

# PHILANTHROPICALLY FUNDED HEROISM AWARDS FOR KIDNEY DONORS?

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## I

### INTRODUCTION

There are about 100,000 people on the waiting list for a deceased donor–kidney transplant in the United States, a number that grows from year to year despite advances that have increased the availability of kidney transplantation.<sup>1</sup> About 36,000 patients joined the waiting list in 2013, though only about 11,000 deceased donor transplants were performed, along with about 6000 transplants from living donors.<sup>2</sup> There are now more living kidney donors than deceased donors in the United States, even though there are more transplants from deceased donors, who donate two kidneys.<sup>3</sup> Although kidneys from deceased donors are allocated by the United Network for Organ Sharing (UNOS) to patients on the waiting list according to strict rules, living donors typically give a kidney to a relative or loved one in need.<sup>4</sup> In this article we explore possible ways to increase the number of living donors.

There have already been efforts to increase the number of living donors. Kidney exchange allows potential living donors who are incompatible with their intended recipients to nevertheless donate kidneys to other, compatible recipients in a way that ensures that their intended recipients receive compatible kidneys. This is done by an exchange between two or more incompatible patient–donor pairs such that each donor gives a compatible

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1. Data on the U.S. kidney waiting list is provided by the Organ Procurement and Transplantation Network. *Data*, U.S. DEP'T HEALTH & HUMAN SERVICES, <http://optn.transplant.hrsa.gov/converge/data> (waiting list, overall by organ) (last visited Sept. 29, 2014).

2. *Data*, U.S. DEP'T HEALTH & HUMAN SERVICES, <http://optn.transplant.hrsa.gov/latestData/rptData.asp> (waiting list additions and transplants by donor type) (last visited Apr. 8, 2014).

3. *Data*, U.S. DEP'T HEALTH & HUM. SERVICES, <http://optn.transplant.hrsa.gov/data/> (last visited Apr. 3, 2014).

4. *Data*, U.S. DEP'T HEALTH & HUMAN SERVICES, <http://optn.transplant.hrsa.gov/latestData/rptData.asp> (Living Donor Transplants by Donor Relation) (last visited Apr. 8, 2014).

kidney to another donor's intended recipient.<sup>5</sup> In addition, kidney exchange has allowed nondirected living donors, who wish to donate a kidney without having a particular patient in mind, to donate a kidney in a way that initiates a chain of transplants that can lead to many donations.<sup>6</sup> Some nondirected donors have initiated chains that have resulted in as many as thirty transplants, although the average chain length is much shorter.<sup>7</sup> So, while there is a general shortage of donors of all sorts, non-directed living donors are particularly valuable.

However, increasing the number of living donors (directed or nondirected) is a complex project. On the one hand, there is a natural reluctance to actively recruit living donors because donation is not risk free. On the other hand, some of the tools that might increase donation rates are unavailable because the National Organ Transplant Act (NOTA) forbids giving "valuable consideration" for organs.<sup>8</sup> Consequently, donors cannot be compensated, which prevents the usual way of raising the supply of scarce resources—by raising the price paid.

NOTA presents legal barriers to giving inducements to kidney donors and, perhaps as importantly, reflects an underlying repugnance that led to the law being passed. The buying and selling of kidneys is a "repugnant transaction" in the specialized use of the term: that is, it is a transaction that some people would like to engage in and that others would like to prevent.<sup>9</sup> Many transactions are repugnant in this specialized sense, some of which are or have been of great economic importance, although the list varies depending on time and location. It is notable, however, that the only country that we know of in which there is an explicitly legal market for kidneys is Iran.<sup>10</sup>

Whether and how kidney donors could or should be compensated is a contentious issue. For example, a recent survey of the general American public found mixed support and opposition for paying for kidneys under some circumstances.<sup>11</sup> But the contentiousness of kidney-donation compensation was evident from more than just the simple results of the survey: The survey was published in a medical journal together alongside a signed editorial, which stated that the survey was a waste of resources because physicians are opposed

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5. Alvin E. Roth, Tayfun Sönmez & M. Utku Ünver, *Kidney Exchange*, 119 Q.J. ECON. 457, 459 (2004).

6. See Michael A. Rees et al., *A Non-Simultaneous, Extended, Altruistic-Donor Chain*, 360 NEW ENG. J. MED. 1096, 1096–97 (2009); see also I. Ashlagi et al., *Nonsimultaneous Chains and Dominos in Kidney-Paired Donation—Revisited*, 11 AM. J. TRANSPLANTATION 984, 984 (2011).

