

# **Field of Education and Prosocial Behavior**

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## **Abstract**

The level of education is a consistently positive determinant of a wide range of prosocial behaviors such as blood donation, organ donation, volunteering, and charitable giving. We investigate the role of four types of resources that may constitute the effect of education: general human capital; field specific resources obtained in education; social capital obtained in specific fields of education; and religious and political attitudes. Drawing upon the Family Survey of the Dutch Population 2000 (n=1,587), we find that the largest part of the education effect is due to general human capital. Cognitive ability promotes all types of prosocial behavior (except blood donation); health promotes blood donation (but not organ donation); income promotes charitable giving (but not health related philanthropy). Communicative resources obtained in education have consistently positive relationships with all examples of prosocial behavior. Religious and political attitudes promote civic engagement but not health related philanthropy.

## **The role of education in prosocial behavior**

Higher educated people are more likely to display a wide range of prosocial behaviors than the lower educated.<sup>1</sup> The higher educated are more likely to volunteer, to give blood, to register for postmortem organ donation, and to engage in philanthropy, and are also more generous donors than the lower educated (Bekkers, 2004; Brown, 2002). Why is that? Why do the higher educated display prosocial behavior more often than the lower educated? We argue that in order to understand the influence of education, (1) prosocial behavior should be considered as a transfer of resources from a donor or volunteer to a nonprofit organization, and (2) one should investigate the role of resources obtained in different fields of education.

## **The role of resources**

Prosocial behavior is often considered as a form of ‘altruistic behavior’ that is dependent on moral qualities of the individual (Muhlberger, 2000) and on altruistic personality tendencies (Oliner & Oliner, 1988). Uslaner (2002) considers volunteering as a form of commitment driven by moral considerations; Penner (2002, 2004) studies the role of empathy for others as a prosocial motive for volunteering. Elster (1990) and Hessing (1987) consider blood donation as a form of altruistic behavior. Sanders (2002) discusses moral and religious debates on organ donation. However, prosocial behavior need not be motivated by prosocial motives (Schroeder, Penner, Dovidio & Piliavin, 1995). In fact, previous research suggests that prosocial motives are less consistently and also less strongly related to prosocial behavior than the level of education (Bekkers, 2004).

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<sup>1</sup> Prosocial behavior is defined as behavior that benefits others while it is costly to the individual. In this paper, we study prosocial behavior in formal contexts, not social support and other forms of informal helping behavior. Wilson & Musick (1997) show that a higher level of education also promotes prosocial behavior in informal contexts.

In addition, the effect of education on prosocial behavior has little to do with prosocial motives. The level of education is not related to altruistic personality tendencies (Oliner & Oliner, 1988; Eisenberg et al., 2002). The influence of the level of education is virtually unaffected when personality characteristics are controlled and remains the most powerful predictor of prosocial behavior (Bekkers, 2004). Therefore we argue that it is more likely that education increases prosocial behavior because it increases the possession of and access to resources. Resources like human, financial and social capital lower the costs of prosocial behavior and increase the benefits (Wolfinger & Rosenstone, 1980). In formal education, students increase their human capital by developing skills that are relevant in the market for paid labor. These skills acquired in education are also productive in the kinds of markets where nonprofit organizations are active: in the market for unpaid labor (where volunteers are active), in the fundraising market (where philanthropy takes place), and in the market for blood and organs. A second spin-off from education is that a higher level of education expands social networks and reduces the distance to the ‘civic core’ of citizens (a label introduced by Reed & Selbee, 2002) who motivate and mobilize each other for civic engagement (Brady, Schlozman & Verba, 1999).

### **The role of field specific resources acquired in education**

Previous studies have investigated the effect of years of schooling or the degree, assuming that spending a longer period of time in the educational system or obtaining a higher level of education is the reason why the higher educated are more likely to engage in prosocial behavior (Brown, 2002). From this perspective, economists estimate the ‘civic returns to education’ as a byproduct of investments in human capital (Dee, 2004). However, it is unlikely that all education is equally effective in producing civic engagement (Hillygus, 2005). The conventional approach to education ignores the content of education programs,

and assumes that all types of education have similar effects on prosocial behavior. Spending an extra year in an engineering program would generate the same additional increase in prosocial behavior as an extra year in an economics or nursery program. We argue that different fields of education generate different ‘civic returns to schooling’. Hillygus (2005) found that taking social science courses in college improved political engagement in a prospective study of college graduates in the US. Previous research in the Netherlands has shown that different fields of education have very different effects on social behavior and attitudes (Van de Werfhorst, 2002; Van de Werfhorst & De Graaf, 2004). In the present study, we extend this line of research. We develop hypotheses on the effects of field of education on prosocial behavior and show the differences between different fields of education empirically.

### **Theory and hypotheses**

We start our argument with the assumption from Wilson & Musick’s (1997) ‘integrated theory of volunteering’ prosocial behavior depends on the availability of human, financial, and social capital. We assume that a higher level of education increases all three types of capital. How does education increase these three types of resources, and how do these resources affect the decision to volunteer, to give money, to give blood and to donate organs after death? First we discuss the role of human capital for different types of prosocial behavior. Then we discuss the role of social capital. We do not discuss financial capital because this type of capital is relevant only for traditional philanthropy (Bekkers, 2004).<sup>2</sup>

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<sup>2</sup> The Netherlands differ from the US in this respect. In the Netherlands, income is not positively related to volunteering, blood donation or post mortem organ donation (Bekkers, 2004a, 2004b), while in the US, these relations are positive (Bekkers, 2004c).

