

Resources That Make You Generous: Effects of Social and Human Resources on Charitable Giving

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In this study we examine whether and why human and social resources increase charitable giving. Using the Giving in The Netherlands Panel Study 2003, we find that people with more extended networks and higher education are more generous. However, these effects can be completely explained by financial resources, church attendance, requests for donations, and pro-social personality characteristics. People with more extended social networks are mainly more generous because they receive more solicitations for donations, and are more integrated in extended religious networks that promote charitable giving. The generosity of people with higher formal education can be explained by their larger financial resources, and stronger verbal abilities. Whereas the effect of education seems mainly causal, that of network extension appears largely spurious.

Charitable giving is a wide-spread and frequently recurring form of pro-social behavior. More than 95 percent of Dutch households made a donation to a charitable organization in 2003, donating on average \$370 (GINPS03 2005).¹ Giving to charitable organizations is certainly not just a Dutch phenomenon. A selection of research findings shows that especially the Americans are very generous. Over the course of 2002, 66 percent of the Americans donated on average \$1,872 (Giving USA 2004, 2005). The British are also generous with an average donation of \$537 in 2004, donated by 57 percent of the population (CAF 2006)². There is less information on charitable giving in other parts of the world, but for example 64 percent of the South Koreans donated on average \$88 in 2004 (The Beautiful Foundation 2005).³ All these charitable donations provide much-needed support for many beneficiaries, ranging from the homeless to animals, and from cultural institutions to athletes. They also have an impact on the charitable donors and their social environment. Donors are likely to receive psychological and social benefits from their donation, such as feelings of joy or warm glow, enhanced self-esteem, and increased

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social status (Andreoni 2001; Bennett 2003; Ickes et al. 1976; Odendahl 1990; Ostrower 1997; Ribar and Wilhelm 2002). Charitable giving thus has a positive impact on society and on the people living in it.

From previous research on charitable giving we know that there are many factors influencing charitable giving. Giving to charitable causes is positively related to, among others, a higher household income, a higher education, and church membership (Bekkers 2004; Borgonovi 2008; Regnerus et al. 1998; Smith et al. 1995; Wiepking 2007). Although there is a considerable amount of factual knowledge about charitable giving, theoretical models explaining charitable donations are scarce. This may be due to two reasons: First, philanthropic research is often driven by practical questions, as practical knowledge about charitable behavior is desired by the philanthropic sector itself and by society as a whole. Furthermore, philanthropy as a phenomenon is subject to research from several disciplines. Economists, psychologists and sociologists all strive to understand why people display charitable behavior. Truly interdisciplinary research is, however, scarce. As a consequence, hypotheses from one discipline are seldom integrated into theoretical models from another discipline.

Some notable exceptions can be found in the studies of Wilson and Musick (1997); Musick et al. (2000); Bryant et al. (2003). Wilson and Musick developed theoretical models based on psychological, sociological and economical insights to explain volunteering behavior. Their models single out the possession of human capital, social capital and cultural capital as important predictors for participation in volunteering activities. Bryant extended these theoretical models in order to explain both volunteering and donating behavior. From their work it becomes clear that having more, and different forms of capital leads to higher levels of charitable giving, but exactly how and why remains unclear.

The aim of this study is to explain why people with more social and human capital –or resources – donate larger amounts to charitable organizations. We will show, both theoretically and empirically, that the effects of social and human resources on charitable giving are largely intertwined. Hypotheses on the mechanisms that connect resources and charitable giving will be tested using the second wave of the Giving in The Netherlands Panel Study, in which 1,316 respondents answered questions about the charitable behavior of their household in 2003.

Theoretical Considerations

Most theories explaining differences in charitable giving are either adaptations of rational choice theory, variations on cognitive and emotional psychological theory, or based on structural functionalistic

theory, depending on the scientific discipline of the researcher attempting to explain charitable giving.

Economists and rational choice sociologists attempt to explain charitable giving from the perspective of rational man, *homo economicus*. Rational actors are assumed to have identical goals, and they try to maximize their utility through their choice of actions. However, different actors face different costs for the same actions, and these costs influence actual behavior (Becker 1964). Andreoni (2004) implements rational choice theory in the research of charitable giving. He shows that conventional rational choice theory is not able to provide us with explanations of individual contributions to collective goods. Assumptions about individual psychological values are necessary, such as the feelings of warm glow people experience when making charitable donations. For an overview of economic theory about charitable giving, see Vesterlund (2006).