7. See Al Roth, *Another Long Kidney Chain: 56 People, 28 Transplants*, MKT. DESIGN BLOG, <http://marketdesigner.blogspot.com/2013/06/another-long-kidney-chain-56-people-28.html> (last visited Oct. 30, 2014).

8. 42 U.S.C. § 274e(a) (2006 & Supp. IV 2011).

9. See Alvin E. Roth, *Repugnance as a Constraint on Markets*, J. ECON. PERSP., Summer 2007, at 37, 38.

10. Fallahzadeh, M. K., et al., *Comparison of Health Status and Quality of Life of Related Versus Unrelated Living Kidney Donors*. 13 AM. J. OF TRANSPLANTATION, 3210–14 (2013).

11. See S. Leider & A. E. Roth, *Kidneys for Sale: Who Disapproves, and Why?*, 10 AM. J. TRANSPLANTATION 1221, 1223–25 (2010).

to such a system, and only their opinions matter.<sup>12</sup> This observation that physicians are opposed is not quite correct: Surveys show a considerable variety of nuanced opinion among physicians (for example, among members of the American Society of Transplant Surgeons).<sup>13</sup>

In the face of these obstacles, inducements that might not be deemed “valuable consideration” in a legal sense have been proposed to increase the number of living donors. Deciding what is and is not valuable consideration might not always be trivial. Indeed, as the name kidney exchange suggests (and other names such as “kidney paired donation” have been used to avoid this suggestion), kidney exchange itself involves an exchange that might be thought of as giving valuable consideration: A donor who is incompatible with his intended recipient agrees to donate a kidney to someone else in exchange for his intended recipient receiving another donor’s kidney. Is this in-kind exchange “valuable consideration” under the terms of the act? The Charlie W. Norwood Living Organ Donation Act (Norwood Act) was passed specifically to say that it is not,<sup>14</sup> and the Department of Justice issued a long-delayed memorandum saying that in fact kidney exchange had never been prohibited by NOTA in the first place.<sup>15</sup> Perhaps because it is an in-kind exchange, kidney exchange has succeeded in increasing the supply of living donors without generating any of the repugnance faced by monetary payments for kidneys; the Norwood Act was ultimately passed without opposition.<sup>16</sup>

Other proposals have sought to find nonrepugnant ways to reward kidney donors. One proposal has been to organize altruism exchanges that would allow kidneys to be donated in exchange for monetary donations to charities chosen by the kidney donors.<sup>17</sup> Another, signed into law in 2008,<sup>18</sup> makes any organ donor eligible for a Stephanie Tubbs Jones Gift of Life Medal.<sup>19</sup> However, the

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12. See D. L. Segev & S. E. Gentry, *Kidneys for Sale: Whose Attitudes Matter?*, 10 AM. J. TRANSPLANTATION 1113, 1113–14 (2010).

13. J. R. Rodrigue et al., *Stimulus for Organ Donation: A Survey of the American Society of Transplant Surgeons Membership*, 9 AM. J. TRANSPLANTATION 2172, 2173–74 (2009); see also Al Roth, *Kidney Sales and Incentives for Donors: Current Controversy*, MARKET DESIGN (Dec. 6, 2010, 2:08 AM), <http://marketdesigner.blogspot.com/2010/12/kidney-sales-and-incentives-for-donors.html>.

14. Charlie W. Norwood Living Organ Donation Act, Pub. L. No. 110-144, 121 Stat. 1813 (2007) (codified at 42 U.S.C. §§ 273b, 274e (2006 & Supp. IV 2011)).

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

16. Elsewhere however, for example in Germany, kidney exchange is illegal, because current law only allows donation to “relatives of the first or second degree, spouses, registered life partners, fiancés or other persons with whom the donor obviously has a very close personal relationship.” Gesetz über die, Spende, Entnahme und Übertragung von Organen und Gewebe [TPG] [Transplantation Act], Nov. 5, 1997, BUNDESGESETZBLATT, Teil I [BGBl. I], at 9, § 8(1) (Ger.), available at <http://www.gesetze-im-internet.de/bundesrecht/tpg/gesamt.pdf>.

17. Stephen J. Choi, Mitu Gulati & Eric A. Posner, *Altruism Exchanges and the Kidney Shortage*, 77 LAW & CONTEMP. PROBS., no. 3, 2014 at 289.

18. Stephanie Tubbs Jones Congressional Gift of Life Medal Act of 2008, Pub. L. No. 110-413, 122 Stat. 4338 (codified as amended at 42 U.S.C. § 274i (2006 & Supp. IV 2011)).

