



Who gives what and when? A scenario study of intentions to give time and money

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ARTICLE INFO

Article history:
Available online 6 September 2009

Keywords:
Philanthropy
Volunteering
Factorial survey
Personality

ABSTRACT

Effects of material, social, and psychological incentives for giving and volunteering as well as socio-demographic and personality characteristics are studied in a factorial survey ($n = 1248$). Social incentives for giving strongly increase intentions to give money and time. Requests for more efficient ways of contributing as well as requests for contributions to local as opposed to (inter)national organizations are also more likely to be honored. More highly educated and more empathic respondents were more likely to intend giving and volunteering.

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1. Introduction

Which principles govern the donation of money and time? Experiments in social psychology, sociology, and economics have shown that prosocial behavior varies with the material, social and psychological costs and benefits (for a review, see Dovidio et al., 2006). Survey research has uncovered a large number of socio-demographic and personality correlates of giving and volunteering (for reviews, see Bekkers and Wiepking, 2007; Penner et al., 2005; Piliavin and Charng, 1990; Smith, 1994; Wilson, 2000). Both types of studies have their own advantages and shortcomings. The key advantage of experiments is that they allow for causal inferences because researchers have control over the situation in which participants decide on contributions of time and money. A common shortcoming of experimental studies is that they rely on convenience samples of students that are fairly homogeneous. Student populations typically contain limited variance in age, level of education and income, which are important correlates of giving and volunteering. Another common shortcoming of experimental studies is that the number of participants is small, limiting the number of conditions that can be manipulated at the same time. Survey studies among random population samples, on the other hand, represent the full variance in relevant characteristics, but typically do not allow for manipulation of relevant situation characteristics.

However, the lack of control over participants is not a defining characteristic of survey studies. Experiments may be included in survey studies, and in fact, the large number of participants in population surveys allow for a much larger number of conditions than the typical experiment. The factorial survey (Rossi and Anderson, 1982) is a type of experiment that can easily be included in surveys, thus combining the advantage of experimental control over subjects with the advantage of having a natural variation in personality and socio-demographic characteristics in a large sample of respondents. The present article reports on a factorial survey study of the effects of material, social and psychological incentives on contributions of time and money to non-profit organizations and charitable causes, simultaneously with the effects of socio-demographic and personality characteristics. In the experiment, participants reported their willingness to give and volunteer in hypothetical

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scenarios in which contributions of money and time were requested for specific types of non-profit organizations by specific types of solicitors. The results reveal not only which types of situations facilitate giving and volunteering, but also which characteristics of persons are associated with the willingness to give and volunteer.

2. Theory and hypotheses

2.1. Social incentives

Contributions to collective goods are often made in response to requests by others (Bryant et al., 2003; Piliavin and Charng, 1990; Schervish and Havens, 1997). In most social contexts, contributions are rewarded with approval while refusing to contribute will damage one's reputation as a good citizen. The act of contributing money or time will thus yield some social reward (Barclay, 2004; Hoffman et al., 1996; Long, 1976; Satow, 1975). The higher the social rewards for giving and volunteering (or the higher the social costs for not giving and volunteering), the more likely that a person will spend some of her resources to comply with a request to give and volunteer. In an important survey study of intentions to give money, time and blood (Lee et al., 1999), perceived expectations – expecting others to reward giving – were a consistent positive predictor of intentions to give. The influence of perceived expectations on volunteering intentions was stronger than on intentions to give money or blood. This finding can be explained by the more public nature of volunteering, such that 'sanctions can be applied more easily on those who do not behave as they are expected to behave' (Lee et al., 1999, p. 286).

The magnitude of the effect of social incentives depends most strongly on the relationship with people who are in the position to (dis)approve of the observed behavior. The higher the social distance, the lower the likelihood of giving and volunteering. Schervish and Havens (1997) find that people who are asked to give by a relative or a friend donate a larger percentage of their income. This effect is partly the result of self-interest: friends are more likely to reciprocate favors than strangers because they are more likely to be encountered in the future. Repeated interaction creates an incentive for helping others through expectations of reciprocity (Axelrod, 1984; Cialdini et al., 1997; Shapiro, 1975). However, social distance also decreases giving and volunteering for other reasons. When a friend acts as an intermediary on behalf of a charitable cause, and asks for a contribution, it is much harder to refuse than when a stranger makes the same request because we fear disapproval from friends more than from strangers. Thus, one would expect requests to volunteer by friends to be more effective than requests by strangers. Experimental studies of charitable giving show that expectation of repeated interaction in the future with an intermediary person making the request increase the likelihood of a contribution, as well as the amount contributed (Hoffman et al., 1996; Long, 1976). Social incentives even increase giving and volunteering when donors can expect social approval from third parties outside the dilemma, who are not able to reciprocate, because there is no prospect of future interaction with them (Deutsch and Lamberti, 1986; Eckel and Grossman, 1996; Eichenberger and Oberholzer-Gee, 1998).

2.2. Psychological incentives

People who give money or time for the benefit of others experience a number of psychological rewards. In the economic literature on philanthropy, the 'warm glow' from giving is assumed to be an important ingredient in donor motivation (Andreoni, 1989, 1990; Ribar and Wilhelm, 2002). Experimental studies in psychology suggest which characteristics of philanthropic acts make people feel good about themselves (Penner et al., 2005). In the present study, two different types of psychological rewards of giving are investigated: the efficacy of the contribution for relieving the need of the beneficiary, and the psychological distance to the beneficiary. More efficient contributions and contributions to causes that are psychologically closer are more rewarding, and generate a 'warmer glow'.

