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Household Decisions Regarding Charitable Gifts

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I.   Introduction

Recent research by economists suggests that men and women are approximately equally generous in their philanthropy, but they direct their money in different ways. A recent study of philanthropic bequests based on estate tax data shows male donors contributed 26.7 percent of their net worth to charitable causes, quite similar to the 27.6 percent figure for women. However, among female decedents, 34.5 percent of the total amount bequeathed went to educational, medical, or scientific organizations, while only 21.5 percent of men's charitable bequests was so directed (Eller 1997). A study of annual giving based on a nationwide household survey found that both the probability of giving anything to charity, and the amount given, depended on such variables as income, educational attainment, and religious attendance. But the relative importance of these variables differed significantly between single men and single women, between single women and married women who controlled philanthropy within their households, and between households in which a married woman had authority over giving and those in which the couple made their decisions jointly (Andreoni et al 1999). Experimental evidence also suggests that men and women react differently to variations in the cost of transferring income to others (Andreoni and Vesterlund, 1998).

If men and women differ in their philanthropic habits when they are single, what happens when they marry? Do they compromise? Does authority go to the spouse who earns more money, or does the partner who can do so at lower

opportunity cost to the couple get assigned the task of deciding where the money should go? In the last decade or so, economists have grown increasingly interested in the allocation of resources within households. Authority over charitable giving is one of many household tasks about which couples must negotiate. For certain types of organizations that depend on gifts, it may matter who controls giving. For example, it may matter whether it is the more or less educated partner, a man or a woman, who makes charitable giving decisions for a household, because education and gender, among other things, appear to influence giving behavior.

In this paper, we do two things. First, we present data on charitable donations organized according to the sex of the higher-earnings partner and the allocation of decision-making authority within the household. These data reveal, for example, that households give a greater percentage of their income to charity if the higher-earnings partner is female or if decisions about donations are made jointly. Second, we present a non-formal economic model of bargaining within the household which allows us to identify a set of variables that are likely to affect the household's allocation of decision-making authority over charitable giving.

In section II, we describe our data set and present data on charitable giving by the sex of the higher-earnings partner and the allocation of decision-making authority over charitable donations. The data demonstrate clearly that both of these factors influence the level of giving and the areas to which donations are made. In section III, we present the model of household bargaining and discuss its implications for the allocation of decision-making. In section IV, we present the

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empirical evidence on the factors affecting the allocation of decision-making authority, and the targets and levels of household giving. Concluding remarks are in section V.

II. The Data

The data for this study are taken from the 1996 Giving and Volunteering (G&V) survey conducted by Gallup for the nonprofits advocacy group Independent Sector. The G&V survey is a household survey conducted through in-person interviews with one adult member of each household. It combines a representative national sample with an oversampling of blacks, Hispanics, and households with incomes above $60,000. The survey collects data on charitable giving during 1995. Because the survey was conducted from May 4 to June 16, 1996, most households would have prepared a 1995 income tax return; many would have recently reviewed their charitable donations as they enumerated their itemized deductions (38 percent reported itemizing their deductions). Information on household income is available in ranges only, with seventeen closed-ended brackets plus an open-ended top bracket for households with incomes of $125,000 or more.

Besides collecting basic demographic data, there are two questions in the survey that relate to the issue of influence over charitable giving in households with more than one adult. First, the survey asks directly who makes decisions about donations: "Even though members of a household or family give as a unit, individual members may select certain charities to support. Who in your family or

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household is considered most involved in deciding to which charities your family or households gives?" Available responses included that decisions were made by the couple jointly, by the respondent, by the respondent's partner, or by someone else in the household. Second, the survey asks the respondent, "Do you earn the highest income in the household?" Models of household bargaining (see e.g. Lundberg and Pollack 1996) suggest that the answer to this question is related to who in the household has more influence over household expenditures.

The survey data set contains 2719 households. Of these, 1755 are households containing couples. Of these couples, about seven percent are unmarried. Because unmarried couples face a different set of legal guarantees and responsibilities, we were unsure their bargaining behavior would be similar to that of married couples. Preliminary tests revealed no significant differences across the two groups; accordingly, we present results based on couples regardless of marital status.

