



## **GENDER DIFFERENCES IN CHARITABLE GIVING**

**GREG PIPER, SYLKE V. SCHNEPF**

### **ABSTRACT**

The predominant part of the literature states that women are more likely to donate to charitable causes but men are more generous in terms of the amount given. The latter result generally derives from the focus on mean amount given. This paper examines gender differences in giving focusing on the distribution of amounts donated and the probability of giving using UK micro-data on individual giving to charitable causes.

Results indicate that most women are more generous than men also in terms of the amounts donated. Quantile regression analysis shows that this pattern is robust if we take into account gender differences in individual characteristics such as household structure, education and income. The analysis also examines differences in gender preferences for varying charitable causes. For most of the paper, separate analyses are presented for single and married/cohabiting people, highlighting the very different gender patterns of giving behaviour found in the two groups.

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# Gender differences in charitable giving

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## Abstract

The predominant part of the literature states that women are more likely to donate to charitable causes but men are more generous in terms of the amount given. The latter result generally derives from the focus on mean amount given. This paper examines gender differences in giving focusing on the distribution of amounts donated and the probability of giving using UK micro-data on individual giving to charitable causes. Results indicate that most women are more generous than men also in terms of the amounts donated. Quantile regression analysis shows that this pattern is robust if we take into account gender differences in individual characteristics such as household structure, education and income. The analysis also examines differences in gender preferences for varying charitable causes. For most of the paper, separate analyses are presented for single and married/cohabiting people, highlighting the very different gender patterns of giving behaviour found in the two groups.

## Acknowledgements

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## **1 Introduction**

It is widely reported that women tend to be more likely to give to charity but reporting on the gender differences in the amounts given is more varied. While the former is verified in the current study, we find the distributions of the amounts to have subtle patterns, with the gender patterns varying substantially depending on marital status.

This paper examines differences between men and women's giving patterns. Since there are notable differences between single people and married/cohabiting people most of the analysis is conducted separately for both groups. We explore the impact of age, education and other background factors on gender patterns in giving. Furthermore, examining both the probability of giving and the amount given, we use regression models to examine whether gender differences remain once we control for background characteristics such as income, education and age.

The current study adds to the established literature in several ways. Firstly, we establish firmly that the common claim that women are more likely to give is true in the UK and that it holds for both single and married people, regardless of whether we control for background factors. Furthermore, we corroborate some recent studies in which, among single people, female donors were found to give larger amounts than male donors. We establish that this is not due to compositional differences between the two groups. We also give additional detail by examining the differences at distinct points of the distribution of donation amounts, using quantile regression. This approach also allows us to examine the more nuanced gender differences among married people. In addition, we identify various gender differences in the support given to particular causes.

The paper is set out as follows. Section 2 summarises the literature on gender and charitable giving and orients the current study within this literature. Section 3 describes the data on which the analyses are based. In Section 4, we present the results of our study. We begin this section with descriptive results on gender differences in the percentage of people giving each month and in the average amount given. We place a particular focus on distributional differences in the amounts donated and on gender preferences for different charitable causes. We also analyse giving patterns separately for single and married/cohabiting persons. In the third part of this section, the impact of age and education on giving is explored in more detail. The final part of Section 4 identifies the extent to which gender differences in the donor percentages and amounts donated can be explained by background factors such as age and income. In Section 5, we discuss further aspects important for understanding the relationship between gender and giving. We also outline possible future research. The paper is concluded in Section 6.

## **2 Literature Review**

The literature on the relationship between gender and charitable giving is diverse but does not yet present a coherent picture. The research is presented either in peer-reviewed journals or in reports designed for direct practical use in the voluntary and community sector. We draw on both of these sources in our review. The UK-based sector reports are of particular value to the current study because of the dominance of US studies in the academic literature.

The growing body of research literature in this area bears witness to the increasingly important role that women play as major donors. Indeed there is an entire issue of *New Directions for Philanthropic Fundraising* devoted to this topic (see Taylor *et al.* 2005). While this is important from a fundraising perspective, large-scale philanthropy is outside the scope of this paper. Instead, we focus on charitable giving by the general population. In this context, a monthly gift of £100 is considered unusually high and the median gift among those who give in a specified month is £10 (see Pharoah *et al.* 2006).

### **Core figures in the UK**

The CAF/NCVO *UK Giving* reports (CAF/NCVO 2006) present brief analyses of gender patterns in giving for the corresponding financial years. In 2005/06, 61% of women and 53% of men gave each month, while the mean amount given was £25 per donor for women, and £29 per donor for men.

A similar pattern is presented in Breeze *et al.* (2005), which reports that: “Girls were more likely than boys to have given to charity the last time they were asked (87% vs. 74%)”. This study also identified that 62% of children had seen their mother give to charity, while only 42% had seen their father give, although the report also mentions that this is likely to be in part due to the fact that children typically spend more time with their mothers. The mother was found to influence the child’s giving behaviour while the father had no impact. However, details on the statistical significance of these analyses are not presented.

### **Households / Marital status**

The focus of Andreoni *et al.* (2003) is the role of the household’s main decision-maker in the context of charitable giving. The study took place in Canada although we might expect the results to hold in a broader context. After identifying that preferences for giving are different for men and women in single-person households, the paper asserts that in married households, the giving tends to follow the husband’s

preferences. The study also finds that when the wife is the decision-maker, she tends to distribute the donations over more charities, giving less to each.

In Wiepking *et al.* (2005) it is identified that traditional norms can play a significant role in financial decision making and “couples with more traditional values are more likely to have the husband decide rather than the wife”. The paper also identifies that “when religious affiliation is controlled for, it does not matter who decides”.

### **Giving by gender and marital status**

Derived from a more general study based in the USA, Mesch *et al.* (2006) presents findings on the effects of race, gender and marital status on both giving and volunteering. This paper provides interesting results, which we build upon in the current study. It identifies that single women give more than single men after controlling for other demographic variables and identifies that married people give substantially more than single people.

### **Other areas of research**

While there is some consensus on the core figures – particular the gender patterns in the donor percentages – in other areas, there is some controversy. We do not examine these questions in detail in the current study but discuss them here to provide a broader context for the research.