Psychologists investigate the effect of many cognitive and emotional characteristics of individuals on charitable giving. There is an extensive literature about factors influencing individual helping behavior (Pillavin and Charng 1990; Schroeder et al. 1994). Results show that people who display higher levels of helping (and with that, charitable) behavior are more emphatic, more agreeable, emotionally stable and have a higher self-esteem (Bekkers 2004).

Sociologists argue that, next to costs and personality characteristics, charitable giving is also influenced by social restrictions. As Durkheim (1952[1897]) explains in his famous study on suicide, people who are more integrated into intermediary groups with specific norms will be more inclined to act according to the norms of these groups. Regarding charitable giving, there is overwhelming evidence that making donations to charitable causes is not an isolated action purely determined by costs and personality characteristics, but in fact is very much influenced by the context or situation in which charitable behavior is displayed. When people actively engage in networks of people with more positive norms regarding charitable giving, they will act according to these norms (see for example Barman 2007; Bekkers 2004; Carman 2003; Lindahl and Conley 2002; Reitsma et al. 2003).

Wilson and Musick (1997), Musick et al. (2000) and Bryant et al. (2003) transcend the boundaries of specific theoretical disciplines, by using theoretical ideas about costs, personality characteristics and structural factors in order to explain charitable behavior. Their explanations are based upon the resources that are available to people. This article expands on their work, and attempts to find answers to the question whether and why social and human resources influence charitable giving, and how the influence of these resources on giving is intertwined.

Social Resources

An interesting finding in research on charitable giving is that individuals with more extended networks give larger amounts (Bekkers et al. 2008; Brown and Ferris 2007; Bryant et al. 2003). There are at least five explanations for this generosity of people with more extended networks. Only one of these explanations suggests a causal relationship between network extension and charitable giving. The other four explanations involve individual characteristics or resources that influence both network extension and charitable giving.

The first explanation concerns the possible causal relationship between network extension and charitable giving. This explanation focuses on the resources people can access through their network (Brooks 2005; Brown and Ferris 2007; Flap and Völker 2004; Granovetter 1973; Lin 2001; Paxton 1999). Having a larger and more diverse social network enables easier access to charitable markets, decreasing the transaction costs of donating (Bryant et al. 2003). People with more extended social networks will more easily receive information about charitable organizations, or be solicited for making donations to these charitable organizations (Brown 2005). Sokolowski (1996) finds, for example, that 80 percent of his respondents received a solicitation for donations by a significant other over the course of a year. A more extended social network will increase the number of solicitations made through this network. It is hypothesized that people with more extended social networks will be more often solicited for donations through this social network, and hence in total donate larger amounts to charitable organizations.

The next four explanations do not assume a causal relationship between network extension and charitable giving. In The Netherlands, as in other countries, there are some specific extended networks that consist of people holding strong positive norms regarding charitable giving. Examples of such networks are religious organizations and service organizations, such as the Rotary and the Lions (Bekkers and Schuyt 2008; Lohmann 1992 in Bennett 2003:13). Although people can have extended networks without being a member of either the church or a service organization, such a membership usually implies developing contacts with many others. We argue that specifically participation in a religious network has a positive relationship with network extension, as religious networks in the Netherlands are typically more extended networks (Dekker and Hart 2002). At the same time, the norm to give to charitable causes is generally stronger in religious networks than in secular networks (Bekkers 2002; Uslaner 2002a; Wuthnow 1991). Applying Durkheim's ([1897] 1952) integration thesis to the case of charitable giving it is hypothesized that people with more extended networks are more likely to be integrated

in networks with strong positive norms regarding charitable giving, and hence donate more money to charitable organizations.

Thirdly, it is expected that people with more extended social networks donate higher amounts of money to charitable organizations, because they are more trusting. Uslaner (2002b) has done extensive research on the causal relationship between trust and civic engagement. He shows that trust is a prerequisite for group membership, and not vice versa, as argued by Putnam (2000). People with higher levels of trust build more extended social networks. At the same time, Uslaner shows that trust is essential for charitable giving. "Giving to charity... involves helping people who are different from yourself." (Uslaner 2002b:138) In addition, charitable giving implies giving money to organizations or people you don't personally know, and who are physically located at a distance. This implies that there are limits to the level of control donors have over the ways charitable organizations spend their money (Bekkers 2006). Therefore, trust is necessary for donating (more) money to charitable organizations. It is hypothesized that the higher donations of people with more extended social networks can be explained by their higher levels of trust.