We removed from our data set those couples for whom it was impossible to infer which partner had higher earnings. For example, there were married respondents who did not earn the highest income and who lived in a household containing other adults besides the respondent's partner who might be the highest earner. We also eliminated couples who said that someone in the household other than either of them had primary decision-making authority over charitable giving. Of the remaining couples, we have information on the sex of the higher-earnings partner and the allocation of decision making within the household in 1,220 cases.

Requiring information on household income reduces the sample size to 1,193 households. Of these, 183, or 15.3 percent, are couples in which the woman is the higher-earnings partner. These households are somewhat less likely to have incomes in the top bracket (three percent versus five percent of households in which the man is the higher-earnings partner). Average income across the rest of the spectrum is lower ($46,320 versus $48,056) but the difference is not statistically significant at a .05 level of confidence. The racial make-up of the two groups of households is also quite similar; 14.8 percent of white households and 15.7 percent of black households have a female as the higher-earnings partner.

In Table 1, charitable giving is presented by the sex of the higher-earnings partner and the allocation of decision-making authority. We consider total annual charitable giving, as well as giving to each of the four areas of charitable activity that constitute the largest components of total giving. These are education, health, human services, and religion. Because households with a male as the higher-earnings partner have slightly higher household incomes, we present average charitable donations in both dollar terms and as a percentage of household income. In calculating giving as a percent of income, we use the midpoint of the income range as our estimate of household income and omit from the data the 58 households with incomes in top range of $125,000 or more. This latter group was removed because there was not enough information in the date set to provide reasonable estimates of household income for these observations.

In the first panel of Table 1, we sort couples based on whether the male or the female is the higher-earnings partner. Among households in which the male is the higher-earnings partner, charitable giving accounts for 1.72 percent of income. This is less than the 2.05 percent of income given by households in which the female has the higher income, but the difference is not statistically significant at the .05 level of confidence. There is a striking difference in the amount of giving to education. The average donation to educational institutions was just $44 among households in which the female was the higher-earnings partner; the $118 average donations from households in which the male was the higher-earnings partner is more than two and a half times as large. This difference is statistically significant at a .05 level of confidence.

Some interesting patterns emerge when the data is further broken down according to the allocation of decision making within the household. Panel II looks at giving when the higher-earnings partner is reported to be the person who makes decisions about charitable giving. Relative to couples in which the man both earns more and controls decision making, couples in which the woman earns more and makes decisions give less to education and more to health-related charities. Relative to income, these households also allocate more to human services. The difference in educational donations is significant at a .05 level of confidence. If the null hypothesis on donations to health and human services organizations is that women are more likely to support these (nurturing) types of

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organizations, the difference in the proportion of income donated to health-related causes is significant at the .05 level (in a one-tailed test).

Panel III reports contributions from households in which both partners participate in decisions about charitable donations. For both male higher-earnings and female higher-earnings households, average total donations are biggest among the households in which both partners decide. While substantial, the differences in average giving between couples in which decisions are made jointly and the other groups are not statistically significant.

In panel IV, donations are reported for households in which authority over them is given to the lower-earnings partner. There is a dramatic difference in average spending on human services, $88 among households in which the male earns more and the female makes decisions versus only $16 dollars among households in which the female earns more and the man makes charitable decisions. This difference is significant at a .05 level of confidence, as is the difference in percent of income given to human service organizations if a one-tailed test is used.

The data in Table 1 demonstrate that giving patterns vary significantly with who has direct authority for making charitable decisions, as well as who has more indirect authority by virtue of earning the lion's share of household income. In the next section of this paper, we turn to an economic model of a couple's decision to assign authority over charitable giving to the lower-earnings partner, the higher-earnings partner, or to share in decision making.

III.   Decision making within the household

In this section, we develop a simple model of the determination of a couple's charitable donations and the assignment of responsibility for allocating those donations. The term "couple" applies to any two adults sharing a household. In practice, it may be that laws governing divorce and inheritance distinguish between married and unmarried couples in ways that affect intra-household resource allocations. Gender may play different roles in allocating chores in heterosexual households and in same-sex households. The model does not capture these distinctions.