Andreoni *et al.* (2001) suggests men respond more strongly to the price of giving (with men being more altruistic when giving is cheaper), whereas Meier (2005) suggests they do not. This question becomes particularly important in the context of tax incentives for giving (such as Gift Aid in the UK) and in studies of the influence of income on giving.

The findings presented in Bolton *et al.* (1994) are based on a dictator game experiment and suggest that there are actually no gender differences in generosity. Reporting on another dictator game experiment, Ben-Ner *et al.* (2003) suggests that women are less generous when giving to other women and that they may give less overall.

### **The current study**

In all of this, there is the sense of a growing theory, but one which needs a substantial effort to bring together into a coherent whole.

This study builds on but also significantly extends research in Mesch *et al.* (2006) which examined gender differences in the US context controlling for income, education, ethnicity and marital status. The UK data available offers the additional

benefit of including information on donations to different causes, which enables us to examine gender preferences for charitable causes. In addition, the large sample size allows us to run models separately by gender and marital status in order to examine gender differences conditional on a greater range of background characteristics. We also enhance results by focusing on the distribution of amounts given separately by gender and marital status. By using quantile regression for our analysis of donation amounts, we examine gender differences at different parts of the amounts distribution conditional on background characteristics.

We also briefly discuss issues such as household giving and the price of giving.

### **3 Data**

#### **The CAF/NCVO Individual Giving Survey**

##### **Survey methodology**

The research in this paper is based on the CAF/NCVO Individual Giving Survey (IGS). This survey is run three times each year as a module in the Omnibus survey carried out by the Office for National Statistics (ONS).

The ONS Omnibus Survey is carried out as a face-to-face survey using Computer Assisted Personal Interviewing. Respondents are asked about their donations to charity over the previous four weeks. The pattern of the questions is to ask about giving to a cause, then to ask the amount given by each method to that cause. The ONS Omnibus Survey also includes a broad range of demographic questions, which are provided along with responses to modules. We discuss some key methodological issues below.<sup>1</sup>

##### **Sample**

The ONS Omnibus uses random probability sampling stratified by region, car ownership, socio-economic status and age. The sample is drawn from the Royal Mail's Postcode Address File (PAF). The Omnibus sample taken from the PAF covers Great Britain but not Northern Ireland.<sup>2</sup>

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<sup>1</sup> Further details are available at [www.statistics.gov.uk/about/services/omnibus](http://www.statistics.gov.uk/about/services/omnibus).

<sup>2</sup> Each survey cluster (which are postal sectors) contains 30 households and we allow for most of this clustering in our estimates of standard errors in our analysis (some clusters cannot be separately identified since IDs are not always unique across years).

Only one person per household is interviewed. For the following analysis we use weights correcting for the higher probability of people in small households being selected.<sup>3</sup>

We have merged data from nine Omnibus modules that were conducted during the years 2004 to 2007. The total sample size is 12,679. The response rate in each survey round is between 62% and 66%.

### **Other methodological issues**

There are a number of other issues that should be borne in mind when reading this study. These are outlined below.

**Seasonality:** Although the months of the surveys are spread evenly across the year, and in supposedly “typical” months, there may be problems with the seasonality of giving. In particular, major campaigns such as Comic Relief and the increased levels of giving around Christmas might reduce the accuracy of the survey. However, since our focus here is on gender differences, this is unlikely to be a major concern.

**Household giving:** Another problem is that the survey is based on individual giving, whereas some reported donations may be derived from the household. This issue is discussed in more detail in Section 5.

**Definition of charitable giving:** The survey asks the donor about charitable giving but does not refer to the legal definition of “charity”. For example, while organisations such as Greenpeace and Amnesty International are not official charities, we would expect people to report fees and donations to these organisations in the survey.

**Definition of causes:** the survey expects the respondent to allocate their donations to particular categories of causes. However, an organisation such as Red Cross could be classified as either “health” or “overseas”. For this study, we have to assume that there is no gender bias in the way a survey respondent classifies such organisations.

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<sup>3</sup> The Omnibus sample size was about 30% higher in 2004/5 compared to the subsequent two years. We apply weights to ensure that each month of data contributes equally to the pooled sample.

**Reference period:** The survey only asks about giving in the previous four weeks. There are two main issues with this. Firstly, “four weeks” acts as a proxy for “one month” and is in line with government studies such as the Citizenship Survey. Throughout this paper, we refer to the reference period as one month. Secondly, both “non-donors” and “high-level donors” are to some extent artificial categories based on the four week reference period. In fact, there may be considerable overlap between the two groups, with some people preferring to give a large donation once each year rather than smaller more regular donations. The high skew in the observed amounts given may well not occur in a study that measured annual donations.

### **Data cleaning**

The raw data was cleaned before analysis was carried out to remove obvious reporting/recording errors including money that had been fundraised through events being reported as individual gifts, and other anomalies. The cleaning procedure included the deletion of high value gifts that did not seem to be appropriate given the method of giving used. For example, an event gift of £2,000 is likely to reflect giving from fundraising and not an individual gift and should therefore not be in the data set.<sup>4</sup> However, since mean amount given is around £30 per donor the deletion of extremely high gifts has an impact on mean amounts reported. We therefore predominantly discuss median amounts given that those are not sensitive to high value gifts.

## **4 Findings**

### **4.1 General results**

We begin with a descriptive analysis of the patterns of charitable giving for men and women. In Table 1, along with the data on the percentage of people giving each month, and the mean and median amount given, we present the values of the 75<sup>th</sup> and 90<sup>th</sup> percentiles on the amount given by donors.

As expected, we find a significantly higher percentage of donors for women than for men (1 percent level): approximately 60% of men give, compared with 50% of women.

When we look at the means per donor in Table 1, male donors appear to give more than female donors.

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<sup>4</sup> The authors can provide on request information of the cleaning rules applied and the impact of different cleaning rules on results observed. Cleaning rules have no impact on gender differences in the observed donor percentages or on the median amounts given, but there is some impact on mean amounts per head and per donor.



The distribution of amounts is extremely skewed with about 60% of the total amount donated being given by the top 10% of donors (Micklewright and Schnepf 2007). As such, the median amounts and other percentile values are more instructive if we want to examine gender differences between the average donors.