Fourthly, social psychological research shows that the ability to empathize with others is important for making (new) friends. Understanding other people's emotions is an important personality trait in forming and maintaining (more) relationships (Graziano et al. 2007; Twenge et al. 2007). People with higher levels of empathic concern are better able to participate in more extended social networks. At the same time, people with higher levels of empathic concern are known to be larger charitable donors, mainly because they better understand potential beneficiaries' needs. Therefore, it is hypothesized that the higher donations of people with more extended social networks can be explained by their higher levels of empathic concern.

Finally, the social brain hypothesis states that cognitive abilities limit the size of the social group people are capable of participating in (Barrett et al. 2003). Stiller and Dunbar (2007) argue that people with higher cognitive abilities are better able "to integrate and maintain an updated mental database of the social relationships" in their network (Stiller and Dunbar 2007:94-95). Their results indeed show that people with higher cognitive abilities participate in more extended social networks. At the same time, people with higher cognitive abilities are also larger charitable donors (Bekkers 2005; Bekkers and De Graaf 2006). Bekkers and De Graaf (2006) explain this by arguing that people with a higher cognitive ability are better able to understand the needs of distant others. It is hypothesized that the higher donations of people with more extended social networks can be explained by their higher cognitive abilities.

Human Resources

People have access to different individual resources that help them achieve goals more accurately, one of these being human resources. Human resources (or capital) refer to the personal resources that enable people to be economically productive (Coleman 1988). Formal educational attainment is the most important of these resources. With respect to the relationship between charitable giving and education, Brown (2001) finds that –controlling for social resources – higher educated people donate more money to charitable causes than lower educated people. This can be a direct result of higher educated people’s higher productivity and consequently higher income. According to Brown and Ferris, however, higher educated people donate more because education has a “socializing influence,” which lowers the costs, and at the same time enlarges the rewards of making donations (Brown and Ferris 2004:9).

One way in which this “socializing influence” of education can be interpreted is that people learn to be more social in school. The longer they stay in school, the more they learn about society and about people who are different from themselves, and the more they will care for the wellbeing of other people, the environment and society as a whole. In other words: Educational achievement enables people to develop a more pro-social attitude towards situations or people not directly related to themselves. Preliminary empirical results, however, do not support this hypothesis. Bekkers and De Graaf (2006) show that, in the Netherlands, higher educated people do not have more pro-social motives for making charitable donations than lower educated people.

Bekkers and De Graaf (2006) provide an alternative explanation for the positive effect of education on charitable giving. They argue that this effect is mainly due to the higher financial resources that people with a higher education have access to, and to their higher cognitive abilities. As we already argued, people with a higher cognitive ability are better able to understand the needs of distant others. It is hypothesized that not only the higher donations of people with more extended networks can be explained by their higher cognitive abilities, but also those of higher educated people.

Following up on this last explanation, we also expect a better understanding of abstract situations to facilitate trust. For example, in order to trust that money donated for “empowering women in Africa” is well spent, a certain level of abstract thinking is required. People without this level of abstract thinking will prefer to donate money to more concrete causes with quantifiable goals, such as an orphanage for children who lost their parents due to the Tsunami, or local food banks that supply food to people without adequate financial resources. However, in many cases

goals set by charitable causes are not directly quantifiable. Donations to these organizations require trust on the part of potential donors, which can be facilitated by a better understanding of the abstract goals. This leads to the hypothesis that higher educated people will donate to a larger range of charitable organizations, and donate more money in total to charitable causes, because they are more trusting.

To sum up, we hypothesize that a higher education is causally related to charitable giving through three mechanisms: the possession of more financial resources, higher cognitive ability and more trust. Two of these mechanisms are also related to network extension. People with more trust and a higher cognitive ability are expected to have more extended social networks. The human resource explanation and the social resources explanation are thus intertwined. More extended social networks may also affect charitable giving through the likelihood of being asked to make a donation. Finally, more empathic individuals and church members will have more extended networks and are also likely to donate larger amounts to charitable causes.

Giving in The Netherlands Panel Study

In order to test the hypotheses, we use data from the second wave of the Giving in the Netherlands Panel Study: GINPS03 (2005). The GINPS is a bi-annual longitudinal study on charitable giving and volunteering in the Netherlands, which started in 2001. In May 2004, 1,557 persons were questioned about their donating behavior in 2003. In total, 1,316 respondents (85 percent) completed the questionnaire, using Computer Assisted Self-Administered Interview procedures. The data are representative for the Dutch population with regard to age, sex and urbanization.