Sharing a household allows two adults to jointly enjoy a range of what economists term household public goods, including donations to charity. (More mundane examples include the ability to share durable goods like TVs, refrigerators and CD players, and the fact that both partners typically share in the benefits of any household tasks done by either of them.) Further, the set of tasks to be completed within the household must be divided up. Making charitable donations is one such task, in that time must be devoted to investigating possible charitable outlets and to deciding upon an allocation. This time input into making donations can come from either partner or from both. If the partners are behaving cooperatively, the money will come from their pooled resources. If one partner takes sole responsibility for making decisions about charity, it is assumed that

charitable donations will reflect that partner's preferences regarding such donations.

The now standard economic model of the allocation of resources and tasks within households views it as the outcome of (perhaps implicit) bargaining between the members of the household. Each member brings into the household some earnings from working outside (this may of course be zero for some) as well as a set of preferences regarding how the household's resources of time and money should be allocated. They may also have preferences regarding the performance of various household tasks. Even if household members are altruistic toward one another, it is to be expected that such preferences will vary among them, as will their earnings and abilities in performing various tasks. The household bargaining model presumes that these differences are resolved by a bargaining process whose outcome is an allocation of tasks and resources that equalizes the net gain to each member. Here, net gain simply means the gain in utility to each member over the utility they would get outside the household, or in a household allocation that is completely non-cooperative[1].

The general implication of this model is that the bargained household allocation will be more favorable to the preferences of those members who have good alternatives outside the household. Since the outcome equalizes these net gains across members, those who would do relatively well outside are predicted to

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[1] A non-cooperative outcome here refers to a *Nash equilbrium:* an allocation that results from each member doing what is best for themselves, taking as given what other household members are doing.

end up relatively well off from the bargained household allocation of resources and tasks.

Bargaining models have been applied to a variety of household issues, and the particular version used here has been specialized in a number of ways to reflect the particular issues relating to household philanthropy in which we are interested.

We assume that each member of the household earns some income in the labor market (which may be zero). Total household income is to be allocated among the following uses: private expenditures on consumption goods for each member, expenditures on the household public goods mentioned above, and donations to any of a given set of charitable causes. The single task whose performance must be allocated within the household is that of making the household's charitable donations (if any). This task requires some amount of time. In a more elaborated model, it would be the case that the couple's time is divided among work, leisure, and a set of household tasks. However, for our purposes it is enough to specify that the charitable allocation task requires some amount of time, and that the value of this time to the household is positively related to the earnings of whichever member undertakes it. Finally, it is presumed that if the allocation of charitable donations is assigned to either partner, then the resulting allocation reflects the preferences of that partner alone, with regard to both the level of giving and the recipient organizations.

This household bargaining may potentially result in any of three mutually exclusive decision-making regimes. Control of charitable giving can be ceded to

either of the two partners, or it can be done jointly, in which case the household's donations will be arrived at in a manner that is a microcosm of the overall bargaining outcome. That is, the charitable allocation that results will tend to favor the partner who would be in the better position outside the household. Sole control over giving by one partner has the advantage for that partner of yielding the most preferred allocation of donations, but it requires some amount of that partner's time, which is thus not available to the household for other uses. As we noted, it is assumed that the magnitude of this loss is directly related to that partner's earning ability. Joint control of charitable allocations allows both partners' preferences to influence giving to some extent, but in requiring the time of both partners, it is the regime that is most costly to the household.

The individual preferences which the partners bring into the household, preferences regarding charitable activities, the use of time, or the performance of tasks, are inherently unobservable. However, we assume that observable demographic variables, like education, labor market status, and participation in religious organizations, both influence and reflect such preferences. Thus, information on the similarity of these variables across partners can be used to infer relative degrees of similarity in their tastes. It is an immediate consequence of the model above that if the two partners' preferences regarding charitable donations were identical, the only consideration that would matter for who does the allocating would be the relative cost to the household of so occupying their time.

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This simple model suggests that whose time is devoted to decision-making will depend on several factors:

Whose time is more valuable to the household elsewhere? If the partners are equally efficient in investigating charities, then, other things equal, the couple prefers to have the allocation done by the partner whose time is less valuable to the household in other endeavors.

Who has low-cost access to information about charities? Each partner may have essentially zero-cost access to information about some subset of the universe of charitable outlets. This reduces the amount of time required to undertake the allocation, and therefore, whatever the value of that time to the household, reduces the cost of having that partner do the allocation. Other things equal, a partner who has costless access to information will be more likely to be the decision maker.

Who cares more about donations? One partner may care more strongly about how charitable money is allocated. Other things equal, this partner will want to participate in the allocation decision, so that his tastes will influence the disposition of funds.