19. 42 U.S.C. § 274i (2006 & Supp. IV 2011).

same law prohibits the use of any federal funds whatsoever to create or bestow this medal, and, as far as we can tell, it has never been awarded. Beard and Leitzel emphasize the heroic aspects of kidney donation in their discussion of a public, nationwide, monopsonistic kidney-procurement system.<sup>20</sup>

In this article we explore another way to possibly ease the path toward nondirected kidney donation among those inclined to make such donations—by combining the appreciation for both philanthropy and heroism suggested by the proposals just mentioned. Specifically, we consider an award that would recognize a nondirected donor as a hero and would come with a prize of \$50,000.<sup>21</sup> We report a brief preliminary survey that we designed and conducted to assess public reaction to various forms of heroism awards for nondirected kidney donors.

In our survey, we measured public sentiment regarding heroism awards along two dimensions. The first dimension concerned whether the award would be given by the federal government, as authorized by Congress, or by a private foundation. Members of the public might have preferences on this issue for at least two reasons, one of which is costs to the taxpayer, and the other of which is whether this is an appropriate role for government.

The second dimension considered how many nondirected donors would receive the award per year. One proposal would have only a few (though at least one) donors recognized each year. It seems plausible that in this case the recognition and prize money might not be seen as valuable consideration because donating a kidney would not automatically lead to recognition. The other proposal would aim to recognize all nondirected living donors. In the case of the awards being given by a private foundation, we also add a category in which the aim would be to recognize every living nondirected donor, though the monetary prize could be determined by the total money available.

## II

### THE SURVEY

The survey contained five questions, each of which was the first question on 200 surveys administered over the Internet by Qualtrics (to a sample of adult Americans, which Qualtrics constructed to be a representative sample). Each subject read the introduction below, and then one of the following five questions (followed by the other four questions in each survey).

#### Introduction

There are almost 100,000 people in the United States on the waiting list for a kidney transplant from a deceased donor, and there are only about 11,000 such transplants a year. Not only is the wait long, the waiting list also grows longer each year, and thousands of people die each year while waiting for a kidney.

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20. T. Randolph Beard & Jim Leitzel, *Designing a Compensated-Kidney Donation System*, 77 LAW & CONTEMP. PROBS., no. 3, 2014 at 253.

21. This would be a bargain, for example, for Medicare, even if we ignore the health benefits of transplantation and consider only the cost savings from transplantation as compared to dialysis.

But there is another source of kidneys for transplantation: healthy people have two kidneys, and can remain healthy with one, and so donation by living donors is also possible. Almost 6,000 people a year come forward and are found to be healthy enough to donate to a friend or relative.

However not everyone who is healthy enough to donate a kidney can donate to a particular person, since kidneys have to be compatible with recipients. The fastest growing source of live donation is therefore *kidney exchange*, in which incompatible patient-donor pairs seek to find others with whom they can arrange transplants in which every patient receives a compatible kidney.

This still leaves more people joining the waiting list for a kidney than being taken off because they received one. Not everyone has a loved one or relative that is healthy enough to donate.

A final source of kidneys is *non-directed* living donors. These are donors who do not have a particular patient to whom they wish to donate. A non-directed donor can initiate a chain of donations among patient donor pairs, and sometimes a single non-directed donor has initiated a chain of as many as thirty life-saving transplants.

Every living donor, be they a donor to a specific patient or a non-directed donor undergoes not only strict medical but also psychological evaluation to ensure that the decision is taken carefully.

Transplantation is the best treatment for end-stage kidney disease: it saves the life of the patient, and also saves Medicare about half a million dollars compared to the alternative, less effective treatments such as dialysis.

On a scale of 1 (strongly disapprove) to 10 (strongly approve) evaluate the following proposals. (The names in parentheses are for later reference and were not presented to survey participants.)

**(Fed 50K) Federal compensation for American Kidney Heroes by an Act of Congress:** Congress will authorize the federal government to recognize all non-directed donors with a ceremony in Washington, D.C., a medal and a payment of \$50,000.

**(Fed few) Federal compensation for American Heroes by an Act of Congress:** Congress will pass the American Heroes Act which will establish some generally recognized criteria for exceptional heroism, and each year will recognize qualifying American Heroes, who will be celebrated with a ceremony in Washington, D.C. and will each receive a medal and a prize of \$50,000. While the kinds of heroism celebrated may vary from year to year, the criteria of the Act will include particularly deserving policemen, firefighters, and non-directed kidney donors. The goal will be to recognize five American Heroes each year. The Act anticipates that a non-directed kidney donor will be honored every year.