Charitable Giving

The dependent variable in our research is the natural log of the total amount of money a household donated to charitable causes in 2003. In GINPS03, donations to 10 particular sub-sectors of charitable organizations are measured separately.⁴ First, respondents were questioned regarding which method they used to make a donation, for example, a collection tin or via a direct debit. After that, for each sub-sector of charitable organizations, respondents were asked whether or not their household had made a donation. Third, for all sub-sectors that received a positive answer by respondents, the exact amount of money the household donated in 2003 was asked. Of the 1,316 respondents that completed the questionnaire, only 59 households (5 percent) indicated not to have made any donation in 2003.

303 households (23 percent) indicated having made a donation to one or more specific sub-sector(s), but failed to specify the exact amount.⁵

This can be either because they forgot how much they donated to that charitable sub-sector or because they don't want to reveal this information in a questionnaire. In these cases, the missing amounts were imputed independently for each charitable sub-sector using multiple imputation. One problem with imputation of missing values in data on charitable giving is that the missing values probably are not Missing at Random, an assumption that needs to be satisfied when imputing missing data (Allison 2002). This is problematic, but multiple imputation seems a better solution for dealing with missing values in such a case than list-wise deletion or other imputing strategies. See Brooks (2004) for more information and a discussion on imputing missing values in charitable giving data. Multiple imputation is based on linear predictions, which can result in negative donations. This is a minor problem, because after imputation only 1 percent of the donations are negative. In line with Schafer (1997) we substitute all donations below 1, including the zero donations, with a donation of 1 euro. This enables us to calculate the natural log of the total amount donated.

Predictor Variables

The great advantage of using GINPS03 is the availability of a large range of explanatory variables that can be related to charitable giving. A disadvantage of the GINPS studies is that only one person per household participates. This person is randomly chosen from all adults in the household. As a consequence, the effects of individual characteristics, such as education, on the size of the household donation will be somewhat underestimated. A description of the predictor variables is included in Table 1.

Formal Education

The respondent has completed a primary or lower secondary educational level (reference category), a higher secondary educational level, or a tertiary educational level (college level or above).⁶

Network Extension

We used a position generator in order to gain insight in the networks of respondents (Van der Gaag 2005; Lin 1999). The position generator consisted of a list of 15 occupations (including -but not limited to- a police officer, teacher, truck driver, journalist, medical doctor and an artist) and respondents were asked to indicate whether they knew anyone (family, friends or acquaintances) with those occupations. Every effort was made to include both mainstream and some more specialist occupations, and both higher and lower status occupations. By adding the number of occupations present in a respondents' network we computed an indicator for the extension of the network. The mean network extension is 7.44,

Table 1: Descriptive Statistics

Variable	Mean	Std. Dev.	Min	Max
Donation (ln)	4.41	1.88	0	8.69
Network extension	7.44	3.42	0	15
Primary education (reference)	.41		0	1
Secondary education	.35		0	1
Tertiary education	.24		0	1
Church attendance	1.78	1.21	1	5
Requests for donations	1.22	1.40	0	8
Empathic concern	3.83	.52	1.83	5
Generalized trust	3.33	.83	1	5
Verbal ability	8.02	2.38	0	12
Household income ^a	10.02	.59	7.09	12.10
Income from wealth	.09		0	1
Home ownership	.63		0	1
Age < 35	.26		0	1
Age 35–65 (reference)	.53		0	1
Age > 65	.19		0	1
Female	.52		0	1
Partner	.70		0	1
Volunteer	.46		0	1

Notes: Descriptive statistics obtained with first (of nine) imputed dataset(s).

^a Ln (annual after-tax household income).

Source: GINPS03 2005.

indicating that respondents on average know seven persons with one of the different occupations. Although there is a high correlation between the size of the network and the number of different occupations, the latter is a better measurement of network extension, because it also includes the diversity in social positions that can be reached through the network.

Integration in Religious Network

An indicator for integration in a religious network is church attendance. Respondents were asked how often they had attended church during the previous six months. Response categories include: (1. (almost) never; (2. once a year, or a few times a year; (3. about once a month; (4. about once a week; (5. more often than once a week. We expect that the more often

people visit church, the more integrated they are in a religious network with positive norms regarding charitable giving.⁷

Requests for Donations

In order to measure the number of times people are requested to make a donation, we asked with which methods respondents were approached to make a donation in the two weeks prior to the interview in 2004. We inventoried whether they were asked for a gift by means of 13 different methods, including an appeal letter, a door-to-door collection and a church collection. Respondents who indicated that they had not been asked for a donation in these two weeks were assigned value 0 on this variable. The respondents who were most often approached had received eight requests for charitable donations.

Generalized Trust

Generalized trust is measured with a 5-point Likert scale item asking respondents about their agreement on the statement: "In general, people can be trusted." (See Uslaner 2002b) The mean score on generalized trust is 3.33.