How similar are the partners' tastes? If the partners, acting independently, would choose nearly identical donation amounts to identical charities, then other things equal, there is little reason for the high-time-cost partner to participate in decision-making. The more similar are the partners'

preferences over charitable allocations, the less likely it is that the household will use a joint decision-making regime.

What is the relative distribution of clout when decisions are made jointly? If one partner has more influence when charitable decisions are made jointly, so that the jointly-determined array of donations resembles more closely the preferred array of that partner, the couple is unlikely, other things equal, to employ joint decision-making. The more nearly the jointly determined outcome approximates one partner's preferred array, the less reason there is to devote the other partner's time to joint decision making.

In models of bargaining, "clout" comes from how well off each person can be in some credible alternative arrangement. As noted previously, in a bargained solution it is the *gains* over this alternative that result from cooperation that are equalized[2]. In this view, a partner has bargaining power when his alternatives are relatively attractive. These alternatives are related to earning power in the labor market, so we might expect jointly determined allocations to favor the tastes of the higher-earnings spouse. Andreoni et al (1999) find that, on average, couples jointly choosing their level of charitable donations settle on an amount that is best described as two-thirds (.677) the husband's preferred choice, plus one quarter (.260) the wife's preferred choice. Whether the solution favors husbands because of gender roles or because the husband is more often the higher-earnings spouse cannot be determined from their analysis. If both gender and earning power

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[2] For a detailed survey of economic models of household bargaining, see Lundberg and Pollak (1996).

matter, then households with male higher-earnings partners may behave differently from households in which the female has the higher income, because in the former households both sources of clout (being male and earning more) reside in the same individual.

IV. Factors affecting the allocation of decision-making authority

Our data allow us to identify several factors that our model suggests will affect how decisions are made in the household. The bargaining model of the household says that a person is more likely to be involved in the allocation of charitable donations if he has the lower time cost of doing so or has strong preferences that differ from those of his partner. It also suggests that there is more likely to be a single decision maker if superior outside alternatives imply the likelihood of one partner asserting their preferences in any joint decision-making scenario.

When the cost of decision making is higher for one partner, the other is more likely to make decisions, all else equal. The central decision-making cost is simply time, and a key determinant of the cost of a person's time is the wage that person commands. Data on wages are not available, but the survey asks whether the respondent earns the highest income in the household. We use this variable to identify the higher-earnings partner, and use higher income as an indicator of higher time cost.

Another element that influences the cost of spending time on charitable allocation decisions is the information a person can be expected to gather at little

or no cost. A church member or a college graduate, for example, will have virtually costless information about the church or the alma mater as a potential charitable outlet. If one member of a couple has more education than the other, or is a member of a church while the other isn't, there is an information advantage to one party and that person, all else equal, will be the decision maker. The survey asks about church membership and educational attainment for both partners. An additional low-information-cost route to giving is through payroll deductions at work, since employers and federated charities (like United Way) to whom such deductions typically go presumably screen recipient organizations and provide information on their programs. The survey collects data on access to and use of payroll deduction, but the data apply to the respondent only.

Couples will not always confer decision making authority on the partner who can make the decision at lower opportunity cost, since the other partner's preferences will not be reflected in the resulting set of donations. This lack of representation is most costly to the higher-earnings partner when she cares strongly about charitable giving and when her partner's tastes do not closely mirror her own.

Previous work on charitable donations suggests that giving increases with education, especially a college education (see e.g. Wolff 1999), and religious attendance (e.g. Hodgkinson and Weitzman 1996), both variables contained in our data set. These variables can proxy for a strong taste for charitable giving.

The more dissimilar two partners are, the more each has to lose by letting the other allocate funds. Dissimilar couples, all else equal, are more likely to engage in joint decision making.

We have several dimensions along which we can measure similarity between partners. First, we know their ages. We categorize partners as being of similar age if the age difference between them is not more than two years. Second, we know whether they are members of a church, synagogue, or similar religious congregation. If both are members, we classify them as similar along a religious dimension.