**(Found 50K) American Kidney Heroes Foundation, a private non-profit philanthropy:** The Foundation will recognize non-directed kidney donors as American Heroes, who will be celebrated with a ceremony in Washington, D.C. and will each receive a medal and a monetary prize. The Foundation expects to be able to include all the non-directed kidney donors every year. The Foundation expects to have sufficient funds to make the prize amount \$50,000.

**(Found div) American Kidney Heroes Foundation, a private non-profit philanthropy:** The Foundation will recognize non-directed kidney donors as American Heroes, who will be celebrated with a ceremony in Washington, D.C. and will each receive a medal and a monetary prize. The Foundation expects to be able to include all the non-directed kidney donors every year. The available prize money will be divided equally among all the recipients.

**(Found few) American Heroes Foundation, a private non-profit philanthropy:** The Foundation will establish some generally recognized criteria for exceptional heroism, and each year will recognize qualifying American Heroes, who will be celebrated with a ceremony in Washington, D.C. and will each receive a medal and a prize of \$50,000. While the kinds of heroism celebrated may vary from year to year, the Foundation's

criteria will include particularly deserving policemen, firefighters, and non-directed kidney donors. The goal will be to recognize five American Heroes each year. The Foundation expects to be able to include a non-directed kidney donor every year.

After answering those five questions,<sup>22</sup> participants filled out a questionnaire (in which answering was optional) about their sex, age, and the state in which they live. Qualtrics, using its information on gender, made a perfectly balanced gender sample for each question (a sample of 100 men and 100 women). There is strong overlap between the gender as declared by Qualtrics and the answer to the sex question.<sup>23</sup> The average age of the 990 participants who declared their age is 45.9.<sup>24</sup> The mean age in each treatment is close to the total average, ranging from 45.5 to 47.1.

Participants were also asked “How often do you attend religious services (excluding occasional weddings, funerals, etc.)?” with possible answers being “[o]nce or more a week,” “[o]nce a month,” “[f]or major holidays,” and “[n]ever.” Overall, 30.4% of participants reported attending religious services once or more a week, 11.1% once a month, 18.6% for major holidays, and 39.9% never, with only four participants not answering this question. There was some variation across questionnaires.<sup>25</sup>

We asked participants whether “[g]enerally speaking, do you think of yourself as a Republican, a Democrat, or an Independent?” Overall, 24% answered Republican, 38% Democrat, and 38% independent, with seven not declaring.<sup>26</sup>

Finally, we asked participants about their social and economic attitudes: “On **social issues**, do you think of yourself as liberal or conservative?” and “On **economic issues**, do you think of yourself as liberal or conservative?” 994 and 996 participants answered, respectively. Table 1 shows the percentage of participants that hold each view.

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22. The order of the questions was such that if the first question was about money from a foundation, so were the next two, whereas if the first question was about a federally funded award, questions about compensation by foundation came last. Within awards from the same funding source, the subjects generally saw the same order of compensation amounts, generally organized in order of amount, with Found div between Found 50K and Found few. That is, a subject in the Fed 50K condition would see Fed 50K, Fed few, Found 50K, Found div, and then Found few. The exception to this order was the Found div treatment: Found div was followed by Found 50K, Found few, Fed 50K, and Fed few.

23. Our sample included 489 self-declared males and 498 self-declared females. Of the 500 men as declared by Qualtrics, 485 declared themselves as male, ten as female, and five declined to answer. Of the 500 females as declared by Qualtrics, 488 declared themselves as females, four as males, and eight declined to answer.

24. Age had a standard deviation of 16.9, minimum of 18, and a maximum of 80, which were the lowest and highest possible answers, given by 1.4 and 0.6 percent of all respondents, respectively.

25. Religious propensity had some variation across treatments. Participants who go to church once or more a week range from being 27.6% to 37.7% of all participants who answer one of the five questionnaires. The two middle categories range from 9.1% to 14.5% and 16.1% to 20.2%, respectively. Participants who never go to church constitute 34.2% to 47.2% of all participants in a questionnaire.

26. Political affiliation by treatment never included less than 21% Republicans, and never more than 44% either Democrats or those who considered themselves independent.