The median amount given among donors (which is not sensitive to the high values at the top of the distribution) is just over a third of the value of the mean, at £10 for both men and women. The 75<sup>th</sup> percentile is also the same for both genders, at £25. The 90<sup>th</sup> percentile is higher for men than for women, and it is the high values of these donors that leads to the higher mean amount among male donors.

Figure 1 further clarifies the gender differences in the distributions of amounts. This diagram presents the percentile range for a selection of round number amounts given for men and women separately<sup>5</sup>.

Although men and women both have a median amount given of £10, the £10 block for men is slightly to the right of the corresponding block for women. This same pattern occurs for almost all of the other blocks in the diagram, only reversing at the level of £30, above the 75<sup>th</sup> percentile in both groups. This demonstrates that in fact, for the majority of people, women tend to give more. We will see in Section 4.2 (in Figures 2 and 3) that this pattern arises largely from differences in the giving behaviour of single people.

### **Gender differences in choice and number of causes**

The results up to now refer only to giving as a whole. We can also ask whether there are distinct gender patterns in the levels of support for different causes. It is important to note that, although we may discuss a choice of cause, this is not necessarily how it appears to a donor. Rather, the cause a person supports arises from a combination of personal motivations, marketing activity and chance events.

Table 2 presents descriptive data on the differences in the causes supported by men and women.

We find that the percentage of female donors is significantly higher than that of male donors for almost all causes.<sup>6</sup> Gender differences in the percentage giving are highest for animal welfare: the percentage of donors for that cause is about 70% higher for women than for men. In absolute terms, 4% more women than men give to that cause. Also for children, the elderly, education and schools the percentage of women's donors compared to men's is about 40% higher. Gender differences

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<sup>5</sup> For example, £10 ranges from percentile 48 to 55 of the amount distribution of male donors and from percentile 45 to 53 for the amount distribution of female donors.

<sup>6</sup> The association between donors and gender is significant at the 1% level for all causes except mental health, other causes, environment and arts causes.

however are very small for causes related to the environment, religious organisations and mental health.

Those causes for which men appear to be more likely to give (Arts and Sports) attract relatively few donors overall so even if a statistically reliable conclusion could be drawn, it would have little impact on the overall patterns of giving. Nevertheless, within these specific areas, the possible greater involvement of men is noteworthy and further carefully targeted research on the demographics and motivations of these donors would be rewarding.

Looking at the mean amounts given per donor (results not reported), we find that for almost all causes women appear to give lower or similar amounts to those of men per donor. However, these differences are not significant, except for religious organisations, for which male donors give significantly more than female donors (£46 per month compared with £28).

In addition to the differences in giving proportions and amounts, we also find that men and women have a different profile when we look at the number of causes supported.

Women appear on average to give to more causes: 55% of male donors support only one cause each month, compared with 46% of female donors. This contributes to the higher percentage of female donors giving to particular causes. In addition, this means that women tend to give smaller individual gifts since they distribute the total amount given among more causes. Note that, although this seems likely, it is not certain: the IGS records the total amount given by each method to each cause but does not record the exact number of gifts.

## **4.2 Marital status**

Marital status is one of the most important background factors in a gender analysis of charitable giving. We will see that marital status has a pronounced effect on individuals' giving behaviour, and more importantly for this analysis, that the difference is quite distinct for men and for women. In this section we present the core differences between men and women independently for single people and married or cohabiting people.

A second important reason for analysing by marital status is that this also gives us an insight into the possible extent of household giving. In the discussion at the end of this paper, we address the question of whether individual charitable giving makes sense in the context of a couple with shared finances.

Before presenting this analysis, it is important to be clear that a comparison of married/cohabiting and single people is complicated by the fact that other aspects of

life stage (such as income, wealth or house ownership) might also be expected to influence giving behaviour.

As well as matters of income, there are natural ways in which a person's personal circumstances might influence his or her choice of charitable cause. For example, we might expect the pattern of giving to schools or children's charities to change once a person has children. Similarly, an older person might have a greater awareness of health issues and this might lead to an increase in giving to medical research or healthcare organisations.

### **Gender differences in giving proportions, by marital status**

As with the overall population, the pattern of women being more likely to give can be seen in both the single and the married/cohabiting populations. In addition, the ratios of donor proportions are very similar between single people and married/cohabiting people for most causes. This indicates that gender differences in the level of support appear to be largely independent of marital status.

For animal welfare and religious organisations, the gender differences in support vary substantially between the single and the married/cohabiting populations. In interpreting this, it should be kept in mind that there are substantial differences in the composition of these two groups and between genders within groups. Using data for all three years of the survey, we see that more than a quarter of single women are above 64 years old, while only 15% of single men are in this age group. In addition, more than 50% of these women are living alone, compared with 30% of the men. Thus, gender differences may be due to compositional differences between genders.

In Table 4, it is particularly striking that while married men and women show the same level of support for religious organisations, among single people, women are nearly twice as likely as men to give to them. If we control for different characteristics (age, income, living alone, region, education and proxies for wealth), this gender difference decreases, suggesting that compositional differences between single men and women can explain some part of this gender difference.<sup>7</sup> However, the gender difference remains significant. One interesting finding is that while giving to religious organisations increases with age for women, the situation is more complex for men, as will be seen in Section 4.3.

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<sup>7</sup> We use a logistic regression analysis with the dependent variable "giving to religious organisations" and control for background characteristics given above with the following variable specifications: age and age square, a dummy for living alone, dummies for educational attainments achieved (degree, a-levels, o-levels/gcse and other qualifications – base category no qualifications), proxies for wealth (number of cars per adult in household and home ownership), income (a dummy if the person has an individual income in the top quintile of the income distribution) and region (dummies for people living in Scotland and Wales with base category people living in England).

For animal causes the gender difference is again smaller for married people (with a ratio 1.6) than for single people (with a ratio of 1.9). In this case, we find that even if women's and men's background characteristics were equal, the ratio of 1.9 found for singles would hardly change.<sup>8 9</sup>

### **Gender differences in giving amounts, by marital status**

While marital status has a fairly marginal effect on the ratios of giving proportions, the effect on the distributions of giving amounts is substantial. Table 5 presents differences in the means and percentile amounts by marital status.

Not surprisingly, we find that amounts given by married/cohabiting people are higher than that of single people (Mesch *et al.* 2006). As well as differences in incomes and household structures between the two groups, this may also reflect the fact that married people report household gifts as individual gifts (see Section 5).