Third, we have data on educational attainment. We classify partners as having similar educational attainment if they fall into the same one of six categories. The categories are: less than a high school degree; high school degree; some college or a technical degree; a two-year college degree; a four-year college degree; and a graduate degree. This variable is more complicated than similarity in religious membership or in age, in that dissimilarities in educational attainment may also be linked to differences in the cost of making household decisions on charitable allocations. For one thing, more highly educated persons may have a stronger taste for charity. A wide variety of empirical work on charitable giving finds that education is positively correlated with levels of donations. All else equal, therefore, a more educated person will wish to allocate more dollars to charity. This, in turn, will tend to mean that partner suffers a relatively large loss from not influencing that allocation. Greater education may also decrease the cost

of processing information about charitable outlets; this lower decision-making cost also makes it more likely that the more-educated spouse will be active in allocation decisions.

A fourth available measure of similarity is labor market status. The data set includes whether each partner works full time, part time, or not at all, and whether workers are self-employed or work for someone else. This is a measure of similarity in everyday experience, and the choice of full-time versus part-time work and self-employment versus working for someone else reflects a person's tastes. Because this variable may also represent how busy a person is, and therefore how costly it might be for that person to make allocation decisions, it is also both a measure of similarity and a measure of cost advantages. Where similarity in employment status, all else equal, suggests that decision making will be done by the low-time-cost partner, similar employment status is an indicator that differences in the value of the partners' time, at least in a comparative-advantage sense, may not be large.

Similarity is one feature of a couple that reduces the likelihood of jointly bargained giving; a second feature is dissimilarity in bargaining power. If one partner has far more bargaining power, so that the jointly-determined array of donations closely resembles what that partner would choose if given sole control, then there is little reason to expend the other partner's time in a joint process. As a measure of bargaining power, we have data on gender and on the identity of the partner who "earns the highest income in the household". It is not obvious how

this question would be answered by a couple in which the lower-earnings partner had enough unearned income to qualify as the higher-income partner. As long as the question is picking up the partner with the higher income, this question measures the concept relevant to determining which partner has a stronger bargaining position.

In short, decision making should devolve to the low-cost partner unless the high-cost partner has dissimilar tastes or readier access to charitable information. This proposition is tested via probit estimation. The dependent variable is ranked by the degree of control transferred to the lower-earnings partner, from sole authority by the higher-earnings partner, to joint decision making, to control by the lower-earnings partner. Probit estimates the cumulative probability of observing successive levels of control given to the lower-earnings partner. Preliminary estimation showed that households with a man as the higher-earnings partner and households with a woman in this position could not be well described by a single statistical relationship. Accordingly, separate regressions were run for the two types of households.

The results are shown in Table 2.

The results from the regression for households in which the male is the higher-earnings partner are reported in the first two columns of numbers. A negative coefficient means that an increase in the associated variable decreases the likelihood that allocation decisions involve the lower-earnings spouse. We see that similarity in ages makes it less likely that the lower-earnings spouse is involved, as

does similarity in religious membership. The effect of the age variable is statistically significant at a .05 level of confidence, and the religion variable is significant at .10. If charitable allocation is a costly activity, it is hard to explain these results; greater similarity should mean that the higher-earnings partner has less to lose by letting his partner make the decisions, and the cost of having the lower-earnings partner do so is low.

The coefficient for *same employment status* implies that if the partners have the same employment status, the female is more likely to share in decision-making. This result is consistent with a view that employment status reflects similarity in outlook. Also, if the female partner is working roughly the same number of hours as her partner and his income exceeds hers, she is likely to have a lower wage, making her time the lower-cost input into making charitable decisions. This view is also consistent with the result obtained here. The coefficient on similar employment status is significant at the .05 level.

Because education can matter in different ways, as a measure of similarity or as a measure of taste for giving, alternative specifications of the estimating equation were explored. Based on a goodness of fit criterion, the estimating equation performs better (i.e. one can with a higher degree of confidence claim that it has explanatory power) in the sample of households with a male higher-earner when the education variable is entered as a dummy variable reflecting a relative taste for charity rather than as a similarity variable. That is, the `Education advantage' variable takes a value of 1 if the higher-earnings partner has more

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education, and zero otherwise. Thus, the results indicates that if the higher-earnings partner is more educated, we are less likely to see his partner wield decision-making authority. The coefficient is larger than those on the similarity variables and it is highly statistically significant (at a .01 level of confidence).

