIDNEY LIST DONATIONS AND NOTA § 301, at 3 (2006) (on file with the *Duke Law Journal*).

55. *Id.* at 2, 4 (footnotes omitted).

of social interactions.<sup>56</sup> For example, people may donate, volunteer, or engage in other prosocial behavior because to do so makes them seem (or feel) like a good person—that is, it affects their image or self-image.<sup>57</sup> The fear is that monetary incentives, by creating doubt as to whether such actions are motivated by the desire for financial gain rather than by a desire to help others, could displace these prosocial (or image-based) motivations.<sup>58</sup>

Existing experimental studies, however, were not designed with NEAD-chain bridge donors in mind. NEAD-chain bridge donors initially agree to transfer a kidney to a stranger for the purpose of receiving a kidney that is a suitable match for their friend or family member—not for the purpose of contributing to the public good. Once the pair has received a kidney, how is the act of following through on the exchange, rather than renegeing, perceived? Will it be seen as a donation, as the follow-through on a prior promise, or as something else? And how would the prospect of contract damages for renegeing affect that image? Studies of the effect of monetary incentives on the decision to donate seem poorly suited to answer such questions.<sup>59</sup>

More helpful are studies that specifically address decisions to defect or renege on a prior promise. Some studies suggest that the use

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56. See generally Uri Gneezy et al., *When and Why Incentives (Don't) Work To Modify Behavior*, 25 J. ECON. PERSP. 191 (2011) (reviewing the crowding-out literature).

57. See Roland Bénabou & Jean Tirole, *Incentives and Prosocial Behavior*, 96 AM. ECON. REV. 1652, 1652 (2006) (suggesting that motivation to perform prosocial behavior can be described by a utility function with three components: the value of extrinsic rewards, the level of enjoyment of an activity, and image—both self-image and the perceptions of others).

58. *Id.*

59. In any event, large-scale studies on the activity most closely related to organ donation—blood donation—suggest that monetary incentives do not crowd out prosocial behavior. See, e.g., Nicola Lacetera et al., *Will There Be Blood? Incentives and Displacement Effects in Pro-Social Behavior*, 4 AM. ECON. J.: ECON. POL'Y 186, 186 (2012) (presenting evidence from roughly fourteen thousand American Red Cross blood drives and concluding that “economic incentives have a positive effect on blood donations without increasing the fraction of donors who are ineligible to donate”); Lorenz Goette & Alois Stutzer, *Blood Donations and Incentives: Evidence from a Field Experiment* 15–16 (Inst. for the Study of Labor, Discussion Paper No. 3580, 2008) (presenting evidence from a study of more than ten thousand previous blood donors and finding that offering lottery tickets in exchange for donated blood increases donations without negative selection effects). *But see* Carl Mellström & Magnus Johannesson, *Crowding Out in Blood Donation: Was Titmuss Right?*, 6 J. EUR. ECON. ASS'N 845, 848–56 (2008) (presenting evidence of a drop in blood donations among women, but not men, when subjects were offered fifty Swedish kronor (roughly seven dollars) to donate blood, though donations returned to normal levels when subjects were given the option to donate the money to charity).

of monetary incentives or penalties may signal distrust, undermining compliance in trust-based relationships.<sup>60</sup> The most relevant of these studies to the NEAD-chain experience are those analyzing how the enforceability of a contract affects individual performance. For example, Bohnet, Frey, and Huck find that intermediate levels of contract enforcement lead to a crowding out of performance, whereas high and low levels of enforceability lead to “crowding in.”<sup>61</sup> This effect occurs because, under high levels of enforcement, performance is assured by the legal system. Under low levels of enforcement, performance is assured by the careful screening of counterparties by the contract participants themselves. The worst legal regime is one with intermediate enforcement levels, which leads to more dishonest participants in the system (relative to the low-enforcement regime) and insufficient external incentives to deter breach.<sup>62</sup>

This research is consistent with current NEAD-chain experience. Either legal enforcement or participant screening, combined with norms of trust and reciprocity, can ensure performance. NEAD-chain participants have, to this point, relied on informal mechanisms to induce performance and have explicitly rejected the contract model. But, if formal contract is viewed as a possible replacement for or enhancement of the gift-based model, then attention must be paid to available contract remedies. This attention highlights the tensions between the needs of the NEAD system and the regime of contract law.

Damages that are too low or enforcement that is too spotty may invite parties to interpret available contract damages as the de facto price for a kidney and so reduce performance, as suggested by Bohnet, Frey, and Huck’s research. Yet attempts to liquidate damages at high levels may raise concerns about coercion and about whether the amounts are punitive, as opposed to compensatory.

An interesting question—one that we do not claim to answer—is whether a low-enforcement regime that employed nominal awards, such as a symbolic amount of one dollar, in recognition of the fact that a legal injury has been sustained, could enhance the existing informal gift-based model employed in NEAD chains, perhaps by leveraging shaming and broader social norms about renegeing on

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60. See Gneezy et al., *supra* note 56, at 199–201 (reviewing this literature).