Distance: For many forms of prosocial behavior, it is unclear to the actor what the exact consequences are of his contribution to a collective good. People will be more strongly attracted to collective goods in the local community than to the problems of a third world country or to global issues because they are more able to monitor and influence the provision of local collective goods such as schools or leisure clubs than global collective goods such as 'the environment'. As a result, people tend to have more confidence in local charities than in national charities (Zalpha van Berkel and WWAV, 2005). In addition, the benefits of contributions to local collective goods can be observed more easily, reducing uncertainty on the quality of the public good. Finally, biological evolution has equipped humans with a general tendency to be more emotionally responsive to the well being of persons who are closer to them (Davis, 1994). In sum, I assume that the closer a person feels towards the beneficiary (or beneficiaries), the higher the degree of psychological satisfaction of a contribution to the well being of this (group of) person(s).

Efficacy: The efficacy of the contribution for relieving the need of the beneficiary generates a second type of psychological reward. When it is uncertain whether the contribution actually relieves the need of the beneficiary, people are less inclined to give. When charities are said to be inefficient in spending their resources, e.g., by paying large salaries for CEOs, corruption or other misgivings, public support declines rapidly (Arumi et al., 2005; Bowman, 2006). It can be expected that the same holds for differences between types of activities as contributions to charitable causes. The less certain that a type of contribution yields a benefit for a group in need, the less likely people will help in this way. Experimental social dilemma studies have shown that the more effective people feel their contribution will be, the more likely they will contribute (Kerr, 1989;

Kerr and Harris, 1996; Komorita and Parks, 1994: 55–68). Mobilization studies have shown that persons who think collective action is more effective are more likely to take part in collective action (Klandermans, 1984).

Next to social and psychological rewards, material incentives are an important factor in decisions on giving and volunteering. Obviously, the more time or money is requested, the less likely that a contribution will be made (Dovidio et al., 1991; Komorita and Parks, 1994; Rapoport and Chammah, 1965).

3. Other-regarding preferences

Psychological rewards for giving and volunteering may not only be the result of the situation in which a request for contributions is made, but also of the person who is asked. Psychological rewards of giving and volunteering are likely to vary between persons, depending on individual differences in other-regarding preferences for the well being of beneficiaries. Some types of people may have a stronger preference for helping others. The literature on prosocial behavior in social and personality psychology suggests at least three kinds of psychological characteristics that may be related to giving and volunteering: social value orientations, empathy, and agreeableness.

Agreeableness: Agreeableness is one of the ‘Big Five’ personality characteristics (McCrae and John, 1992). Agreeable persons are described as friendly, helpful and sympathetic. This trait description leads to the expectation that agreeableness is positively related to volunteering and donation of money (Ben-Ner et al., 2004; Graziano and Eisenberg, 1997; Elshaug and Metzger, 2001; Carlo et al., 2005; Ashton et al., 1998). However, Bekkers (2005) found that volunteers described themselves as slightly less agreeable than non-volunteers, though the difference was not significant. Perhaps the general nature of the agreeableness construct obscures relevant differences between specific aspects of agreeableness. Some aspects may be more important than others, and some may have less positive relationships with giving and volunteering than others. In a study on philanthropy, Bekkers (2006) found that helpfulness has a weakly negative relationship with philanthropy, interpersonal warmth has no significant relationship, while empathic concern and prosocial value orientation promote philanthropy.

Empathy: Empathy (Davis, 1994) is an alternative explanation for how people come to be concerned for the welfare of others. Empathy is often divided in two dimensions: an affective and a cognitive dimension. The cognitive dimension is also called ‘role taking’ or ‘perspective taking’ and refers to the ability to see the world from another person’s viewpoint. The affective dimension is also called ‘empathic concern’ and refers to the emotional responsiveness to the situation of others. There is substantial evidence that there are stable individual differences in these two dimensions of empathy (Davis, 1994), and that these differences are correlated with prosocial behavior (Batson, 1998; Davis, 1994; Eisenberg et al., 1989). Recent research has shown that empathic concern is the most distinctive personality characteristic of charitable donors (Bekkers, 2006) and volunteers (Bekkers, 2005; Penner, 2002). Bennett (2003) found that empathy is positively related to a preference for donations to human rights organizations.

Social value orientations: Social psychological experiments on the effects of social value orientations on cooperation show that people differ widely in the goals they strive for in situations of interdependence (Van Lange, 2000). Some persons are motivated primarily by their own outcomes, while others are more concerned for joint outcomes. Previous research has indicated that social value orientations are related to cooperation in abstract social dilemma games (e.g., Kuhlman and Marshello, 1975), and several forms of prosocial behavior in the ‘real life’, including volunteering behavior (McClintock and Allison, 1989) and philanthropy (Bekkers, 2006). Social value orientations are not as stable as personality traits like the Big Five or empathy (Van Lange, 1999). In addition, unlike personality traits, socio-demographic groups have markedly different social value orientations. Older people, women, and religious persons are known to have more prosocial value orientations (Van Lange et al., 1997; Bekkers, 2003a).

3.1. Socio-demographic correlates of giving and volunteering

Survey studies reveal a fairly consistent picture of the socio-demographic characteristics that are related to giving and volunteering behavior: both types of prosocial behavior increase with age, church attendance, the level of education, income, and decrease with hourly wages and the level of urbanization (Bekkers and Wiepking, 2007; Penner et al., 2005; Piliavin and Charng, 1990; Smith, 1994; Wilson, 2000). However, to some extent these variables are related to giving and volunteering because they increase the likelihood to be asked to do so (Musick and Wilson, 2008). Thus, they may tell us more about the level of exposure to solicitations for contributions rather than about the willingness to engage in prosocial behavior. In the present study, all respondents responded to scenarios in which they were asked to give and volunteer. Positive answers reflect a positive preference for giving and volunteering. The expectations outlined above reflect the general hypothesis that prosocial traits will have positive relationships with giving and volunteering intentions because they measure global preferences for other people’s well being. Socio-demographic groups that have positive social norms on giving and volunteering will also result in positive relationships with giving and volunteering intentions. Variables that are not related to giving and volunteering in the present study may be related to actual giving and volunteering because they are related to a higher likelihood of being asked.