The other cost variable that is statistically significant in this regression is the measure of time disadvantage. If the higher-earnings partner works longer hours than his partner, we are more likely to see the lower-earnings partner involved in decision-making. This effect is significant at the 0.05 level of confidence.

The equation for households in which a woman is the higher-earnings partner is based on a much smaller sample and is therefore estimated with much less precision. The only statistically significant effect comes from the employment status variable. A woman is more likely to share decision-making with her lower-earnings partner if that partner has a similar work situation.

One piece of an explanation for the lack of significant effects in the equation with households in which the higher-earnings partner is female, and for the signs on the similarity variables in the equation for households with a male generating the higher income, may be the nature of joint bargaining outcomes. As mentioned earlier, Andreoni et al (1999) find, using a similar data set, that the level of donations chosen by joint decision making is two-thirds the male's preferred amount, plus one quarter of the female's preferred amount.

When jointly determined outcomes are close to that preferred by the male partner than to the female's preferences, there is no reason for the couple to use joint decision-making. The charitable allocation will be little different from what arises when the male decides, and requires the expenditure of both partners' time. On the other hand, the loss to the female from having the male be the decider, rather than herself, should seemingly be symmetric with the loss to the male if the female decide. The loss to either person from letting their partner make the charitable allocation is smaller the more similar are the partners' preferences. Thus, an increase in similarity has no obvious implications for which of the two partners will make charitable decisions, but does imply that it would reduce the likelihood of joint decision-making. Thus, these results seem to imply that there is some unobserved asymmetry between the partners that makes it more likely that the higher earnings partner does the allocation.

We can investigate this further by collapsing the dependent variable into two outcomes. If jointly determined outcomes are not very different from male-determined ones, the real choice in a household with a man as the higher-earnings partner is whether or not sole authority is given to the lower-earnings partner. Thus, we are doing a probit regression in which the dependent variable is the probability that the low-earning female partner makes the charitable decisions alone. The results of this estimation are shown in Table 3.

The first two variables are the pure similarity variables. Each suggests that an increase in the particular measure of similarity makes it less likely the lower-

earning (female) partner will have sole authority. There is also a large and negative coefficient on the variable measuring whether the man has more education than the woman. When he does, he is more likely to have stronger feelings than she does about charity; the coefficient suggests he is much less likely to give control to his partner if his education exceeds hers.

The only variable that makes it more likely that the female will be in charge of charitable decision-making is the time disadvantage variable. If the partners' employment situations are such that the female works fewer hours (including none), she is more likely to control decision-making. As noted above, a lower-earnings partner who works similar or fewer hours than her partner is likely to have a lower wage. Thus, one would expect that she would be more likely to be given the charitable allocation task, other things equal. This variable does not seem to be capturing any similarity in preferences over charities, therefore.

One explanation for the fact that increases in similarity seem to have an effect on decision-making that is opposite from what the model predicts, is that the variables we are using simply do not measure similarity appropriately. The model predicts that it is similarity in preferences over charitable giving that should make low-earner decision making regimes more likely. We are assuming that increases in the similarity of the demographic variables we have data on imply increases in preference similarity. It may even be that they do, but that the magnitude of the correlation is so small as to be swamped by other things that these measures are also related to.

The model makes no particular prediction regarding the effect of increasing preference similarity on levels of total charitable giving by a household. Yet there seems to be a strong empirical finding, which is presented in Table 4. This presents the results of a Tobit regression of the log of total household donations on a set of variables, including the similarity variables used above. We control for factors known to influence the level of giving. We include log income, itemization status to capture a tax price of giving less than one, a dummy variable equal to one if either partner has at least a college degree, and a dummy variable equal to one if either partner is a member of a religious congregation. Also included is a new measure of partner similarity, labeled `similar formative years', which takes on the value 1 only if the partners are the same age and have the same educational attainment.

The surprising thing is that both the religious membership and formative years similarity variables are statistically significant, and have a positive coefficient (as do the log of income and the dummy variable indication a tax price of giving of less than one). This seems to indicate that the similarity variables are picking up something of importance, although it may not be anything predicted by the model.