*Table 1: The Economic and Social Views of Participants by Percentage*

	Quite Liberal	Somewhat Liberal	Moderate	Somewhat Conservative	Quite Conservative
Social	14.7%	17%	39.1%	18.1%	11.1%
Economic	8.5%	15.1%	39.9%	22%	14.5%

These two measures are very correlated: A simple regression of the economic view on social views yields a coefficient of 0.74 ( $p < 0.01$ ). Likewise, the Spearman rho of correlation is 0.75,  $p < 0.01$ . There is quite some variation in the fraction of participants that hold various social or economic views across treatments, with up to twelve and ten percentage-points difference in a single category between treatments, respectively.

### III

#### SURVEY RESULTS

We first present overall results. We then present the results based on specific variables separately, and conclude the results section with an overall regression that confirms the main result.

##### A. Main Result

We present for each survey only the answer to the first question. This is because there were strong order effects; differences within subjects are much smaller than across subjects. On average, when comparing any two questions, of the 200 subjects, 106.7 would answer both questions the same way. Of the 1000 subjects, 314 answered all the questions exactly as they answered the first question.

Table 2 below shows for each of the proposals the mean response of the 200 participants in each treatment (underlined), where 1 corresponds to strongly disapprove, and 10 corresponds to strongly approve, as well as the  $p$  value of a two-sided t-test on the mean difference. Table 2 shows that the policy of the government paying \$50,000 to every nondirected kidney donor (Fed 50K) has significantly lower approval than any other policy. The policies of the government recognizing just a few heroes, of which one is a nondirected donor (Fed few), or a foundation recognizing all nondirected donors either with \$50,000 (Found 50K) or by dividing the available money equally (Found div) all receive the same approval ratings. The policy of a foundation recognizing a few heroes (Found few) has significantly more approval (though only marginally as compared to Found 50K) than any other proposal.

Furthermore, for each of the two proposal variants—be it \$50,000 per nondirected living donor or honoring a few heroes—the proposal has more

approval when it is implemented through a foundation rather than by the government.

*Table 2: Average Approval and Significance of Differences in Mean Approvals*

	Fed 50K	Fed few	Found 50K	Found div	Found few
Fed 50K	<u>6.48</u>	<0.01	<0.01	<0.01	<0.01
Fed few		<u>7.28</u>	0.35	0.42	0.048
Found 50K			<u>7.37</u>	0.28	0.096
Found div				<u>7.23</u>	0.029
Found few					<u>7.69</u>

The main result—that Fed 50K has lower average approval rating than any other proposal—is not only present in the mean, but is also reflected when considering extreme answers (such as the percent of participants who strongly disapprove or strongly approve) or moderate answers.<sup>27</sup>

*Table 3: Percentage of Extreme and Moderate Answers on Each Proposal*

	Fed 50K	Fed few	Found 50K	Found div	Found few
Strongly disapprove (1)	10%	6%	3.5%	3.5%	3.5%
Disapprove (1–4)	17%	11%	11.5%	11.5%	10%
Approve (7–10)	52.5%	68%	68%	66%	73%
Strongly approve (10)	21%	25%	27.5%	27%	37%

## B. Results for Different Subgroups

We now parse the results using specific subgroups, which generally do not show large differences from the whole sample.

The main result, that Fed 50K has less approval than any other treatment, is true for women and men separately at the five-percent level.<sup>28</sup> Furthermore, there are no significant gender differences of approval ratings on any given proposal. Combining the data on all proposals, women have somewhat lower

27. See *infra* Table 3.

28. The exception is that for men, the difference between Fed 50K and Fed few and that between Fed 50K and Found 50K is significantly different only at the ten-percent level (the p-values are 0.060 and 0.064, respectively).



approvals (7.11 compared to 7.32,  $p = 0.103$ ), though the difference fails to be significant.

Our main result, that Fed 50K has significantly less approval than any other policy at the five-percent level, remains accurate when controlling for responses to the question, “How often do you attend religious services (excluding occasional weddings, funerals, etc.)?” The two largest subgroups of participants according to their answer, namely those that answer “once or more a week” and “never,” significantly prefer other policies over Fed 50K at the five-percent level, though only at the ten-percent level when comparing Fed 50K to Found div. By and large, for a given policy, when grouping participants by whether they attend religious services once or more a week compared to others, or when grouping them by whether they attend any religious services, we find no significant differences in approval ratings.<sup>29</sup> Overall, participants who attend services once or more a week approve of all kidney compensations significantly more than others (7.43 vs. 7.11,  $p = 0.03$ ). Likewise, participants who never attend services approve less of kidney compensation than others (6.96 vs. 7.37,  $p < 0.01$ ). These differences are driven by participants who never attend services.<sup>30</sup>