Other variables included in the present study may reveal why socio-demographic characteristics are related to giving and volunteering. Prosocial value orientations discussed earlier may explain why women and religious persons are more likely to engage in giving and volunteering. Postmaterialistic values may explain why the more highly educated are more likely to

give and volunteer. More highly educated people are more likely to have postmaterialistic values, and postmaterialism is positively related to volunteering (Bekkers, 2005) and charitable giving (Bekkers and Wiepking, 2006). Alternatively, the more highly educated may be more likely to give and volunteer because they are better informed about the world in general and are more aware of social problems. To test this possibility, a measure of verbal proficiency is included. From previous research it is known that the more highly educated are verbally more proficient (Alwin, 1991; Hauser, 2000) and that verbal proficiency is positively related to membership in voluntary associations (Hauser, 2000) and charitable giving (Bekkers, 2006).

3.2. Traditional and health related philanthropy

Previous research has revealed not only positive associations between different forms of traditional philanthropy – giving and volunteering benefiting non-profit organizations – but also between traditional philanthropy and health related philanthropy – giving parts of the self to the health benefit of others (Meslin et al., 2008). Volunteers and donors are more likely to donate blood and donate their organs. It is unclear why these relationships exist. Theoretically, one may imagine two possibilities: (1) the relationships are spurious; (2) one form of philanthropy promotes the other. The relationships between traditional and health related philanthropy are spurious if both types of philanthropy are the result of the same set of determinants. This is not very likely because most of the personality and socio-demographic characteristics of those who engage in traditional philanthropy are different from those who engage in health related philanthropy. Bekkers (2006) found that Dutch blood donors describe themselves as more helpful and less conscientious persons, and have higher levels of education, subjective health and lower incomes than non-donors, while organ donors describe themselves as more emotionally stable, are more inclined to share with others, are less likely to be religious, and are verbally more proficient than non-donors. Charitable donors, in contrast, are more empathically concerned, have a higher level of education, are more likely to live in rural areas, earn higher incomes, are verbally more proficient and are more religious than non-donors. Research on volunteering (Bekkers, 2005; Elshaug and Metzger, 2001; Penner, 2002; Smith, 1994) has found that volunteers are more extraverted, empathically concerned, more highly educated, more often religious, and living in rural areas than non-volunteers. In sum, there is only one characteristic that is typical of volunteers, charitable donors, blood donors and organ donors: a higher level of education. It is rather unlikely that correlations between different types of philanthropy are all due to this one common characteristic.

It is more likely that different forms of philanthropy promote each other. Volunteering is likely to promote charitable giving. It is likely that volunteers receive more solicitations for contributions to charitable organizations than non-volunteers. In the present paper, this pathway is ruled out by design because volunteers as well as non-volunteers reported their intentions to donate if asked. But volunteering may also promote giving through another pathway. Volunteering seems to enhance confidence in charitable organizations (Bowman, 2004), which, in turn, is associated with higher levels of charitable giving (Bekkers, 2003b). Involvement in charitable organizations as a donor may also sustain charitable confidence, and thus promote future involvement in the form of giving and volunteering. Blood donation is likely to promote charitable giving and volunteering. Sustained blood donation promotes an altruistic self-image (Piliavin and Callero, 1991). Persons with an altruistic self-image find it harder to refuse compliance with a request for prosocial behavior (Kraut, 1973). The decision to donate one's organs after death is not likely to promote volunteering or charitable giving. People do not get into social networks where they are asked to contribute money or time by signing an organ donor registration form. In addition, organ donation is a single shot decision (Healy, 2004) that does not reinforce an altruistic self-image, like blood donation (Piliavin and Callero, 1991).

4. Data and methods

4.1. Data

To test the hypotheses of this article, the third edition of the Family Survey of the Dutch population, 2000 (De Graaf et al., 2000) is used. This nationwide survey used a two stage stratified sample of individuals in households. In the first stage, a random sample of municipalities in The Netherlands, stratified according to urbanization level, was drawn. In the second stage, a sample of persons was drawn from the population registers of these municipalities, with an oversampling of cohabitating couples. In 723 households, both partners participated in the study ($n = 1446$). In addition, 141 persons who did not have a partner also participated. The contact rate (contacted households compared to the total sample) was 86%, and the cooperation rate (responding households to contacted households) 47%. The resulting response rate of 40% is not very low compared to other surveys in The Netherlands, especially given the requirement that both partners had to be interviewed for a successful response. However, it is likely that participation in the survey was selective with respect to prosocial tendencies. Individuals with a more prosocial value orientation and/or prosocial self-image are more likely to comply with requests to participate in surveys. In fact, participation in the survey is a form of volunteer work. This is likely to have resulted in (a) overestimates of the level of willingness to give and volunteer and (b) reduced variance in willingness to give and volunteer. The latter makes it more difficult to detect effects of prosocial value orientations and a prosocial self-image.

4.2. Experimental design

The factorial survey approach (Rossi and Anderson, 1982) offers the possibility to manipulate four aspects of the situation that are often correlated in the real world in one design. The scenarios were constructed to cover a wide range of situations in which an individual is asked to contribute time or money to a non-profit organization. On a separate page of the written questionnaire, eight short scenarios were presented to the respondents under the heading 'What would you do?' Respondents were instructed that they would read a number of situations. Respondents were asked to imagine that they were in the situation described in the scenario, and were asked to indicate what they would do in the scenario. An example of a scenario is 'Your neighbor asks you for help for one evening of door to door fundraising for the local soccer club'. Response categories in all scenarios were the same: 'I would not do that' and 'I would do that'.