Empathic Concern

Measured by seven 5-point Likert scale items (Bekkers 2004; Davis 1994 for more information). Among others these items include: "I am often touched by things that other people go through," and "When I see someone being taken advantage of, I feel bad". Reliability analysis showed that reliability is highest when one item ("I am a soft-hearted person") is excluded. Deleting this item increased Cronbach's Alpha from .727 through .749.

Verbal Ability

We use *verbal ability* as a measure of a respondent's cognitive ability. In order to establish the verbal ability of a respondent we use the total number of correct descriptions chosen for difficult words in a vocabulary test (see Bekkers and De Graaf 2006). At worst, the respondent scored 0 out of 12 (.8 percent), at best 12 out of 12 (3.3 percent). The average score was 8 out of 12 (16.1 percent).

Financial Resources

In order to obtain annual after-tax household income, we multiplied the sum of the exact monthly after-tax income for the respondent and (if applicable) the partner by twelve. For 202 households (15.3 percent) no information on monthly after-tax income was available. We substituted these answers with information on gross annual household income, multiplied by .69, assuming an average income tax of 31 percent. After this transformation, we still have missing information on after-tax income for 114 households

(8.7 percent). We estimated their after-tax income using the mean income of the household's socio-economic status class. In the analyses we used the natural log of income.

Additional indicators of a household's financial stability and wealth are whether or not households received *income from wealth* and whether or not they *owned their home* in 2003.

Control Variables

We included age 35 and younger, age 65 and older, female gender, whether or not the respondent was a volunteer in 2003 and whether or not the respondent has a partner in the analysis. According to Bryant et al. (2003) females and those with a partner are more connected with societal networks. Females are more connected because they "traditionally have carried the burden of much of the volunteering, especially for those activities serving children and the elderly," and those with a partner, because they "share each other's social network." In addition, being a volunteer also increases one's access to social resources.

Table 2 presents the correlations for the variables used in the analyses.

Results

Table 3 displays the results of an OLS regression analyses of the natural log of the total amount donated to charitable organizations.⁸ In the base model (Model 1) we include only the direct effects of variables measuring social resources (network extension) and human resources (formal education), in addition to the control variables. From this base model we can conclude that people with a more extended social network indeed show a higher level of charitable giving, as expected. The extension of someone's network with one point (on a scale of 0 to 15) leads to making 9 percent higher donations.⁹ Compared to people with primary education, those with secondary education donate 42 percent more money to charitable causes. People with a tertiary educational level donate 77 percent more than those with only primary education. Hence, there is a positive effect of educational level on charitable giving. This is in line with results from other research (Bekkers and De Graaf 2006; Brown and Ferris 2004).

Model 2 explores whether the effect of the extension of the network is explained by the network and individual characteristics, as hypothesized. The variables measuring network characteristics (church attendance and requests for donations) both have a significant positive effect on the level of charitable giving. Intensifying religious involvement with one step (e.g., going to church once a week instead of once a month) increases the level of charitable giving by 60 percent. Receiving one more request for a donation leads to 21 percent higher donations. The variables measuring

Table 2: Correlations

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
1 Donation (ln)	1																	
2 Network extension	.22**	1																
3 Primary education	-.10**	-.17**	1															
4 Secondary education	-.01	.03	-.62**	1														
5 Tertiary education	.13**	.16**	-.46**	-.41**	1													
6 Church attendance	.51**	.18**	-.06*	.01	.06* 1													
7 Requests for donations	.37**	.22**	-.03	.01	.02	.37** 1												
8 Empathic concern	.28**	.14**	-.02	-.02	.04	.17**	.18** 1											
9 Generalized trust	.17**	.14**	-.07**	-.03	.12**	.02	.04	.10** 1										
10 Verbal ability	.25**	.18**	-.21**	-.02	.26**	.08**	.10**	.08**	.15** 1									
11 Household income ^a	.18**	.13**	-.14**	.03	.13**	.05	.01	.04	-.01	.16** 1								
12 Income from wealth ^b	.12**	.09**	-.06*	.00	.07**	.04	.12**	-.01	.02	.15**	.10** 1							
13 Home ownership ^b	.13**	.17**	-.08**	.01	.08**	.04	.07*	.02	.06*	.09**	.31**	.06* 1						
14 Age < 35	-.16**	.01	-.28**	.11**	.19**	-.04	-.12**	-.09**	-.07**	-.22**	-.13**	-.10**	-.03 1					
15 Ages 35–65	.01	.07	.14**	-.07*	-.09**	-.04	.05	.08**	-.01	.01	.17**	-.05	.15**	-.63** 1				
16 Age > 65	.17**	-.11	.14**	-.06*	-.10**	.09**	.06*	-.02	.10**	.24**	-.08**	.19**	-.15**	-.29**	-.52** 1			
17 Female ^b	.03	.05	.06*	-.02	-.04	.06*	.03	.27**	.07**	-.01	-.02	-.05	-.02	.02	-.01	-.02 1		
18 Partner ^b	.10**	.06*	.18**	-.07**	-.13**	.06*	.03	.10**	-.01	.02	.35**	-.01	.22**	-.25**	.22**	-.00	.07* 1	
19 Volunteer ^b	.24**	.26**	-.07*	.00	.08**	.28**	.23**	.16**	.10**	.11**	.00	.07*	.05	-.09**	.00	.08**	.07* .02	