Participants who declare themselves as Democrats show the main result—that Fed 50K has significantly less approval than any other policy at the five-percent level. This is also the case for Republicans, though  $p$  values of the difference between Fed 50K and policies such as Found 50K and Found div are only significant at the ten-percent level ( $p = 0.075$ ) or just fail to be significant ( $p = 0.11$ ). However, Republican Fed 50K responses show significantly less approval than responses to the two Foundation questions intended to reward any nondirected living donor (6.21 vs. 7,  $p = 0.058$ ). Independents judge both government policies (Fed 50K and Fed few) roughly the same way (6.49 vs. 6.72,  $p = 0.30$ ) and also do not differentiate between Fed 50K and Found 50K (6.49 vs. 6.88,  $p = 0.21$ ). However, Fed 50K has lower approval than Found div (6.49 vs. 7.20,  $p = 0.052$ ) and Found few (6.49 vs. 7.56,  $p < 0.01$ ).<sup>31</sup>

Political affiliation does affect the approval rating even within a single proposal. First, note that Republicans and independents are not significantly different in their preferences for each proposal. Although all three groups agree

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29. Only in Found few do we find differences in approval ratings across attendance of religious services. There, the results are that participants who never attend religious services approve at a significantly lower rate than those who have moderate religious behavior (7.18 versus 8,  $p = 0.02$ ), whereas participants who attend once or more a week do not significantly differ in their approval ratings from those with moderate religious behavior (that is, attendance once a month or for major holidays) (8.05 versus 8,  $p = 0.45$ ). The Leider and Roth 2010 survey of attitudes toward purchasing kidneys found that more religious respondents were more disapproving, so the difference found here might reflect something worth further exploration (for example, regarding prizes versus payments).

30. Participants who attend religious services once a week compared to those with moderate attendance (that is, once a month or for major holidays) agree on kidney compensations (7.43 versus 7.31,  $p = 0.27$ ), whereas those that never attend have lower approvals compared to moderate attendance (6.96 versus 7.31,  $p = 0.037$ ).

31. Comparing, for independents, Fed 50K to the two Foundation questions that aim to reward any nondirected living donor does show a significant difference (6.49 versus 7.05,  $p = 0.075$ ).

on the rating of both Fed 50K and Found few, Democrats are more in favor of all the other proposals than are Republicans or independents (with the difference not being significant between independents and Democrats for Found div).<sup>32</sup> Overall, when combining all policies, Democrats are more favorable toward these proposals than Republicans (7.54 vs. 7.02,  $p < 0.01$ ) or independents (7.54 vs. 6.98,  $p < 0.01$ ), although the latter two groups do not differ from one another ( $p = 0.43$ ).

In terms of views on social conservatism, we group quite liberal and somewhat liberal together into liberal, as well as quite conservative and somewhat conservative into conservative. Social liberals and moderates show the main pattern; they approve less of Fed 50K than any other policy. Social conservatives do not show this pattern.<sup>33</sup> Each of those subgroups have views that are not significantly different from one another on each policy separately, the exception being that social liberals find Found div more attractive than social conservatives (7.57 vs. 6.78,  $p = 0.04$ ). Overall, the differences between social liberals, moderates, or conservatives in terms of views that reward nondirected living donors are not large.<sup>34</sup>

In terms of views on economic conservatism, we lump quite liberal and somewhat liberal together into liberal, as well as quite conservative and somewhat conservative into conservative. Economic liberals and moderates show the main pattern: They approve less of Fed 50K than of any other policy. Although the views of economic conservatives are slightly more approving of Fed few or Found div than Fed 50K, these two differences fail to be significant. However, comparing Fed 50K to the two foundation questions that aim to

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32. For the Fed 50K proposal, no group is significantly different from each other (Democrats versus Republicans, 6.61 versus 6.21,  $p = 0.23$ ; Democrats versus independents, 6.61 vs. 6.49,  $p = 0.39$ ). For Found few, Democrats are not significantly different from Republicans (7.93 versus 7.51,  $p = 0.17$ ) or Independents (7.93 versus 7.56,  $p = 0.18$ ). For Fed few, Democrats are significantly more in favor than Republicans (7.88 versus 7.25,  $p = 0.07$ ) and independents (7.88 versus 6.72,  $p < 0.01$ ). For Found 50K, Democrats are significantly more in favor than Republicans (7.83 versus 7.11,  $p = 0.04$ ) and independents (7.83 versus 6.88,  $p < 0.01$ ). For Found div, Democrats are significantly more in favor than Republicans (7.52 versus 6.91,  $p = 0.076$ ), but not significantly more so than independents (7.52 versus 7.20,  $p = 0.22$ ).