There is another, simpler prediction of the model that our data allows us to check. If a high-earning partner is making charitable allocations, so that the time cost of doing so is high, the model predicts that partner is more likely to make use of freely available information regarding charitable outlets, so as to minimize those costs. Making use of a payroll deduction plan like the United Way is one low-time-

input way of making charitable allocations, when it is available. In our sample there are 372 households in which the respondent to the survey was the high-earning partner, and had a payroll deduction plan available to use. In Tables 5a and 5b is displayed the number of these individuals who did and did not make use of the plan, broken down by the high-earning respondent's gender, and by which decision-making regime the partners used. There is a clear pattern in both tables; payroll deduction is used more often as the high-earner becomes more involved in the decision making. To further check this, we ran a logistic regression with the dependent variable taking the value 1 if payroll deduction was used. The independent variables were household income in thousands of dollars, and a variable that takes on the value 1 if the high-earner makes decisions alone. The results are displayed in Table 5c. The decision making variable is statistically significant. Its estimated effect is positive, as the model predicts, and substantial. The point estimate suggests that if decision-making authority is given to the higher-income partner, the likelihood of using an available payroll deduction plan increases by .55.

V. Concluding remarks

Gender plays a role in determining contributions to education, but the analysis presented in this paper suggests that it is a somewhat mysterious one. We were interested in whether it plays a role independently of the fact that males are more often the high-earners in a household. Looking at both who in a household has authority over donations to charity and who has the higher income, we find

that giving to education is relatively low in households in which the woman has more income and either the woman or the man has sole control over giving. The shortfall in giving to education does not reflect a general lack of interest in charitable activity; these households give as high a share of their income to charity as the others.

The phenomenon of married couples in which the wife earns more than the husband is a growing one. Among couples in which both spouses work, wives earned more than husbands in 16 percent of marriages in 1981, according to data from the Current Population Survey. In 1996, the wife was the high-earnings spouse in 23 percent of dual-earner couples (Winkler 1998). These couples are particularly interesting from a household-bargaining standpoint, since the traditional gender role of "primary earner" is reversed, implying a shift in bargaining power within marriage from husband to wife.

We proposed a first pass at a bargaining model of household decision making in which the task of allocating charitable donations is one of the things which is decided on in the bargaining. Our hope is that this will allow us to sort out the separate roles of gender, earnings, and decision-making within the household. However, one implication of such a model seems to be that similarity in preferences will make it more likely that the low-earning partner makes such decisions. Our empirical results provide little support for this prediction.

For households with a male high-earner, the more similar the partners are in terms of age and in membership in a religious congregation, the less likely the

couple is to devolve decision-making authority onto the low-time-cost wife. This may indicate that our empirical measures of demographic similarity simply do not relate positively to the preference similarity which the model predicts as being important. On the other hand, the empirical similarity measures do seem to be significantly related to levels of giving. And, the model's predictions regarding the use of (low-time-cost) payroll deduction plans by high-earning decision makers are supported by the data, as are its predictions regarding the effect of relative earnings on the decision-making regime chosen by households. We see further refinement of the model as the next step in this research.

It seems at this point that household donation behavior depends on both who decides and who has greater earning power. Both variables matter, as the model suggests and the data confirm, but they interact in ways that require further theoretical elaboration and empirical exploration.

References

Andreoni, James, Eleanor Brown, and Isaac Rischall, 1999. "Charitable Giving by Married couples: Who Decides, and Why Does It Matter?" manuscript.

Andreoni, James, and Lise Vesterlund, 1998. "Which Is the Fair Sex? Gender Differences in Altruism," manuscript.

Eller, Martha Britton, 1997. "Federal Taxation of Wealth Transfers*,*" *Statistics of Income Bulletin*, Winter 1996-97, 8-63.

Hodgkinson, Virginia, and Murray Weitzman, 1996. *Giving and Volunteering in the United States: Findings from a National Survey*. Independent Sector.

Kaplan, Ann, ed., 1999. *Giving USA: the Annual Report on Philanthropy for the Year 1998*, AAFRC Trust for Philanthropy.

Lundberg, Shelly, and Robert Pollack, 1996. "Bargaining and Distribution in Marriage," *Journal of Economic Perspectives*, vol. 10 no. 4 (Fall), 139-158.

Wolff, Edward, 1999. "The Economy and Philanthropy," in Charles T. Clotfelter and Thomas Erlich, eds., *Philanthropy and the Nonprofit Sector in a Changing America*, Indiana University Press, 73-98.