61. Iris Bohnet et al., *More Order with Less Law: On Contract Enforcement, Trust, and Crowding*, 95 AM. POL. SCI. REV. 131, 132 (2001).

62. *Id.*

promises to the detriment of others. Symbolic damages of this type are sometimes sought and awarded, on the justification that normative statements regarding legal transgressions are important to both individual plaintiffs and society at large.<sup>63</sup> Finally, perhaps the simple presence of a contract itself could perform some useful work in the context of NEAD chains, acting as a filter for reliable chain participants, screening out potential free riders, or serving as a pragmatic reminder of the seriousness and credible commitment of the participants.<sup>64</sup>

At the same time, the insertion of formal contract into what is currently a purely trust-based system inevitably makes the market-like aspects of NEAD-chain transactions more salient. The contracting process itself can be formal and legalistic, and could conceivably alter the decision-making frame, for better or for worse. And it does not require much imagination to conclude that the availability of monetary damages for the breach of a promise to donate an organ may look, to some observers, equivalent to a purchase price for kidneys.

The crowding-out framework usefully elaborates the intuition that the introduction of incentives can cause people to switch their interpretation of an exchange, with unwanted results. There are two relevant parts to the insight. First, a price or other monetary incentive may change motives, as already discussed.<sup>65</sup> Second, a fine or an award of money damages may act as a price. Hence, one might be tempted to argue that a contract in which money damages are potentially available could inadvertently encourage a deliberately strategic kind of participation, with the result being a rise in renegeing. Although this scenario is a possibility, we should take care not to

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63. See, e.g., Stephen A. Smith, *The Normativity of Private Law*, 31 OXFORD J. LEGAL STUD. 215, 241–42 (2011) (arguing that private law influences behavior, not only through setting incentives, but also through setting norms, and invoking nominal and punitive damages as examples).

64. The intentional use of vague, unenforceable, or otherwise problematic contract terms, even when both contracting parties are sophisticated actors aware of the offending term, is well documented, though the reasons for this phenomenon remain poorly understood. See, e.g., Stephen J. Choi et al., *The Evolution of Contractual Terms in Sovereign Bonds*, 4 J. LEGAL ANALYSIS 131, 136 (2012) (“[E]ven if the legal terms of a sovereign debt contract are not enforceable by courts, they can matter.”); Stewart Macaulay, *Non-Contractual Relations in Business: A Preliminary Study*, 28 AM. SOC. REV. 55, 65–66 (1963) (explaining why some businesses choose to use contracts even when they are not necessary to ensure compliance).

65. See *supra* notes 56–58 and accompanying text.

forget the structure of the actual exchange and the limits it places on routine bad faith of this kind.

First, the underlying medical nature of the transaction persists regardless of whether the exchange is governed by gift or contract. A consequence of this is that, in practice, medical exemptions for nonparticipation are almost always available. In much the same way that courts would not force performance of a kidney contract, in practice doctors will not force patients to go through with a donation if they really do not want to—and, moreover, are likely to provide them with a medical reason to cover their nonparticipation.<sup>66</sup>

Second, and more generally, the NEAD-chain community's rejection of the contract model does not appear to be based on a careful weighing of the costs and benefits of contract, as compared to gift, which presents its own challenges and imperfections, as already discussed. Rather, the choice appears both simpler and more familiar. In his famous 1963 study of contracting practices among Wisconsin businesses, Stewart Macaulay concluded that business people frequently settled disputes without regard to existing contractual arrangements, which they considered a “legalistic” nuisance. Said one businessperson:

[I]f something comes up, you get the other man on the telephone and deal with the problem. You don't read legalistic contract clauses at each other if you ever want to do business again. One doesn't run to lawyers if he wants to stay in business because one must behave decently.<sup>67</sup>

Though the settings are very different—in particular, NEAD-chain bridge donors are not repeat transactors who need to protect their reputation for trustworthiness to generate future exchanges—the sentiments are remarkably consistent with those expressed by some NEAD-chain professionals.<sup>68</sup>

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66. The example of the donor who was allowed to withdraw due to “changes in the economy” demonstrates that even nonmedical rationales may be invoked to excuse from performance a sympathetic donor who has had a change of heart. *See supra* notes 29–30 and accompanying text.

67. Macaulay, *supra* note 64, at 61.

68. *See supra* note 39 and accompanying text.

## VI. CUSTOM, CONTRACT, AND ORGANIZATIONS

We have argued that neither of the salient social imaginaries of exchange—gift giving or formal contract—perfectly meets the practical demands of the NEAD system. The question, then, is whether the ambiguities can be finessed by the practices of NEAD-chain professionals and in the minds of transplant participants. Exchange of awkward goods is often accompanied by a considerable amount of practical and symbolic work that signals the transaction's social meaning and the basic principles by which it is governed. Rather than cleaving to one pure model of exchange or another, in such circumstances there is often a deliberate mixing of various modes, as when egg donation is strongly embedded in a rhetoric of selfless gift giving but also involves the transfer of substantial amounts of money.<sup>69</sup> In many such cases, expansion often brings formalization. If NEAD chains follow that path, perhaps the professional resistance to potential contractual solutions will wane. Formalization has already occurred at some stages of the NEAD-chain process, though so far it has taken place not on the donor-patient side but at the organizational back end. As transplant centers, organ procurement organizations, hospitals, insurers, and other participating entities have come to collaborate on longer chains, organizational actors have begun to push for the development and elaboration of clearer procedures for sharing information, standardizing cost and reimbursement structures, and clarifying the expectations and obligations of the institutional participants in the chains.<sup>70</sup> This elaboration has been in the form of procedural standardization rather than inter-organizational contracts as such.