33. Social conservatives do not approve significantly more of Fed few than Fed 50K (7.18 versus 6.56,  $p = 0.14$ ). They do not even show a significant difference in approvals when comparing Fed 50K to the two foundation questions that aim to reward any nondirected living donor (6.56 versus 7.11,  $p = 0.11$ ).

34. Social liberals are slightly more in favor of policies that reward nondirected living donors than are moderates (7.38 versus 7.12,  $p = 0.08$ ), though moderates are not significantly different from conservatives (7.12 versus 7.11,  $p = 0.49$ ). Liberals are slightly more in favor than conservatives (7.38 versus 7.11,  $p = 0.098$ ). A regression of the approval of payment for nondirected living donors on social views (from 1, corresponding to quite liberal, to 5, corresponding to quite conservative) yields a constant of 7.58,  $p < 0.01$ , and a coefficient of  $-0.13$ ,  $p = 0.06$ . This difference is driven by differences in views concerning the policies of foundations ( $-0.17$ ,  $p = 0.47$ ). There are basically no differences for government policies ( $0.07$ ,  $p = 0.55$ ). See also Christopher T. Robertson, David V. Yokum & Megan S. Wright, *Perceptions of Efficacy, Morality, and Politics of Potential Cadaveric Organ-Transplantation Reforms*, 77 LAW & CONTEMP. PROBS., no. 3, 2014 at 101 (finding in an online survey on Amazon Turk that political affiliation is correlated with approval of various proposed reforms of the deceased donor-registration system).

reward any nondirected living donor does show a significant difference (6.39 vs. 7.06,  $p = 0.052$ ). The different subgroups do not agree on their views even for a given policy. Although there is no significant difference in the approval of Fed 50K, economic liberals have higher approval ratings for any policy when compared to conservatives, with the exception of Found 50K. However, liberals have higher approval ratings than others when we combine the foundation policies that aim to reward all nondirected living donors.<sup>35</sup> Combining all policies, liberals have higher approval ratings than both moderates and conservatives, who do not differ from one another.<sup>36</sup>

### C. Results Combining Characteristics of Participants

Because there is quite some variation in the distribution of characteristics of participants across treatments, we tested the main result using regressions. In table 4 we show the coefficients of a linear regression of the approval of policy when controlling for all the characteristics of participants we collected.

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35. Liberals evaluate both foundation policies that aim to reward any nondirected living donor higher than moderates (7.71 versus 7.26,  $p = 0.064$ ) and conservatives (7.71 versus 7.06,  $p = 0.01$ ).

36. This is confirmed by regressions of the approval of payment for nondirected living donors on social views (from 1, corresponding to quite liberal, to 5, corresponding to quite conservative), which yield a constant of 8.05,  $p < 0.01$ , and a coefficient of  $-0.26$ ,  $p < 0.01$ .

*Table 4: Approval Ratings of Various Policies Using Ordinary Least Squares<sup>37</sup>*

	(1)	(2)
Economic	-.308 (.12) <i>.011</i>	-.286 (.14) <i>.047</i>
Social	.114 (.12) <i>.342</i>	.119 (.14) <i>.398</i>
Sex	-.398 (.17) <i>.018</i>	-.405 (.20) <i>.039</i>
Church	-.191 (.07) <i>.006</i>	-.214 (.08) <i>.009</i>
Democrats	.380 (.26) <i>.149</i>	.284 (.30) <i>.347</i>
Independents	.052 (.24) <i>.830</i>	-.031 (.28) <i>.347</i>
Fed few	.900(.27) <i>.001</i>	
Found 50K	.790 (.27) <i>.003</i>	
Found div	.661 (.27) <i>.012</i>	
Found few	1.198 (.27) <i>.000</i>	
Federal		-.529 (.19) <i>.006</i>
State, Age	Yes	Yes
N	937	743