Although the mean amounts for men and women are closer for single people than for married people, it is with single people that we find the strongest difference in the overall distributions of giving amounts.

Up to the 90<sup>th</sup> percentile of the respective distributions, single women give more than men. It is only if we compare the highest-level givers, above the 90<sup>th</sup> percentile, that men appear more generous. Among married people, the turning point of gender differences arises much earlier, at around the 75<sup>th</sup> percentile.

Figure 2 gives more detail on the respective distributions of the amounts given by single men and women. We see that while 50% of single female donors gave less than £10, nearly 60% of single male donors did so.

As a consequence, we find that single women are not only more likely to give to charitable causes but that they are predominantly also more generous in terms of their amounts given. This corroborates the findings in Mesch *et al.* (2006) and Brennan and Saxton (2007) and will be examined in greater detail in Section 4.4.

The distributions for married/cohabiting men and women do not show the same marked differences that we saw for single people. This may be due to household giving or to a convergence of social norms of giving (see Figure 3).

The analyses we have presented above give a picture of several gender differences in giving behaviour. As well as strong evidence that women are more

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<sup>8</sup> These results derive from a similar logistic regression like that described in FN7; however, here the dependent variable was "giving to animal causes". Details of regression results can be obtained from the authors.

<sup>9</sup> A regression analysis run separately for single women and single men showed that women were more likely to give to animal organisations if they were living alone. This was not true for men. For both, single men and women, higher age leads to a higher probability of giving to animal causes. For married men and women, age did not have any impact on giving to animal organisations. Married women were less likely to give to animal organisations if they had dependent children.

likely to give, we also see possible differences in preferred causes and in the distribution of the amounts given by donors.

### **4.3 Gender differences in giving conditional on age and education**

Gender variations in giving are closely linked not only with marital status but also with factors such as age and education. We now investigate more closely the possible impact of these background factors.

Figure 4 demonstrates how likelihood to give changes with age, by gender and marital status for different causes. The y-axis scales vary between the different graphs in order that the overall pattern is clear for each. Nevertheless, care should be taken in interpreting the graphs. In particular, the much broader scale for the “All causes” graph means that quite substantial changes (such as the peak for married men in the 36-45 age group) can be less apparent than on the cause-specific graphs. We outline below some of the more substantial findings.

With the exception for married women giving to medical research and children charities, the percentage of people giving is lower for 16-25 year-olds than for 26-35 year olds.

In almost all cases, the donor proportion for women is higher for both single and married people. The pattern for children charities and religious organisations are quite different however: for children’s charities, donor proportions tend to fall with increasing age (after an initial increase), while for religious organisations, it generally increases with age.

For all groups except married men and for all causes except religious organisations, the likelihood to give falls when we move from the 55-64 age band to the 65+ band. For married men, the donor proportion increases when we move from the 55-64 band to the 65+ band, overall and for all causes except children’s charities.

For overseas and religious organisations, there are noticeable peaks in the donor proportion for married men in the 36-45 age band. This may well be two measures of the same phenomenon since many overseas organisations have a religious affiliation. If this were only about rising incomes followed by increased responsibilities in the 46-54 group, we would expect to see the same pattern across other causes. A quantitative study might be useful to help assess this pattern. Lastly, we find that married men’s giving to overseas and animal charities falls dramatically in the 46-55, perhaps due to changing personal priorities.

Although the likelihood increases with education (Figure 5), it is interesting to note that the gender variation persists across all levels of education. Note that this

relationship may in part be due to the correlation of educational attainment with income.<sup>10</sup>

We also see that at all levels of education, there is a much greater difference in donor percentages between men and women among single people. It is not clear whether the difference falls because of household giving or because of social influences causing spouses' giving habits to converge.

For both single people and married/cohabiting people, the difference is particularly strong those having completed a degree. Although the difference is even greater for people with education recorded as "other", this is not easily interpreted since it includes foreign qualifications of varying levels.

#### **4.4 Gender differences after controlling for background characteristics**

As discussed above, the male and female populations differ in their composition, according to demographic factors such as age and income. These compositional differences might explain gender differences found in the amounts given and the probability of giving.

In the analyses above, we have seen that gender variations persist even when we take into account marital status together with age or education. To examine this more rigorously, we perform regression analyses on both the probability of giving and the amount given, drawing on a broad range of background factors.

#### **Gender differences in the probability of giving, conditional on background characteristics**

To model the probability of giving, we use logistic regression. The first model uses gender as the only independent variable. In successive models, we then add additional variables describing: age, household structure (whether a dependent child lives at the same address and whether the person is living alone) and region (England, Scotland or Wales); then proxies for wealth (property ownership and the number of cars per adult in the household) and income (a dummy for whether individual income is below or above the top quintile of the income distribution); and finally education.<sup>11</sup> This allows us to assess the extent to which gender may be acting as a proxy for these other factors in its apparent relationship with giving.

Table 6 presents the logistic regression coefficients for gender (taking 0 for male, 1 for female) for models run separately for single and married people. The eight

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<sup>10</sup> This impact of income on giving conditional and unconditional on education is discussed in detail in Micklewright and Schnepf (2007).

<sup>11</sup> In addition, we also controlled for differences in % donor between the nine survey rounds.

coefficients reflect eight different logistic regression models and are all significant at the 1% level.<sup>12</sup>

Model 1 was a void model, with the dependent variable of being a donor and the independent variable of being female. As can be seen in Table 6, for Model 1, the coefficient for the gender variable for single people is 0.467. We can calculate that the unconditional probability of giving increases for women by  $0.476 / 4 = 0.119$ , and hence that the proportion of women who give each month is approximately 12% higher than that of men, a fact corroborated in the descriptive analyses earlier in this paper. (Table 4 shows that gender difference in giving is 11.8 percent).<sup>13</sup>

Results for Models 2 to 4 show that the conditional gender coefficients are significant in all 6 models controlling for background factors. In fact, controlling for background factors leads the coefficients to increase slightly for both single and married people. Thus, we can also see that once we take other background factors into account (for example, comparing men and women with the same income, education etc.), for single people, the difference in donor proportions rises from 12% to nearly 14% (as  $0.545 / 4 = 0.136$ ).