Material costs were manipulated in terms of amounts of time requested in case an activity was asked (one hour, one evening, several evenings), and in terms of money in case a donation was asked (2.50, 5, 10, 25). Social incentives were manipulated by describing the role relation to the intermediary person asking for a contribution (fundraising letter, stranger, a person vaguely familiar from your neighborhood, a neighbor, family member, friend, sibling, partner). Psychological rewards were manipulated by describing more or less efficient activities to contribute and more or less psychologically distant beneficiaries. It was assumed that more efficient activities are psychologically more rewarding. People will feel themselves better when they have performed an activity that benefits a group of persons with a higher degree of certainty, than when they are not so sure whether their contribution was useful. Constructing a building for a non-profit organization was assumed to be a more efficient type of contribution than collecting money, which, in turn, was assumed to be more efficient than distributing flyers. It turned out to be rather difficult to manipulate psychological distance. The approach that worked best in the pilot study was to mention different types of causes as beneficiaries. It was assumed that people feel better about contributing to more local and less distant causes. The causes mentioned were (from close to distant) 'the local soccer club', 'the Red Cross', 'third world people', and 'political prisoners'. Admittedly, this manipulation of psychological distance is confounded with other factors, such as group size and political controversy.

Space constraints in the survey allowed for a maximum of eight scenarios per respondent. One scenario that was judged to be a very realistic one in the pre-test ('Your neighbor asks you for one evening of door to door fundraising for the local soccer club') was placed first in all sets of scenarios. After the fixed scenario, seven other scenarios were presented, drawn randomly from the universe of potential scenarios. First, three or four scenarios followed in which an amount of time was requested. In the last three or four scenarios, a monetary contribution was requested.

Because one scenario was the same for all respondents, and the organization of the data collection allowed for 20 different sets of scenarios, a sample of 140 (7×20) scenarios was drawn randomly from the 338 possible scenarios identified as realistic situations in a pre-test.¹ The procedure resulted in 55 different philanthropy scenarios with a request for a monetary donation, and 85 different volunteering scenarios.

4.3. Measures of socio-demographic and personality characteristics

The respondents completed a computer assisted personal interview as well as a written questionnaire. In the personal interview, data were obtained on the highest completed educational level (seven categories, ranging from primary school to postacademic degree), yearly household income (sum of all sources of income of both partners in € 1000), working hours per week, the frequency of church attendance (number of visits per year), and level of urbanization (from 0: rural to 4: very urban).

The written questionnaire was left at the respondent's home after the CAPI and contained the scenarios and questions on personality characteristics, because they are more vulnerable to social desirability. Dutch translations of Davis' (1994) measures of empathic concern (four items, $\alpha = 0.68$; sample item: 'I often feel concerned for less fortunate people') and perspective taking (six items, $\alpha = 0.78$; (sample item: 'When I am angry with someone, I try to take his or her perspective') were included. The written questionnaire also contained a 30-item 'Big Five'-adjective checklist (responses ranging from 1 – 'Does not fit me at all' to 7 – 'Fits me completely') based on Goldberg (1992). After removal of three items that showed loadings above 0.35 on multiple factors, a six-factor structure emerged. The first four dimensions were extraversion ($\alpha = 0.82$, four items), neuroticism ($\alpha = 0.77$, four items), conscientiousness ($\alpha = 0.87$, four items), and openness ($\alpha = 0.80$, six items). The fifth and sixth factor were subdimensions of agreeableness. Factor five refers to warmth or friendliness in interpersonal relations; factor six refers to helpfulness. To measure social value orientations, respondents were asked to provide a rank order to four self-other distributions in two tables (see Bekkers (2006) for more information). The rank orders reflect the degree to which respondents have the tendency to give away points to the unknown other (or to keep them for themselves). The mean

¹ First, all 416 (for money: $4 \times 8 \times 1 \times 4 = 128$; for time: $3 \times 8 \times 3 \times 4 = 288$) possible combinations of text-elements were generated with a simple computer program. In the pre-test, random selections of scenarios were presented to five subjects, who identified unrealistic combinations of scenario characteristics (e.g., building a clubhouse for political prisoners in China) and made suggestions to improve the internal validity of the manipulations. As suggested by Faia (1980), the unrealistic combinations were removed, leaving 338 useful scenarios. It should be noted that the removal of the unrealistic scenarios introduces non-zero correlations between scenario factors. Most of these correlations were below 0.10, except for the correlation between efficacy and psychological distance in the volunteering scenarios ($r = -0.36$). These correlations limit the potential variance to be explained. The set of 338 realistic scenarios formed the population from which a random sample was drawn. Chi square tests indicated that the actual distribution of values on the four dimensions in the sample of scenarios did not differ from the expected values based on a random selection.

Table 1
Descriptive statistics of variables in the analyses.

Variable	Mean	Standard deviation	Minimum	Maximum
Positive response to scenario	0.579	0.494	0	1
Money scenario	0.342	0.474	0	1
Costs	5.375	2.260	1	8
Social distance	4.846	1.989	1	8
Efficacy	2.604	1.151	1	4
Psychological distance	2.219	1.101	1	4
Female	0.509	0.500	0	1
Age (standardized, s)	−0.019	0.995	−2.009	2.629
Conscientiousness (s)	−0.007	0.968	−4.185	1.920
Extraversion (s)	−0.013	0.962	−3.251	2.530
Neuroticism (s)	−0.014	0.962	−2.292	3.232
Openness (s)	0.001	0.958	−3.212	2.590
Warmth (s)	−0.001	0.972	−4.401	2.723
Helpfulness (s)	0.018	0.965	−5.080	2.671
Perspective taking (s)	−0.012	1.011	−4.441	2.272
Empathy (s)	0.011	1.007	−3.987	1.731
Education (s)	−0.015	1.000	−1.308	2.391
Hourly wages (s)	−0.044	0.812	−0.283	1.110
Owns house	0.198	0.398	0	1
Catholic	0.287	0.452	0	1
Reformed	0.064	0.245	0	1
Rereformed	0.070	0.255	0	1
Other religion	0.047	0.211	0	1
Church attendance (s)	0.015	1.017	−0.442	0.379
Urbanization (s)	0.020	1.008	−1.749	1.525
Subjective health (s)	−0.008	0.993	−2.760	1.871
Verbal proficiency (s)	0.104	0.876	−2.478	1.649
Postmaterialism (s)	−0.022	1.020	−2.807	2.659
Prosocial value orientation (s)	0.014	1.023	−2.277	1.632
Volunteered in past year	0.319	0.466	0	1
Gave money in past year	0.807	0.395	0	1
Gave blood in past	0.268	0.443	0	1
Organ donor	0.351	0.588	0	1
Amount donated (ln)	0.072	0.146	0	1.712

(s) standardized score; (ln) natural log.