Thus far in practice, the social imaginary of generalized reciprocity frames the public side of NEAD chains. Contract lurks in the background, not so much as a means of enforcing shadow prices but more as a potential alternative for normatively generating commitment among participants. This is consistent with the organization of other types of awkward exchanges—adoptive children, gametes, and surrogacy, for example—and yet contrary to popular expectation, which often assumes that the growth of an exchange system straightforwardly entails the displacement of less

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69. RENE ALMELING, *SEX CELLS* 110–144 (2011).

70. See Mast et al., *supra* note 7, at 1810 (suggesting a model for improving the financial management of NEAD chains across multiple hospitals).



formal by more formal means of monitoring and control.<sup>71</sup> Instead, the formal expansion of organizational systems often involves considerable *symbolic* elaboration of rules and expectations.<sup>72</sup> The imagery of gift exchange is a powerful resource for endowing cadaveric organ donation with social meaning. This is so even though cadaveric donation is a highly mediated and organizationally intensive practice, far removed from the ideal-typical structure of generalized exchange of values in small-scale societies. In much the same way, the imagery of formal contract may come to structure the social meaning of participation in NEAD chains without having much contract-enforcement capacity behind it.

A final possibility is that real institutional formalization will intensify as NEAD chains become more common, but that this formalization will be confined to the realm of agreements between organizations. As we have detailed here, neither contract nor generalized exchange drives the practice of NEAD at present. Rather, the majority of actual exchanges still resemble the simplest form of exchange described in Figure 1: direct, simultaneous exchange between parties with no time delay or opportunity to back out. Even in the widely reported sixty-person (thirty-donor) chain,<sup>73</sup> only five links involved a pay-it-forward delay of more than twenty-four hours. Strikingly, when considered as exchanges between *transplant centers* rather than individual patient-donor pairs, each of these five longer-term links—which were of thirteen, twenty-one, four, sixty-eight, and twelve days in length, respectively—was itself a directly reciprocated exchange, in which the chain was moved forward when the receiving transplant center gave a kidney back to the center from which it had received a kidney. From this perspective, what appears to the public and to participants as an instance of solidaristic, chain-generalized exchange is, from the point of view of transplant centers, better seen as a restricted exchange of kidneys

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71. See Robert E. Scott, *The Promise and the Peril of Relational Contract Theory* 9–10 (on file with the *Duke Law Journal*) (reviewing the literature on formal and informal enforcement mechanisms in contract and arguing that economic-relationalist research largely assumes “that the relationship between formal contract and informal norms [i]s antagonistic: the introduction of formal contract and its ‘high-powered’ sanctions tended to crowd out the otherwise powerful informal forces” of contract enforcement (footnote omitted)).

72. John W. Meyer & Brian Rowan, *Institutionalized Organizations: Formal Structure as Myth and Ceremony*, 83 AM. J. SOC. 340, 357 (1977).

73. Sack, *supra* note 27.

under strong and perhaps formally specified expectations for reciprocity.

#### CONCLUSION

Our focus in this Essay has been on the “goodness of fit” between the practical organization of NEAD chains and the social imaginaries of customary gift exchange and formal contract-based transactions. Our approach has been to treat this fit as variable, and the different levels of the exchange process as separable. We have argued against a tendency in the literature to fuse questions of individual motivation, social interaction, and institutional organization into a unified characterization of “gift” versus “contractual” exchange in goods like human organs. Instead, we have argued, the social imaginaries of gift- and contract-based exchange provide rich cultural resources to participants and professionals seeking to frame the social meaning of NEAD chains. This effort takes place against a background of largely fixed logistical demands and organizational actors. Both gift and contract have the potential to act as schemas for the exchange. Neither fit perfectly. Gift exchange is the more familiar template in this kind of case, but we have argued that contract also has the potential to symbolically frame the exchange. Despite being rejected as inappropriate by some organizational actors, contract-like forms appear implicitly or explicitly at several points in the NEAD donation-and-exchange process—not, we emphasize, because anyone expects to legally enforce them, but rather, it seems, for their ability to powerfully symbolize credible commitments by participants. Whether this symbolic use of contract will continue to expand is an empirical question. Meanwhile, NEAD chains should also be seen as systems of exchange among organizations, not just individual donors. Because these organizations deal with kidney exchanges repeatedly and as a matter of course, we may see more formalization of standards and expectations for reciprocity among participating entities—perhaps driven in part by a desire to ensure that the different parts of the organizational layer, too, are giving and receiving their fair share.