As a consequence, we can conclude that our unconditional results do not simply mirror some compositional differences for women and men. Women seem to be genuinely different from men in terms of the probability of giving.

Although we have aimed to control for the main factors of interest, we have not, of course, included every possible factor. Other factors which could be examined in future analyses might include: spouse's income; employment status (whether full-time, part-time or no paid employment); or whether the respondent's home is in an urban, suburban or rural environment.

### **Gender differences in the amount given, conditional on background characteristics**

As described earlier in this paper, the amounts given are heavily skewed towards lower amounts, even when we exclude non-donors. As such it is not possible to carry out a straightforward least squares regression on the amount.

We present results of quantile regression models, which allow us to explore separate parts of the giving distribution independently.<sup>14</sup> As with the logistic

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<sup>12</sup> The full regression results are available on request from the authors.

<sup>13</sup> The logistic regression model specifies the probability of giving,  $P$ , to be the function  $1/(1+\exp[-B.X])$  where  $X$  is a vector of explanatory variables and  $B$  is a vector of coefficients. The estimated coefficient for giving implies that for someone with a predicted probability of giving of 0.5 (about the sample average), the probability of giving increases by about  $b/4$ , whereby  $b$  is the coefficient of the variable (i.e. here gender).

<sup>14</sup> Where least squares regression optimises the model according to the mean, quantile regression optimises according to the quantile, such as the median. Koenker et al. (2001) provides a detailed discussion of this method.

regression on likelihood to give, we run four models with successively more background factors, doing this separately for single people and married/cohabiting people. These models allow us to give a value in pounds and pence to assess the extent of the gender difference at different parts of the distribution.<sup>15</sup>

We analysed the impact of gender at the 25<sup>th</sup> percentile (Q25), the median (Q50), the 75<sup>th</sup> percentile (Q75) and the 90<sup>th</sup> percentile (Q90) of the distribution of the amounts given by donors. Table 7 presents the coefficients for the gender variable (again coded 0 for men and 1 for women) of these different regression models.

The models presented in Table 7 display several interesting results. We begin by reviewing the Q50 models (which analyses the distribution around the median). As with all of the models, the results for single people are quite different from those for married people.

In Model 1 (the unconditional model), we find that single women give £3 more than single men, whereas we find no significant gender differences for married people (Model 1). Note that this corresponds to the unconditional results presented in Table 5. Once we introduce control variables into the model, the gender difference decreases for single people. Conditional on household structure, age, region, wealth, income and education single women give just £1 more than men.

The change in the gender coefficient from £3 to £0.93 (in Model 2) for single women is significant. Compared to single men, single women are more likely to live alone and to be older, which are both correlated with higher giving. Still it is notable that controlled for wealth and income (both higher for men) the gender coefficient becomes significant again (Model 3). Adding in addition a control for education decreases the coefficient slightly, however gender does still matter (Model 4).

For married people, we find that once we control for factors proxying wealth and income, the gender difference becomes significant (at the 5% level), with women again giving about £1 more than men.

We turn now to the other models and hence to the other parts of the distributions of amounts. For single people, the results are very similar to those found at Q50, except that the lower coefficients for the Q25 models and the higher coefficients for Q75 and Q90 models reflect the fact that we are looking at lower or higher parts of the distribution, where the amount given are, of course, correspondingly higher or lower.

For married people, a very different pattern in the higher percentiles (Q75 and Q90) appears. We find a gender difference in giving amounts in only one of these

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<sup>15</sup> We also ran an ordinary least square (OLS) regression. As the dependent variable, we used the natural logarithm of the amount given by donors, which has a normal distribution. We then run Models 1 to 4 with the same independent variables as described above. The results match relatively closely to those of the quantile regression models for the median.



models, (Model 2 for Q95). This coefficient is negative indicating that men give significantly more than women. Thus, while lower value donations tend to be higher among married/cohabiting women compared to men, this difference disappears at the top end of the distribution.

It is notable, that throughout all 32 regressions run at different percentiles of the distributions and by marital status, 17 gender coefficients are significantly positive indicating female donors' higher generosity compared to just one negative gender coefficient, showing a higher generosity of male donors.

## **5 Household giving and the price of giving**

There are various other aspects of the link between gender and charitable giving that we have not discussed in detail. We briefly consider the way in which gender patterns in charitable giving are influenced by household finances and the price of giving, and give some suggestions on how these might be investigated in further research.

### **Household giving**

The Individual Giving Survey aims at measuring giving from the point of view of the individual. In particular, individuals are asked how much they gave to specific causes assuming that there is for all people a concept of *individual* giving. This is not necessarily true.

The apparent convergence of giving behaviour among married people suggests that the household does have an interesting impact on giving behaviour. Couples sharing a home may decide together about their household spending, possibly including giving to charitable causes, especially for large gifts or for regular Direct Debit donations. The extent to which couples share resources has been investigated, although the details are still unclear. For example, while Lundberg et al. (1997) found that couples do not pool resources, Hotchkiss (2003), in reanalysing the same data, found the opposite. Both of these papers are based on a comparison of changes in child benefit legislation with clothing expenditure.

Since it may be that decision-making over household finances is shared, in the context of charitable giving, both the decision to give and the amount given may derive from the household and not individual. An important question is whether people report household gifts which they would not have made as an individual (meaning the person might not have been a donor in the first place). Similarly we can ask whether the amount reported includes household giving, potentially increasing the apparent level of giving.

In Sections 4.3 and 4.4, we observed a strong distinction between gender differences for single people and those for married people, with the former being much more pronounced. The apparent convergence in giving behaviour may well

arise from giving becoming a household decision. On the other hand, it may be that within a marriage, giving behaviour of the couple converges as each partner is exposed to new social norms. It is worth noting that spouses are likely to have similar background characteristics, and once these are controlled for in the regression model, married women are found to give more than married men at the lower end of the distribution of amounts. Further research in this area would be helpful.