Means (and standard deviations) of standardized variables sometimes differ slightly from 0 (and 1, respectively) because the variables were standardized before respondents with missing data in the scenario experiment were removed from the dataset.

proportion of points given away is used as a measure of social value orientation. On average, the respondents gave away 42% of the points to the other. Postmaterialism is a variable in five categories based on the rank ordering of two sets of four political goals (see De Graaf (1988) for original items). Cognitive proficiency was measured with a vocabulary test in which respondents had to select the correct synonym for 12 difficult words (Gesthuizen and Kraaykamp, 2002). This test was modeled after the WORDSUM variable in the General Social Survey (Alwin, 1991). Previous research found that the vocabulary test is a reliable proxy measure of verbal ability that is strongly correlated with other measures of crystallized intelligence (Alwin, 1991).

Descriptive statistics of the variables included in the analyses are displayed in Table 1.

4.4. Analytical strategy

Responses to scenarios will be analyzed with logistic regression models including fixed effects for sets of scenarios using the XTLOGIT command with the FE option in Stata. Because each respondent received a set of eight scenarios, unintended differences in the situations described in the scenarios included in the specific set may result in differences in the average willingness to give or volunteer. If one set included relatively many ‘easy’ scenarios, in which most people would be likely to report a willingness to give money or time, respondents who happened to receive this set would appear to be more altruistic than respondents who received another set. The fixed effects control for potential differences between sets of scenarios in the ‘difficulty’ of the scenarios.

Responses to volunteering and philanthropy scenarios are analyzed separately, because efficacy was not manipulated in the money scenarios and because the relevant budgets for contributions of money and time differ. The willingness to give money was positively related to the willingness to give time ($r = 0.235$).² All personality characteristics

² A reviewer suggested an analysis of the willingness to give time including the willingness to volunteer as an additional predictor. Unfortunately, this regression model did not converge. A regression of willingness to volunteer including the willingness to give time did converge. In this analysis, effects of several variables changed. Specifically, relations of gender, age, empathic concern, education, hourly wages, the vocabulary test, giving money in the past year, and blood donation became less pronounced, and effects of warmth, helpfulness, home ownership, and volunteering in the past year became more pronounced (results available from the author).

Table 2
Conditional fixed effects logistic regression models of intentions to volunteer ($n = 6194$).

	Model 1 Coeff. <i>p</i>	Model 2 Coeff. <i>p</i>	Model 3 Coeff. <i>p</i>	Model 4 Coeff. <i>p</i>
<i>Scenario characteristics</i>				
Costs	-0.177***	-0.178***	-0.177***	-0.178***
Repeated interaction	0.378***	0.380***	0.380***	0.384***
Efficacy	0.103*	0.103*	0.105(*)	0.102*
Distance	0.092**	0.093**	0.093**	0.092**
<i>Respondent characteristics</i>				
Female	0.120*	0.130*	0.109(*)	0.124**
Age	-0.196***	-0.190***	-0.175***	-0.187***
Conscientiousness	-0.046	-0.059(*)	-0.064*	-0.059*
Extraversion	0.096***	0.101***	0.099***	0.087**
Neuroticism	0.001	0.014	0.023	0.022
Openness	-.019	-.019	-.016	-.004
Warmth	0.092**	0.090**	0.083**	0.075**
Helpfulness	0.073*	0.076*	0.069*	0.050(*)
Perspective taking	0.063*	0.057(*)	0.059*	0.061*
Empathy	0.171***	0.163***	0.165***	0.158***
Education		0.110***	0.133***	0.102**
Hourly wages		-0.072*	-0.069*	-0.070*
Owns house		-0.105	-0.105	-0.157*
Catholic		0.196**	0.192**	0.163*
Reformed		0.136	0.122	0.053
Rereformed		0.007	0.005	-0.010
Other religion		0.052	0.015	-0.028
Church attendance		-0.001	-0.001	-0.019
Urbanization		-0.058*	-0.051(*)	-0.039
Subjective health			0.045	0.033
Verbal proficiency			-0.059	-0.105**
Postmaterialism			-0.012	-0.021
Prosocial value orientation			0.048(*)	0.052(*)
Volunteered in past year				0.196**
Gave money in past year				0.270***
Amount donated (log)				0.309
Gave blood in past				0.139*
Organ donor				0.006
Log Likelihood (df)	-3878.286 (14)***	-3861.036 (23)***	-3850.581 (27)***	-3762.843 (32)***

(*) $p < 0.10$.

* $p < 0.05$.

** $p < 0.01$.

*** $p < 0.001$.

and socio-demographic (except dummy variables) were standardized into z-scores to enable a comparison of the effect sizes.

The analyses were conducted in several steps, introducing blocks of variables in each step. In model 1, the effects of scenario characteristics were entered together with age, gender, and personality characteristics. In model 2, the level of education, hourly wages, home ownership, religious affiliation, church attendance and size of residence were included to examine whether these characteristics mediate effects of personality characteristics. Previous studies have found evidence for such mediation processes (Bekkers, 2005, 2006; Okun et al., 2007). In model 3, verbal proficiency, postmaterialism and social value orientation were included to examine whether these characteristics mediate effects of human and social capital (as suggested by Hauser, 2000; Bekkers, 2006). In model 4, finally, whether or not the respondent had volunteered in the past year and whether or not the respondent had donated money to charitable organizations in the past year were included to check if positive responses to hypothetical situations are related to actual giving and volunteering behavior.