Table 1

Average annual contributions, in dollars and as a percent of income, by sex of higher-earnings partner, assignment of decision-making authority, and area of charitable activity

	Average contribution, higher-earnings spouse is male		Average contribution, higher-earnings spouse is female	
	dollars	% of income[1]	dollars	% of income[1]
I. All couples[2]:				
Education	118	0.12	44	0.08
Health	78	0.10	55	0.13
Human services	85	0.16	77	0.14
Religion	664	1.14	665	1.51
Total	1,080	1.72	944	2.05
N	*1,033*	*957*	*187*	*178*
II. Higher-earnings Partner decides:				
Education	136	0.12	25	0.04
Health	44	0.09	59	0.17
Human services	92	0.14	81	0.22
Religion	590	1.10	564	1.26
Total	985	1.66	780	1.79
N	*242*	*225*	*86*	*83*
III. Partners decide jointly:				
Education	120	0.10	70	0.14
Health	115	0.09	48	0.08
Human services	79	0.10	94	0.10
Religion	709	1.34	762	1.75
Total	1,180	1.83	1,143	2.35
N	*470*	*430*	*74*	*69*
IV. Lower-earnings Partner decides:				
Education	100	0.16	32	0.05
Health	51	0.12	64	0.12
Human services	88	0.27	16	0.02
Religion	653	0.88	718	1.65
Total	1,006	1.61	922	2.04
N	*321*	*302*	*27*	*26*

[1]Percent of income calculated only for those households with incomes below $125,000.
[2]Includes only those households providing information on charitable decision making.

Table 2

Determinants of Intra-Household Decision-Making Authority

Dependent variable: Authority lies with higher-earnings partner, with both partners jointly, or with lower-earnings partner

Estimation: Probit (parallel regressions)

Variable:	Households with Higher-earnings male		households with higher-earnings female	
	Coefficient	Pr>Chi	Coefficient	Pr>Chi
1st intercept	-0.731***	0.0003	-0.625	0.1919
Similar ages	-0.177**	0.0166	-0.035	0.8494
Similarly religious	-0.157*	0.0616	0.073	0.7219
Same employment status	0.174**	0.0365	0.366*	0.0771
Same education			0.220	0.2330
Education advantage	-0.238***	0.0036		
Relig. info. advantage	-0.015	0.9194	-0.027	0.9286
Time disadvantage	0.256**	0.0111	0.234	0.4146
2nd intercept	1.249		1.163	

*** significant at a .01 confidence level
** significant at a .05 confidence level
* significant at a .10 confidence level

number of observations	987		171	

Goodness of fit:
Pr>Pearson chi-square:	0.0214		0.0846	

Table 3

Determinants of the Likelihood that Decisions Are Made by the Lower-earnings Partner in Households with a Male as the Higher-earnings Partner

Variable:

	Coefficient	Pr>Chi
intercept	0.588**	0.0116
Similar ages	-0.222**	0.0113
Similarly religious	-0.376***	0.0001
Same employment status	0.215**	0.0321
Education advantage	-0.261***	0.0086
Relig. info. advantage	-0.011	0.9472
Time disadvantage	0.296**	0.0127

n=987

*** significant at a .01 level of confidence
** significant at a .05 level of confidence

Table 4

Similarities Between Partners and Total Annual Giving

Dependent variable: Log (contributions plus $10)
Estimation method : Tobit

Variable	Coefficient	Pr>Chi
Intercept	-1.308	0.0001
Log income	0.215	0.0001
Tax itemizer	0.117	0.0001
Average age	0.004	0.0001
College graduate	0.079	0.0114
Religious membership	0.274	0.0001
Similar formative years	0.091	0.0694
Similar religious memb.	0.161	0.0001
Similar employment status	-0.025	0.3598

N=1490

Table 5a

Use of payroll deduction in male high-earner households

Decisions by:	High Earning	Joint	Low earning
Don't use p.d.	29	68	55
Do use p.d.	36	74	49

Table 5b
Use of payroll deduction in female high-earner households

Decisions by:	High earning	Joint	Low earning
Don't use p.d.	12	8	8
Do use p.d.	25	10	4

Table 5c

Logistic regression
Dependent variable: 1, if payroll deduction used, 0 if not.

Independent variables	Parameter value	Pr>chisq
Intercept	.0099	.9693
Income (thousands)	-.0008	.8235
High-earner decides	.5479	.0348

N=372