A detailed analysis of preferred causes may also give useful evidence of household giving. To consider the idea that women may be more likely to report household giving, we note that, according to Andreoni et al. (2003), in negotiating household giving, “married couples tend to resolve these conflicts in favour of the husband’s preferences”.<sup>16</sup> This implies that if women are indeed more likely to report household giving as their own, the preferences of causes for household giving would differ for married and single women, as giving is diverted towards the husband’s preferences. However, in Table 4, we observed that the ratios of giving for the various causes are very similar between married/cohabiting people and single people, indicating that it is not household giving that leads to a higher percentage of female donors. The lack of convergence in preferred causes in the married/cohabiting population also suggests that household giving is not a straightforward replacement of individual giving. Further research is needed to elaborate on this question.

### **Response to the price of giving**

Various experiments suggest that men are more responsive to the price of giving, as outlined in the literature review. We might expect this to be reflected in data that compares those who use Gift Aid with those who do not. Indeed, in the data from the IGS, for both men and women, donors using Gift Aid tend to give more than those who do not. However, it is difficult to separate the influence of the price of giving from other effects. For example, a person using Gift Aid may be generally more engaged with charities and would perhaps feel inclined to give more regardless of tax incentives.

The relationship between income and giving behaviour is another area in which we might expect to observe the price of giving. Again, however, real-world complexities make it difficult to analyse this question from the survey data available. For example, it may be more reasonable to look at the level of disposable income as a measure of the price of giving, rather than simply the total individual income.

A specific study focused on the price of giving may be helpful in clarifying how the theoretical findings in Andreoni et al. (2001) and Meier (2005) influence behaviour in a real-world context. This might be of value to policymakers (for

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<sup>16</sup> It should be noted that this study was based in the USA. As such, we must be cautious in using this to make conclusions about giving in the UK. A similar study based in the UK would be of value.

example in the area of tax efficient giving) and to fundraisers (in deciding on the level of suggested donations to appear in targeted appeals).

## **6 Conclusions**

A number of points have arisen from the analyses presented in this paper.

Looking at the overall picture, women are significantly more likely than men to give to charities and this is not due to different background factors such as age and income. The same pattern holds when we look separately at single people and married/cohabiting people.

Much of the research examining gender differences in amounts given focus on the mean amount. Our focus on distributional differences by gender shows that the mean amount is misleading. This is due not only to the high skew of the amounts data but also to the very distinct patterns of the distributions of donation amounts for men and women.

For single people, results presented show that about 90% of women give more than men.

For married people, although gender is not significant in the unconditional regression models of amounts given (suggesting there is no gender difference), when controlled for background factors, gender becomes significant at the lower end of the distribution. Thus, at and below the median, married women tend to give more than married men with similar background characteristics.

Once background factors are controlled for, women's higher probability to give increases, whereas the amount they give decreases (compared to the unconditional model). This indicates that the decision to donate and the decision about how much to donate are impacted differently on by background characteristics.

Finally, men and women appear to have different preferences for causes, with a notably higher support among women for animal welfare, education and the elderly. For men, the support for religious organisations is also related to marital status, with married men nearly twice as likely as single men to support such organisations. Women also tend to support more causes.

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**Table 1: Core data on giving behaviour, by gender**

	% donor	Amount given per donor (in £s)				Amount given per head (in £s)
		Median	75 <sup>th</sup>	90 <sup>th</sup>	Mean	Mean
Men	49.6	10	25	65	30	15
Women	59.8	10	25	58	26	15
All	55.1	10	25	60	27	15

**Table 2: Percentage of donors and average amount given, by gender**

	% donors			Amount per donor (in £s)			
	Men	Women	Ratio	Men		Women	
				Mean	Median	Mean	Median
Animal welfare	5.7	9.7	1.7	10	5	10	5
School / colleges / universities	3.4	5.3	1.6	13	6	15	5
Elderly people	3.1	4.6	1.5	9	5	8	5
Hospitals / hospices	11.0	15.7	1.4	14	5	13	5
Children / young people	11.3	16.1	1.4	17	5	11	5
Medical research	17.0	23.7	1.4	13	5	12	5
Overseas aid / disaster relief	8.3	11.1	1.3	18	10	17	7
Homeless / housing / refugees	4.3	5.6	1.3	9	4	6	3
Physical / mental health	3.2	4.1	1.3	11	5	10	5
Disabled people	6.0	7.5	1.3	12	5	10	5
Conservation / environment	2.5	2.9	1.2	18	7	17	5
Religious organisations	6.5	7.4	1.1	46	15	28	12
Arts	0.5	0.5	1.0	24	5	17	3
Other	7.3	6.3	0.9	11	4	10	3
Sports and recreation	2.2	1.2	0.5	22	5	10	5

Note: data are sorted by the “% giving” ratio for each month. This is the ratio between the percentage of women and the percentage of men giving to a cause.

**Table 3: Percentage of donors giving to specified numbers of causes, by gender**

		Number of causes							Mean number of causes
		1	2	3	4	5	6+	Total	
All	Men	54.7	24.2	11.1	5.3	2.2	2.6	100	1.9
	Women	46.2	27.0	14.1	7.1	3.3	2.4	100	2.0
	Total	49.7	25.8	12.8	6.3	2.8	2.5	100	2.0



**Table 4: Percent donors for married/ cohabiting and single people**

	Single			Married/cohabiting		
	Men	Women	Ratio	Men	Women	Ratio
Animal welfare	5.2	9.9	1.9*	6.0	9.7	1.6*
School / colleges / universities	2.4	3.3	1.4*	4.0	6.5	1.6*
Elderly people	2.5	4.2	1.7*	3.4	4.9	1.4*
Hospitals / hospices	7.5	12.9	1.7*	12.8	17.4	1.4*
Children / young people	9.7	14.0	1.4*	12.2	17.4	1.4*
Medical research	15.1	21.4	1.4*	18.0	25.2	1.4*
Overseas aid and disaster relief	7.4	9.9	1.3*	8.7	11.9	1.4*
Homeless / housing / refugees	5.0	5.6	1.1	4.0	5.6	1.4*
Physical / mental health	2.9	4.0	1.4	3.4	4.1	1.2
Disabled people	5.3	6.6	1.2	6.4	8.0	1.3*
Conservation / environment	1.7	2.6	1.5	2.9	3.1	1.1
Religious organisations	3.7	6.8	1.8*	7.8	7.8	1.0
Arts	0.5	0.6	1.2	0.5	0.5	1.0
Other	5.7	5.8	1.0	8.1	6.6	0.8*
Sports and recreation	1.4	0.5	0.4	2.6	1.5	0.6*
All	43.9	55.7	1.3*	52.5	62.3	1.2*

Note: the table is ordered by the overall ratio, as in Table 2. The asterisk denotes that the gender difference is significant at the 5% level.