Notes: Correlations obtained with first (of nine) imputed dataset (s); ^a Ln (annual after-tax household income); ^b Dichotomous variable.

*p < .05 **p < .01

Source: GINPS03 2005.

individual characteristics also all have a significant positive effect on the level of charitable giving. An increase in the level of empathic concern by one point increases charitable donations by 55 percent. Having one point more trust in others increases the level of charitable giving by 22 percent. And finally, knowledge of the meaning of one more difficult word in the vocabulary test increases charitable giving by 9 percent.

After we control for the explanatory variables, the effect of network extension decreases. Where in Model 1 a one-point extension of someone's network increased the level of charitable giving by 9 percent, in Model 2 this increase is reduced to 3 percent. Additional analyses (not shown) reveal that the inclusion of measures of network characteristics (church attendance and requests for donations) caused a larger decrease of the effect of network extension on level of charitable giving than the inclusion of the measures of individual characteristics (empathic concern, generalized trust and verbal ability).

Model 3 explores whether the direct positive effect of formal education on charitable giving can be explained by the hypothesized mediating individual characteristics. In Model 2 we already showed the positive effect of generalized trust and verbal ability on level of charitable giving. The indicators for financial resources are new in Model 3. Results show that the elasticity of charitable giving with respect to income is .32, meaning that a 10 percent increase in annual after-tax household income increases the level of charitable giving by 3.2 percent. Being a home owner increases the level of charitable donations by 24 percent. There is no significant effect of receiving income from wealth.

Both the effects of secondary educational level and tertiary educational level decrease substantially after including the variables measuring generalized trust, verbal ability and income. However, the effects of different educational levels on charitable giving remain significant. Additional analyses reveal that the effect of education on charitable giving is mediated for the greater part by verbal ability and the indicators for financial resources. Verbal ability specifically decreases the positive effect of tertiary educational level. The higher educated indeed donate more money because of their stronger verbal abilities. Generalized trust is less important for explaining the educational effect.

In Model 4 we include all variables. The results show that the human- and social resource explanations are indeed intertwined as expected. In the complete model, the effects of network extension and educational level on charitable giving are no longer significant. It appears that the social- and human-resource mechanisms together explain both the effect of formal educational level and that of network extension on charitable giving.

The changes in the effects of the control variables on the level of charitable giving between the four models are also noteworthy. Bryant et

Table 3: Regression of the Natural Log of the Total Donated to Charitable Causes

	1		2		3		4	
	Base Model		Social Resources		Human Resources		Social + Human Resources	
	B	t-value	B	t-value	B	t-value	B	t-value
Network extension	.090**	5.84	.029*	2.12	.067**	4.29	.021	1.55
Primary education	—		—		—		—	
Secondary education	.422**	3.57	.243*	2.38	.249*	2.10	.170	1.66
Tertiary education	.769**	5.65	.371**	2.99	.378**	2.59	.244	1.95
Church attendance			.599**	15.58			.596**	15.60
Requests for donations			.211**	6.43			.210**	6.43
Empathic concern			.546**	6.22			.557**	6.39
Generalized trust			.215**	4.07	.203**	3.34	.218**	4.16
Verbal ability			.087**	4.33	.084**	3.59	.077**	3.81
Household income ^a					.317**	3.38	.319**	3.98
Income from wealth ^b					.157	.88	.108	.70
Home owner ^b					.244*	2.25	.226*	2.42
Age < 35 ^b	-.538**	-4.18	-.252*	-2.17	-.318*	-2.41	-.191	-1.64
Aged 35–65	—		—		—		—	
Age > 65 ^b	.730**	5.56	.386**	3.33	.624**	4.57	.461**	3.92
Female ^b	.064	.65	-.189*	-2.13	.059	.61	-.168	-1.92
Partner ^b	.357**	3.17	.247**	2.57	.156	1.30	.048	.46
Volunteer ^b	.629**	5.86	.118	1.25	.631**	5.97	.136	1.45
Constant	2.831**	16.89	-.957*	-2.54	-1.428	-1.54	-4.062**	-4.79
R-squared	.16		.40		.19		.41	

Notes: ^a Ln (annual after-tax household income)

^b Dichotomous variable

* $p < .05$ ** $p < .01$.