5. Results

5.1. Giving time: intentions to volunteer

Table 2 presents an analysis of intentions to volunteer. The effects of the manipulated scenario characteristics are in the expected direction for three out of four dimensions: costs, social rewards and efficacy. People are more likely to volunteer when it takes less time to do so and when a person who is more likely to be encountered in the future makes the request. The effect of efficacy is in line with the hypothesis that psychological incentives for contributions to collective goods increase the

likelihood of such contributions. The effect of distance, however, is not in line with this hypothesis. Volunteering intentions are more positive as the distance to the beneficiaries increases.³

The analysis of intentions to volunteer also shows that women, younger persons and those who describe themselves as more extravert, warm, helpful, better able to take the perspective of others and more empathic are more likely to display intentions to volunteer (model 1). The positive effects of extraversion (Smith, 1966) and empathic concern (Penner, 2002; Bekkers, 2005) are consistent with research on actual volunteering. The effects of warmth and helpfulness as facets of agreeableness are in line with findings in one previous study (Elshaug and Metzer, 2001), but not in another (Bekkers, 2005).

Younger respondents and those with higher levels of education, lower hourly wages, Catholics, and those living in less urban environments are more likely to report willingness to volunteer (model 2). Except for the age effect, these relations are consistent with research on actual volunteering. The non-significant effect of church attendance seems surprising given that the literature on volunteering using ordinary survey data consistently shows a positive relation between church attendance and volunteering (Berger, 2006; Lam, 2002; Putnam, 2000). However, the present analysis shows that frequent church attendees are not more likely to offer help if they are asked than persons who never attend church. This result is in line with previous research showing that church attendees are more likely to volunteer because they are more likely to be asked (Bryant et al., 2003).

Because effects of verbal proficiency and postmaterialism are not significant and effects of socio-demographic characteristics on intentions to volunteer hardly change in model 3, we may conclude that they are not mediated by verbal proficiency or postmaterialism (model 3). Social value orientation, however, does seem to mediate effects of gender, age, warmth and helpfulness as well as the level of urbanization. Despite the fact that the relationship of social value orientation with intentions to volunteer is not very strong, the relationships of gender, age, warmth and helpfulness as well as the level of urbanization with intentions to volunteer are weaker in this model than in model 2. Due to the lack of a formal test of mediation in a fixed effects logistic regression model, it is not possible to provide an estimate of the magnitude of mediation. The coefficients do not change much, suggesting that mediation is not strong.

Model 4, finally, reveals that volunteering, charitable giving and blood donation in the past all have predictive value for volunteering intentions in the experiment. Those who volunteered in the past year, gave money to charities, or ever gave blood were more likely to say they would volunteer if asked. The amount donated and organ donation were not predictive of volunteering intentions. In this regression model, effects of extraversion, warmth, helpfulness, empathy, Catholic affiliation and education on volunteering intentions were weaker. This suggests that giving and volunteering in the past year partly mediate these effects. In other words, it is probably because these categories of persons are more likely to give and volunteer that they report more positive attitudes toward requests for volunteer work.

Interestingly, we also observe that some effects of personality and socio-demographic characteristics become stronger rather than weaker after controlling for giving and volunteering in the past. Females, younger people, home owners, and verbally more proficient individuals are actually less likely to report volunteering intentions when their giving and volunteering in the past year is taken into account. Previous research shows that these categories of persons are more likely to have donated money or to have volunteered in the past year, but in the factorial survey experiment they are less likely to say they would volunteer if asked. This may indicate that these groups are overrepresented among donors and volunteers not so much because they like volunteering, but because they are more likely to be asked.

5.2. Giving money: intentions to donate

In the analysis of intentions to give money (see Table 3), we observe the expected effects of the variables manipulated in the experiment: the lower the material costs, the higher the social rewards, and the less distant the beneficiary, the more likely people will give money. The effects of costs and distance are stronger but the effect of social rewards is weaker than in the analysis of volunteering intentions.⁴

Model 1 of the analysis of intentions to give money also shows that females, younger persons, less neurotic, less helpful and more empathically concerned persons are more likely to respond positively to a request for money. Model 2 reveals that those with higher levels of education, higher wages, Catholics and Reformed Protestants (a group of orthodox Calvinists; see Bekkers and Schuyt, 2008) are more favorable to requests for contributions. The results in models 1 and 2 are in line with survey research on philanthropy, except for the negative age effect and the absence of effects of urbanization, church attendance, home ownership, and reformed protestant denomination. Once again, these differences may be interpreted as the result of differences in exposure to fundraising solicitations, as these variables are known to have a positive relationship to the number of solicitations received (Bryant et al., 2003). Eckel and Grossman (2004) also failed to obtain effects of religiosity on giving in a dictator game experiment.

³ Additional analyses revealed that the effect of distance reversed when political prisoners were the beneficiaries: volunteering requests benefiting this group were less likely to be honored. Including a dummy variable in model 1 for political prisoners revealed a significantly negative effect for that category of beneficiaries (-2.143 (0.138), $p < 0.000$) while the effect of distance remained positive (0.617 (0.047), $p < 0.000$).

⁴ This was evident from an additional analysis pooling all responses to both giving and volunteering scenarios. A strongly positive main effect of a dummy variable for money scenarios was found (1.369 (0.285), $p < 0.000$), reflecting the tendency to react more positively to money scenarios. Also negative interactions were found between the money scenario dummy variable and costs (-0.094 , (0.044), $p < 0.033$), social distance (-0.113 (0.025), $p < 0.000$) and psychological distance (-0.325 (0.053), $p < 0.000$), revealing that the effects of costs, social distance and psychological distance were more negative (less positive) in the money scenarios than in the volunteering scenarios.