**Table 5: Amounts (in £s) given in different percentiles of the distribution, by gender and marital status**

	Single		Married/cohabiting	
	Men	Women	Men	Women
Mean	21	22	33	28
P25	2	4	4	5
P50 (median)	7	10	10	11
P75	16	21	30	27
P90	44	50	74	61
P95	87	80	133	107

Note: the amounts given refer to the distribution of the specific group, e.g. single men. For example, in the distribution of single men, the median amount is £7.

**Table 6: Logistic regression results: coefficient for gender variable**

	Model 1	Model 2	Model 3	Model 4
	With gender as the only independent variable	Controlled for age, household structure, and region	Controlled in addition for factors proxying wealth and income	Controlled in addition for education
Single women	0.476	0.512	0.561	0.545
Married / cohabiting women	0.400	0.392	0.429	0.463

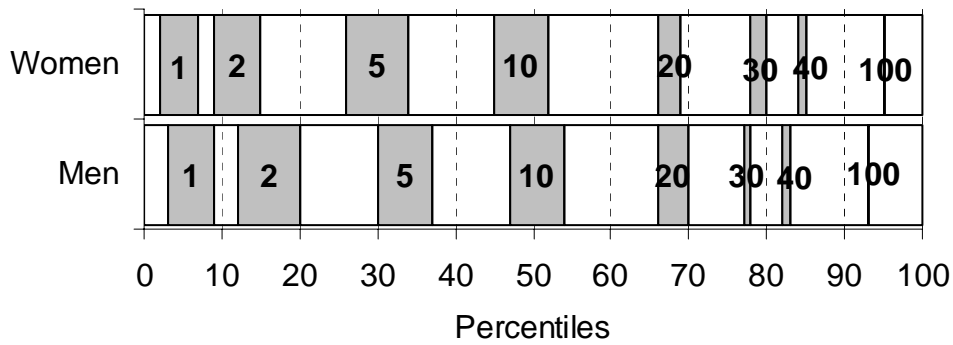
Note: this table presents the gender coefficient (coded 0 for men and 1 for women) for eight different logistic regression models run (four models separately for singles and married/cohabiting). The first model uses gender as the only independent variable. The second model controls in addition for age (age and age squared), household structure (whether a dependent child lives at the same address and whether the person is living alone) and region (dummies for Scotland or Wales, base group is England). In the second model, we add in addition proxies for wealth (property ownership and the number of cars per adult in the household) and income (a dummy equal to 1 if the individual income is above the top quintile of the income distribution). Model 4 controls in addition for education (dummy variables for attainment of degree, a-levels, o-levels/GCSE and other qualifications, base group is no qualifications).

**Table 7: Results of quantile regressions: gender coefficient**

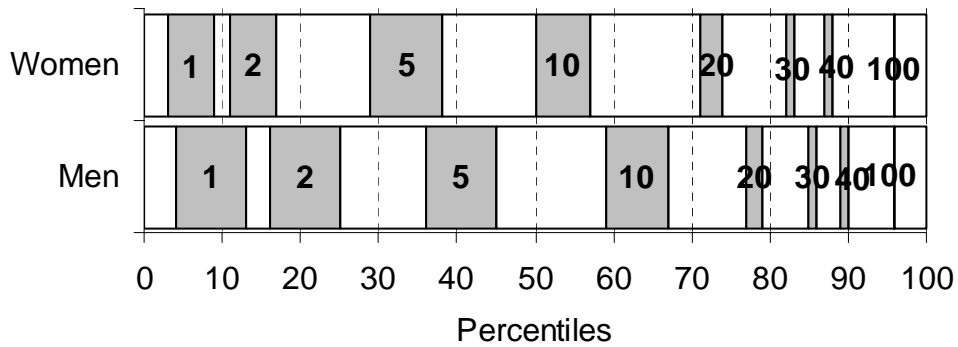
		Model 1	Model 2	Model 3	Model 4
		With gender as the only independent variable	Controlled for household structure, age and region	Controlled in addition for factors proxying wealth and income	Controlled in addition for education
Single women	Q25	1.00**	0.73**	0.87**	0.54*
	Q50	3.00**	0.93	1.27*	0.97*
	Q75	5.00**	2.04*	2.74**	2.45**
	Q90	4.00**	2.34	5.01	5.81*
Married / cohabiting women	Q25	-0.00	0.42	0.80**	0.86**
	Q50	0.00	0.70	1.48*	1.19*
	Q75	-2.00	-2.31	1.49	1.48
	Q90	-10.00	-10.60*	-2.61	-0.81

Note: \* significant at 5% level; \*\* significant at 1% level. For control variables used in different models see note to Table 6.

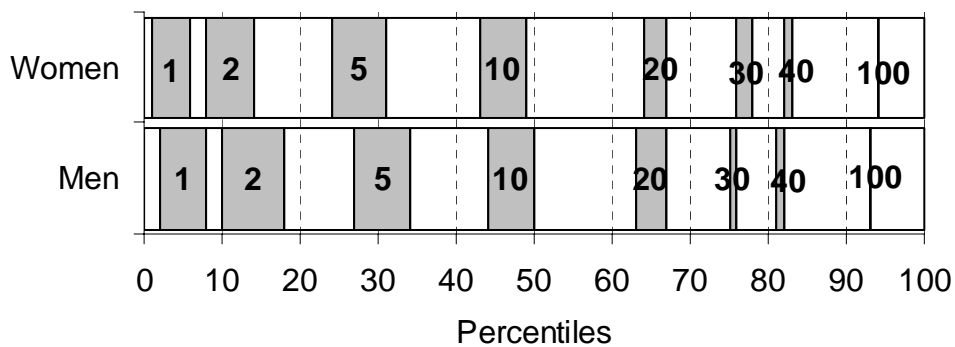
**Figure 1: Percentile range of “peak” amounts on the distribution of amounts given by female and male donors**