Source: GINPS03 2005.

al. (2003) used female gender and having a partner as alternative indicators for having access to social resources. We argued that volunteering is also such an alternative indicator. In the base model, having a partner has a positive effect on the level of charitable giving. Those with a partner donate 36 percent more than singles. The effect of having a partner decreases after the inclusion of the indicators of the network mechanisms (Model 2), but remains significant. After the inclusion of the income indicators in Model 3, the partner effect is no longer significant. Apparently, having a partner leads to making higher donations not only because of the access

to social resources, but mainly because having a joint household increases one's financial resources.¹⁰

Being a volunteer is also positively related to the level of charitable giving. Volunteers donate 63 percent more than those who do not volunteer. Including the social resources (Model 2) completely explains the effect of volunteering, whereas human resources (Model 3) have nothing to do with the relationship between volunteering and charitable giving. Additional analyses reveal that the larger donations made by volunteers are mostly explained by their stronger integration in religious networks.

The effect of gender is not significant in the base model. It is, however, significantly negative in the model that includes social resources. If we take women's larger social resources into account, they report smaller donations to charitable causes than men.

The effect of age is consistent with findings in the philanthropic literature (Bekkers and Wiepking 2007). Younger people give less than middle-aged, because they are less integrated in the church and because of their smaller financial resources. Older people donate more than middle-aged people. This is partly explained by their larger social resources, especially indicated by church attendance, and for a small part by older people's stronger verbal abilities. A substantial age effect, however, remains unexplained.

Conclusion

This study examined the effects of human and social resources on charitable giving. The main goal was to answer whether and how social and human resources make one more generous. In order to answer this question, previous research was expanded by constructing a model combining insights from economics, psychology and sociology. With these insights, hypotheses on the importance of human and social resources for charitable giving were formulated. Human resources were measured with formal education and social resources with network extension. The hypotheses were tested using the second wave of the longitudinal *Giving in the Netherlands Panel Study* (GINPS03 2005). The initial results showed that social and human resources do make one generous. However, once financial resources, social network characteristics and pro-social personality characteristics were held constant, there was no effect of network extension and formal education on the level of charitable giving.

How exactly can the effect of human and social resources on charitable giving be disentangled? First, the positive effect of a more extended social network on charitable donations can for largely be accounted for by the fact that those who are more integrated in religious networks also have more extended social networks. A possible reason for the large donations of people in religious networks is that in those networks one finds strong

positive norms for making regular and substantive charitable donations. Thus, being more integrated in a religious network increases the level of charitable giving and reduces the positive effect of the social network on charitable giving. In addition, part of the positive effect of having a more extended social network on charitable giving can be explained by the more frequent requests for donations that people with a more extended network receive. People with a more extended social network are more often exposed to solicitation by charitable organizations, very likely through people in their own network (e.g., a nephew asking to sponsor his laps in a school walk-a-thon or a neighbor standing at the doorstep around dinnertime asking for a small contribution to his favorite charity). To a lesser extent, the positive effect of having a more extended social network on level of charitable giving can be explained by the fact that individuals with more trust, more empathic concern and stronger verbal abilities both have more extended networks and donate larger amounts. Thus, the 'effect' of network extension is largely spurious and caused by common causes of both charitable giving and having an extended network.

Second, having a higher level of formal education is also positively related to charitable donations. As expected, this effect is partly due to the larger financial resources people with a higher education have access to. But the generosity of the higher educated is not only caused by their better financial situation. People with a higher level of formal education also have stronger verbal abilities, which facilitate a better understanding of the needs of (distant) other people, increasing charitable donations. In addition, people with more formal education and stronger verbal abilities also have more trust that donations will be spent well, something which also increases their donations. We conclude that those with more human resources are more charitable, because they have more financial resources, better verbal abilities and – to a lesser extent – a higher level of trust.