Table 3Conditional fixed effects logistic regression models of intentions to give money ($n = 6194$).

	Model 1 Coeff. <i>p</i>	Model 2 Coeff. <i>p</i>	Model 3 Coeff. <i>p</i>	Model 4 Coeff. <i>p</i>
<i>Scenario characteristics</i>				
Costs	-0.343***	-0.349***	-0.351***	-0.356***
Repeated interaction	0.237***	0.241***	0.242***	0.248***
Distance	-0.237***	-0.240***	-0.239***	-0.244***
<i>Respondent characteristics</i>				
Female	0.232*	0.284**	0.284**	0.284**
Age	-0.216***	-0.201***	-0.227***	-0.243***
Conscientiousness	-0.072	-0.070	-0.059	-0.059
Extraversion	-0.036	-0.017	-0.007	-0.005
Neuroticism	-0.129**	-0.073	-0.050	-0.069
Openness	0.028	0.003	-0.016	0.008
Warmth	-0.056	-0.066	-0.058	-0.063
Helpfulness	-0.138**	-0.123**	-0.103*	-0.104*
Perspective taking	0.001	-0.008	-0.014	-0.013
Empathy	0.269***	0.241***	0.208***	0.175***
Education		0.270***	0.196***	0.159**
Hourly wages		0.121(*)	0.118(*)	0.096
Owens house		0.010	-0.018	-0.093
Catholic		0.204(*)	0.253*	0.243*
Reformed		0.262	0.260	0.194
Rereformed		0.598**	0.601**	0.457*
Other religion		0.130	0.187	0.092
Church attendance		0.042	0.038	0.022
Urbanization		-0.026	-0.024	-0.018
Subjective health			0.057	0.041
Verbal proficiency			0.131*	0.091
Postmaterialism			0.138**	0.120**
Prosocial value orientation			0.019	-0.000
Volunteered in past year				-0.180*
Gave money in past year				0.287*
Amount donated (log)				1.706***
Gave blood in past				0.043
Organ donor				0.066
Log Likelihood (df)	-1663.703 (13)***	-1634.356 (22)***	-1622.931 (26)***	-1573.592 (31)***

(*) $p < 0.10$.* $p < 0.05$.** $p < 0.01$.*** $p < 0.001$.

In model 2, effects of neuroticism and empathic concern are substantially smaller than in model 1, suggesting that they are partly mediated by variables added in model 2. Additional analyses (available upon request) reveal that adding the level of education weakens effects of neuroticism and empathic concern most strongly.

Model 3 shows that verbal proficiency and postmaterialism are positively related to giving intentions. Social value orientation is not significantly related to giving intentions. This finding is not in line with Bekkers' (2006) finding of a positive relationship between social value orientation and charitable giving. In this model the effects of empathic concern and the level of education are substantially smaller, suggesting that they are mediated by verbal proficiency and postmaterialism. Additional analyses (available upon request) reveal that adding postmaterialism weakens the relationship of empathic concern with giving intentions, and that adding verbal proficiency weakens the relationship of education with giving intentions.

Model 4, finally, includes giving and volunteering in the past year. Both turn out to have predictive value for positive responses in the giving scenarios. However, those who volunteered turn out to be less likely to say they would give money to charities in the scenarios. This finding runs counter to the predicted positive relationship. The result is in line with the view that volunteering and giving are substitutes (Gruber, 2003). Volunteers may feel they have contributed enough to non-profit organizations through volunteering, and become less willing to contribute money as a result. If this explanation is correct, it raises the question why charitable giving in the past year was not negatively related to volunteering intentions in the previous analysis. A speculative hypothesis – one that obviously requires a more thorough test – is that philanthropy is less strongly quenching the need for civic-mindedness than volunteering. Blood donation and organ donation are not related to intentions to give money to charities if asked. The absence of an organ donation effect is in line with the prediction, but the absence of a blood donation effect is not. Apparently, the effect of blood donation in the past is limited to volunteering, and does not spill over to charitable giving.

In model 4, the effects of empathic concern, education, Catholic and Rereformed religious affiliation, verbal proficiency, and postmaterialism are reduced, suggesting that these variables are related to the willingness to make charitable

contributions because they are associated with giving in the past year. The negative effect of age becomes somewhat weaker, suggesting that older persons are more likely to make charitable contributions not so much because they enjoy giving, but because they are more likely to be solicited for charitable contributions.

6. Conclusion

This paper shows how the willingness to contribute time and money to charitable organizations among a representative sample of the Dutch population is the result of characteristics of situations in which contributions are solicited and characteristics of persons who are being asked for a contribution. In line with a previous study (Lee et al., 1999), social incentives for giving turn out to be a very important aspect of the situation for both giving money as well as time. The smaller the social distance to the person asking for a contribution, the more likely that people give time and money. Also in line with prior research (Lee et al., 1999), social incentives are more strongly related to intentions to give time than to give money. Obviously, requests for contributions that require a greater sacrifice of money and time are less likely to be honored. Psychological incentives may increase contributions. Requests for more efficient ways of contributing time to a non-profit organization are more likely to be honored. More efficient contributions generate a ‘warmer glow’ for donors. Effects of psychological distance to the beneficiaries were not entirely as expected: while the willingness to make charitable contributions decreased as they benefited more distant organizations, the willingness to volunteer tended to be higher for organizations benefiting more distant beneficiaries.

In retrospect, it is possible that the manipulation of distance was confounded with deservingness of beneficiaries. Organizations at a higher distance mentioned in the scenarios worked for more deserving beneficiaries (the poor, the sick) than organizations at a closer distance (community members). Though effects of need are generally weak, people are more willing to contribute money to charities that help more needy and deserving beneficiaries (Cheung and Chan, 2000; Wagner and Wheeler, 1969). The fact that distance was negatively related to volunteering intentions may then be explained with the argument that the effect of need was compensated by social motives such as the development of networks and a reciprocity motive. Volunteering for local organizations serves these motives, but charitable giving to local organizations does not.