37. The dependent variable was the approval rating of the policy (1 corresponds to strongly disapprove and 10 corresponds to strongly approve). The table shows the coefficient, the standard error in parentheses, and the *p* values in italics under the coefficients. Economic represents the answer to the question, "On economic issues, do you think of yourself as liberal or conservative?" where 1 is quite liberal and 5 is quite conservative. Social represents the answer to: "[o]n social issues, do you think of yourself as liberal or conservative?" where 1 is quite liberal and 5 is quite conservative. Sex is 1 for males and 2 for females. Church represents the answer to the question, "How often do you attend religious services (excluding occasional weddings, funerals, etc.)?" where 1 is "[o]nce or more a week" and 4 is "[n]ever." Democrats is a dummy for Democrats and Independent for independents (with Republicans being the omitted category from the answer to the question, "Generally speaking, do you think of yourself as a Republican, a Democrat or an Independent?" Fed few, Found 50K, Found div, and Found few are dummies for the various policies (where Fed 50K is the omitted category in regression (1)). In regression (2) Federal is a dummy that equals 1 for the policies that use federal funds (that is, Fed 50K and Fed few). In regression (2) we exclude respondents from Found div.

In column (1) we compare all policies to each other using fixed effects for the states the participants live in and for their political views (with Fed 50K, Democrats, and Alabama as omitted categories). The coefficients on all the policies—Fed Few, Found 50K, Found div., and Found few—are significant, confirming that Fed 50K has the lowest approval ratings, when controlling for participant characteristics. It is, however, not the case that Found few is universally more approved of than the other treatments: When testing the equality of coefficients Found few to Fed few yields  $p = 0.259$ , Found few compared to Found 50K yields  $p = 0.123$ , and Found few compared to Found div yields  $p = 0.041$ .

In column (2) we compare policies issued by the government to the other policies, and find that government policies have lower approval than other policies. To maintain comparability, we consider in regression (2) only Fed 50K and Fed few—which are lumped in the Fed variable—as well as Found 50K and Found few. The coefficients remain qualitatively the same when we add Found div as well.

#### IV CONCLUSIONS

We analyzed approval ratings of various policies that reward nondirected living kidney donors, considering the effect of rewards such as recognition as a hero accompanied by a prize of \$50,000. We also considered policy variations such as whether the reward is from the government or a private foundation and whether all or only a small group of nondirected living donors are recognized and rewarded. We also tested a “foundation divide” policy, in which all donors are recognized, but their prize is simply the total money available divided by the number of recognized donors. Such a policy might be useful for a foundation in its startup phase.

One potentially surprising result of the survey is the overall high approval ratings of all policies. However, we hasten to note that this is not a “within experiment comparison,” and so could of course be a result of the way the problem was posed. Nonetheless, it suggests that repugnance toward such policies might be less severe than perhaps anticipated. The main result of our survey is that there is basically universal agreement that the Fed 50K policy receives less approval than any of the hero-foundation proposals.

It is premature to do more than speculate on the reasons, but we can think of some hypotheses. Fed 50K is the option that most resembles simple payment in return for kidney donation, and this might account for the fact that it meets with the lowest level of approval, and the highest level of strong disapproval. It is also the option that requires the highest expenditure of taxpayer money. But Fed 50K is also the only one of our proposals that was not framed in terms of heroism or in terms of being a prize.

The idea of giving a “hero” (or “champion”) awards exists in our culture in different kinds of combinations with monetary payments. We award medals to

unusually heroic soldiers, sometimes posthumously, but also to those who survive their heroic acts. These medals bring honor and acclaim but no cash reward, nor is much cash outlay required to make the award. We give champion Olympic athletes gold medals, which also come with great honor and acclaim but no cash award, yet which are made of gold, which is part of what distinguishes them from lesser medals made of less expensive metals. In many countries, including the United States, Olympic medalists are also rewarded with cash. And scientific prizes, like the Nobel prizes, combine all of the above: honors and acclaim, a gold medal, and a substantial monetary award.

Prizes also come with the idea that they are awarded only to a few, and not necessarily even to all eligible contenders. They are not “consideration” in the sense that a prize does not automatically follow from worthy performance, which might also be part of what differentiates Fed 50K from the other proposals.<sup>38</sup> And a monetary award in appreciation for the heroism involved in kidney donation is and can be distinguished from payment for a kidney.

Although the survey we report here provides very limited ability to determine causes, it does suggest that payments to nondirected kidney donors would meet with more approval and less strong disapproval when included in awards for heroism, and when paid by a private foundation.<sup>39</sup> Consequently, this might be an avenue worth further exploration in the effort to increase donation and relieve the shortage of kidneys and the burden of kidney disease.

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38. We hasten to note that we are not licensed to practice law in North Carolina, or anywhere else.

39. Among the particular directions that seem worthy of further exploration would be direct comparison of approval rates for heroism awards and for explicit purchases of kidneys.