A methodological issue that deserves discussion concerns the dealing with respondents who state that they have made a donation to a charitable sub-sector, but fail to specify the amount donated. As mentioned in the methodological section, we use multiple imputation to replace these missing values. However, these missing donations are not Missing at Random, as they are very likely dependent on the actual amount donated. People giving smaller donations are more likely to have forgotten the exact amount they donated, as giving is a less salient act in their lives. Consequently they are more likely to say that they have donated, but not how much. Philanthropic research generally does not mention this problem, let alone provide solutions, with the exception of Brooks (2004). Future philanthropic research should pay more attention to this methodological issue, and attempt to provide answers for dealing with this problem.

Notwithstanding the previous issue, this study provides insight in the

mechanisms behind charitable giving, showing how and why exactly social and human resources positively effect charitable giving. The mechanisms behind these explanations originate not only in sociological theory, but also in psychology and economics. They explain the effects of education and network extension and also most of the effects of control variables, such as gender, having a partner and volunteering. The results can be used to understand the findings of more practical-oriented research, in which for instance the direct effects of income, educational level and religiousness on charitable giving are studied. They may also help philanthropic practitioners to fine-tune their strategies. Finally, they may be a building block in more extended interdisciplinary explanations of pro-social behavior, such as charitable giving.

Endnotes

1. One U.S. dollar = .855 euro. Exchange rate June 2, 2003. Accessed Jan. 12, 2006 at: <http://www.federalreserve.gov/releases/H10/20030609>.
2. One U.S. dollar = .559 Pound Sterling. Exchange rate Jan. 2, 2004. Accessed July 3, 2007 at: http://www.federalreserve.gov/releases/H10/Hist/dat00_uk.txt. Donations in Britain were measured over the course of a month in 2004: During that month, 57 percent of the British donated on average \$45.
3. One U.S. dollar = 1,025 won. Source: The Beautiful Foundation 2005.
4. These 10 sub-sectors of charitable organizations are: Religion, Health, International Aid, Environment/Nature protection, Animal protection, Education/Research, Culture, Sports/Recreation, and Public/Social Benefits and Other causes.
5. Of these 303 respondents, 119 (39.2 percent) mentioned to have donated to a charitable sub-sector, but failed to name an amount only once. 67 respondents (22.1 percent) did not state the amount donated to two specific charitable subsectors. The other 186 respondents failed to come up with the amount donated for three (N = 49; 16.2 percent) to eight (N = 1; .1 percent) charitable sub-sectors. To estimate the sensitivity of the analyses using multiple imputation, we repeated the analyses without the imputed donations. That is, without the 303 respondents that failed to specify one or more amounts donated. These results resemble the results reported in this study to great extent, although we found smaller coefficients for some variables (secondary educational level and age 65 and older).
6. Educational level is originally measured in eight categories (Nuffic 1994): (1. primary school; 2. lower secondary vocational education (LBO); 3. lower general secondary education (MAVO); 4. upper secondary vocational education (MBO); 5. upper general secondary education (HAVO) and pre-university education (VWO); 6. higher professional education (HBO) and propaedeutic examination (WO-kandidaat); 7. university education (WO);

- (8. Post-doctoral program (Postdoctorale opleiding). Categories 1 through 4 form the primary or lower secondary educational level, categories 5 and 6 compose the higher secondary educational level and categories 7 and 8 are combined to the tertiary educational level.
7. The data do not contain information on membership in service organizations.
 8. Because only 5 percent of the respondents did not make a donation in 2003, problems with sample selection and truncation are negligible. See Buis and Wiepking (2006) or Bradley, Holden and McClelland (2005) for more information on the use of statistical models in the analysis of donating behavior. We performed a Tobit analysis to test for the sensitivity of the statistical model. The results obtained using the Tobit analysis resemble the results obtained using OLS regression analysis almost perfectly. Because Tobit is not a certified regression command for using with multiple imputed data, we choose to report the results obtained with OLS regression analysis.
 9. It could be argued that network extension is an endogenous variable. This would imply that there is not only a causal effect of network extension on level of giving, but also an effect of the level of giving on network extension, for example because through their charitable behaviour people make new acquaintances. We used the GINPS's panel character (GINPS03 2005, GINPS05 2007) to test for causality between network extension and level of giving. When we analyse the effect of level of giving in 2003 on network extension in 2005 and control for network extension in 2003, empathic concern, generalized trust and the other variables included in Table 3, we find no effect of level of giving in 2003 on network extension in 2005.
 10. It could be argued that having a partner is an endogenous variable, as well as network extension (see note 9). We tested for causality between having a partner and level of giving. When we analyse the effect of level of giving in 2003 on having a partner in 2005, and control for having a partner in 2003 and the other variables included in Table 3, we find no effect of level of giving in 2003 on having a partner in 2005.

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