**Figure 2: Percentile range of “peak” amounts on the distribution of amounts given by single donors, by gender**

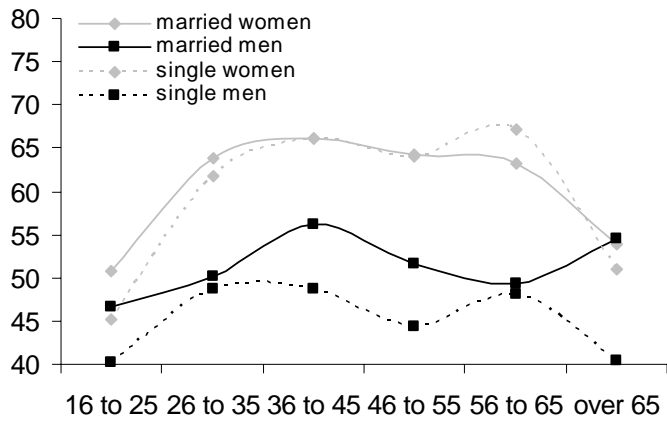


**Figure 3: Percentile range of “peak” amounts on the distribution of amounts given by married donors, by gender**

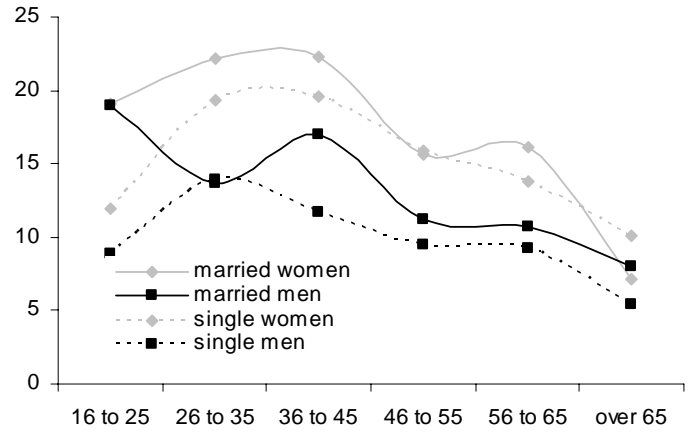


**Figure 4: % donors by age and charitable cause**

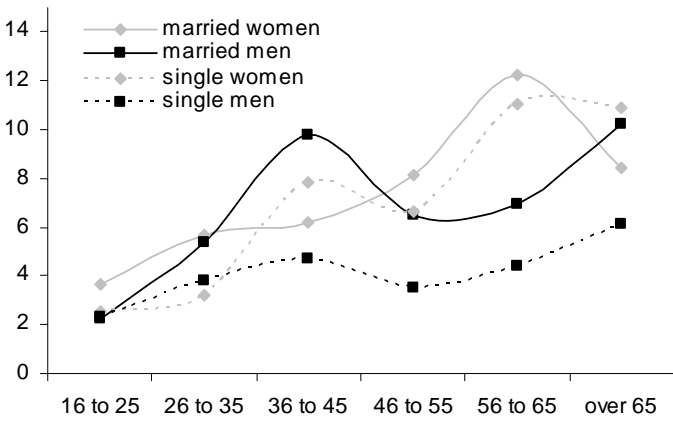
All causes



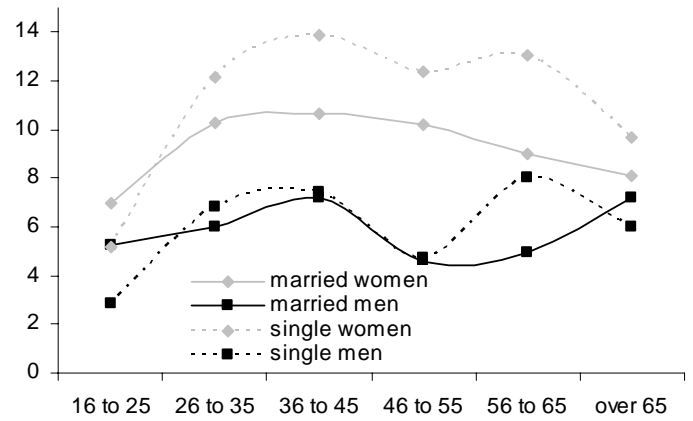
Children



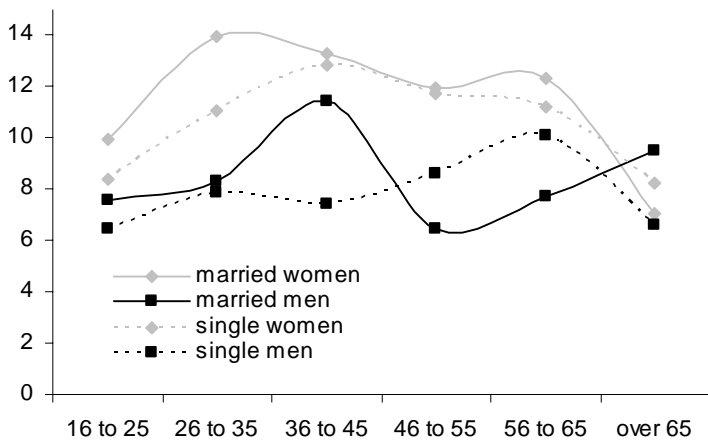
Religious organisations



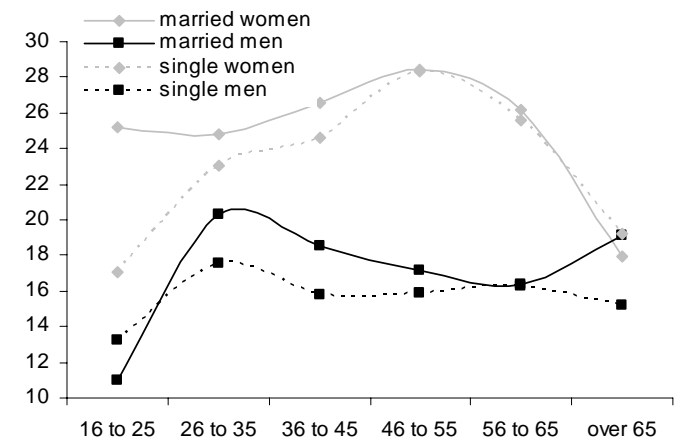
Animals



Overseas



Medical Research



**Figure 5: Percent donor by education**