The willingness to give and volunteer is also a function of socio-demographic and personality characteristics. The strongest relationships are found for the level of education, empathic concern (both positive for both giving and volunteering), age (negative) and Reformed protestant affiliation (positive for giving). As in previous research, volunteers and charitable donors have different personality profiles. The present analyses suggest that intentions to volunteer are more positive among individuals who describe themselves as more extraverted and warm and as less conscientious. Intentions to give money are more positive among individuals who describe themselves as less helpful. The results on conscientiousness and helpfulness are at odds with prior research in the US and Canada (Ashton et al., 1998; Carlo et al., 2005), but consistent with prior research in The Netherlands (see Bekkers, 2005, 2006 for interpretations). A common characteristic of those who report a higher willingness to engage in giving and volunteering is a higher level of emotional stability. Emotional stability is also related to self-reported volunteering and giving in the past year (Bekkers, 2005, 2006). Females report a higher willingness to give and volunteer. Those with higher wages are more likely to give money but less likely to volunteer. This pattern is in line with economic models of philanthropy (Freeman, 1997): a higher wage means a higher opportunity cost of time, which should decrease the willingness to volunteer but increase the willingness to give money.

In some respects, the predictors of the willingness to contribute money and time to non-profit organizations differ from the predictors of self-reported contributions in the past year. Generally speaking, the relationships of personality characteristics and values with the willingness to contribute tend to be stronger than with self-reported contributions in the past year. The reverse holds for the relationships of resources (financial, human and social capital): their relationships tend to be weaker with the willingness to contribute than with self-reported past contributions. There are several explanations for this pattern. One explanation is that giving and volunteering are usually household decisions. Whether the household donates to charity depends on characteristics of both spouses (Andreoni et al., 2003). Because spouses tend to be more similar with respect to resources than with respect to personality traits and values, effects of personality traits and values of a single spouse on household contributions may be smaller than effects of resources of a single spouse. Another explanation is methodological: self-descriptions, endorsement of social values and intentions to give and volunteer may be correlated because of a social desirability bias (Crowne and Marlowe, 1964). Although it is difficult to rule out this problem entirely, it is not a very likely explanation of the results. We have seen that reports on giving and volunteering in the past year are predictive of giving and volunteering intentions. One would think it is more difficult to lie about actual volunteering and giving behavior in the past year than to exaggerate intentions to give and volunteer in hypothetical scenarios. But the mean score on five social desirability items is not correlated with the number of positive responses to money scenarios ($r = 0.02$) or time scenarios ($r = 0.01$). As a result, including the social desirability score did not affect the correlations with actual giving and volunteering (or any of the other independent variables).⁵

⁵ The items were taken from the Crowne and Marlowe instrument. The scale correlated positively with gender (0.100), age (0.134), warmth (0.123), helpfulness (0.107), conscientiousness (0.169), perspective taking (0.192), empathic concern (0.123), social value orientation (0.106) and negatively with neuroticism (−0.143).

Finally, it is possible that resources are more strongly predictive of actual contributions because resources determine the likelihood to be solicited and not so much the willingness to give and volunteer. Bryant et al. (2003) found such a pattern: solicited contributions were less strongly related to resources (financial, human and social capital) than unsolicited contributions.

The relative absence of relationships with social capital indicators such as religious affiliation, church attendance and level of urbanization suggests that social capital facilitates giving and volunteering mainly by creating opportunities for contributions and shaping contexts in which contributions are solicited and valued, and not by shaping the preferences of individuals for making such contributions. A similar conclusion was drawn in previous research using US data on actual giving and volunteering in the past (Bryant et al., 2003).

The results also shed light on the relationship between traditional and health related philanthropy found in previous research. Blood and organ donors have been found to be more active in charitable giving and volunteering. In the present study, blood and organ donation have few effects on the willingness to contribute time and money. Blood donation in the past is related to a higher willingness to volunteer, but not to charitable giving, and organ donation is not related to willingness to either give money or time. These findings suggest that causality in the relationship between traditional and health related philanthropy flows from traditional to health related philanthropy and not vice versa.

In sum: the answer to the question 'who gives what and when' is threefold. First the when: people are more likely to give when solicited for a smaller contribution and by a person at a smaller social distance. Second the who: more emotionally stable and more empathically concerned persons and people with a higher level of education are more likely to give both time and money. Finally the what: the opportunity costs of time determine the preference for giving rather than volunteering. A higher wage makes giving more attractive but volunteering less attractive.

Of course, many more questions await future research. An interesting question is how characteristics of people who seem to be more willing to give and volunteer interact with characteristics of situations that promote giving and volunteering. An obvious hypothesis is that costs of giving matter less for persons in higher income households. Other relevant questions are whether repeated interaction has a stronger effect on giving among empathically concerned persons or whether distance lowers giving mainly among persons with lower levels of education. Another set of questions concern the relation between traditional and health related philanthropy. The analyses suggested that health related philanthropy is probably related to traditional philanthropy because the latter promotes the former. Future research should establish how traditional philanthropy promotes health related philanthropy. Analysis of data included in the present dataset on the timing of volunteering and blood donation careers enables answering this question. Such analyses remain to be conducted. Finally, the finding that resources are less strongly related to the willingness to give and volunteer than to actual giving and volunteering also remains to be explained: is it the result of methodological factors, the result of the relation of resources with being asked irrespective of the willingness to contribute, or the result of decision making processes within the household? These questions cannot be answered with the present data, and require new fieldwork.

Acknowledgments

A previous version of this paper was presented at the Symposium for Economic Psychology, Tilburg University, September 20, 2002. Funding by NWO (#425-12-002 and #451-04-110) is gratefully acknowledged. I thank Harry Ganzeboom, Nan Dirk de Graaf and two anonymous reviewers for useful comments on previous versions of this paper.

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