### *Human capital and prosocial behavior*

A higher level of human capital lowers the costs of volunteering. This is evident when one considers the role of field-specific resources acquired in education for volunteering. It is less burdensome to preside a board meeting or to organize a fundraising drive for volunteers who have management and organization skills. At the same time, human capital also increases the benefits of volunteering. It is more fun to preside a meeting or organize a fundraising drive for people who do a better job in these tasks. The skills that facilitate volunteering are developed in specific fields of education. Hillygus (2005) shows that communicative skills trained in education, especially in social science programs, are most strongly productive for civic engagement. To estimate the effects of field-specific resources properly, we control for general cognitive ability, which is also related to civic engagement (Hauser, 2000; Gesthuizen & Kraaykamp, 2002; Hillygus, 2005). *We expect that persons who have acquired more field-specific resources in education will be more likely to volunteer, and that these resources are one of the reasons why the higher educated are more likely to volunteer than the lower educated.*

The role of human capital is different for traditional philanthropy and health related philanthropy, because giving money or body parts are not productive activities like volunteering that benefit from specific skills. For a nonprofit in need of money, blood or organs, the value of a dollar, a gallon of blood or a kidney contributed by a donor who did not finish high school is the same as the value of these contributions by a university graduate. One does not need specific skills to give money or blood. Thus, we expect that *field-specific resources acquired in education do not increase the likelihood of engaging in traditional or health related philanthropy, and do not explain why the higher educated are more likely to engage in traditional or health related philanthropy.*

Other aspects of human capital that are related to the level of education, however, do affect engagement in traditional and health related philanthropy. Health – an ingredient of human capital that increases with the level of education – determines whether people are eligible for blood and organ donation. The better the state of health of a person, the more likely that this person will donate blood or register to donate organs after death. *We expect that health related philanthropy increases with health, and that this one of the reasons why the higher educated are more likely to engage in health related philanthropy.*

Wage income as well as permanent income – both increasing with the level of education – decrease the loss of one euro donated to charity. The higher the income from wages or wealth, the higher the likelihood that a person donates money to charity and the higher the amount donated. *We expect that a better financial position increases traditional philanthropy, and that this one of the reasons why the higher educated are more likely to engage in traditional philanthropy and why they are more generous than the lower educated.*

We note that human capital is not only important in the decisions of donors and volunteers, but also in the decisions of nonprofits who are looking for new donors and volunteers. Like employers who are looking for new paid employees, nonprofits that seek productive volunteers should be more likely to try to recruit volunteers with a higher level of education. A sports club in need of a new board member should be more likely to look for a volunteer with some training in management skills and will be hesitant to recruit a person without such skills.<sup>3</sup> Likewise, fundraising nonprofits should be more likely to solicit

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<sup>3</sup> One could argue that nonprofits do not care about the productivity of volunteers when the supply of volunteers is inadequate. Of course, the preference for more skilled workers has stronger consequences in a more competitive market. When there are more candidate volunteers available, the lower educated are less likely to be elected than in a market where a fewer number of volunteers compete for the same volunteer job. But also when there are only a few candidates, nonprofits will still prefer the higher educated. When there are no candidates available with sufficient qualifications, nonprofits often try to delay replacing a volunteer.

donations from the higher educated because they are more generous than from the lower educated, even when income is held constant (Bekkers, 2004). Indeed, the higher educated are solicited for donations more often than the lower educated (Bekkers, 2005).

### *Social capital and prosocial behavior*

Social capital increases prosocial behavior in two ways: (1) by reducing the distance to nonprofit organizations in need of donors and volunteers, and (2) by increasing the social pressure to comply with requests for contributions to nonprofit organizations. This distinction fits with the distinction between ‘structural’ and ‘attitudinal’ components of social capital (Hooghe, 2002), or the distinction between network structure and the content of ties in social networks (Podolny & Baron, 1997). First we discuss the role of network structure.

When nonprofit organizations need new (or more) donors and volunteers, they use social networks of participants to find new participants (Brady, Verba & Schlozman, 1995). Individuals with a large network are more likely to have contacts with people who are active as donors and/or volunteers. A larger network reduces the distance between a potential donor or volunteer and a nonprofit organization trying to recruit new donors and volunteers. Individuals with a large network are more easily accessible for recruitment attempts by nonprofit organizations than individuals in small networks.

Not all networks are equally effective in reducing the distance between individuals and nonprofit organizations prospecting for participants. Different fields of education give access to very different social networks. Education in nursery and medical school, for instance, gives access to the world of medical professionals, reducing the distance to recruitment networks for blood and organ donors and for volunteers in health related nonprofit organizations. Education in social work and social science brings students in networks containing activists in public and social benefit organizations. *We expect that specialization in health education*



*programs increases health related philanthropy, and specialization in social sectors increases membership and volunteering in voluntary associations.*

Social capital in the form of norms that prescribe prosocial behavior, such as norms on trust and reciprocity, also facilitate prosocial behavior. In networks with more prosocial norms people will be more likely to engage in prosocial behavior when they are asked to do so by a person in that network because they can expect more approval from others for prosocial behavior (and/or more disapproval for not engaging in prosocial behavior). During college, students develop a number of prosocial values, such as intrinsic values related to social connection and societal contribution (Sheldon, 2005). We assume that this holds more strongly for higher education in social work and social sciences. Psychologists have argued that education in economics breeds rational egoism (Marwell & Ames, 1985), but economists have shown that economics merely selects for egoism (Meier & Frey, 2003). Regardless of the reason, *we expect less prosocial behavior from graduates in economic fields of education.*

Other studies show that a higher level of education is positively related to postmaterialistic value orientations (De Graaf, 1988), trust in fellow citizens (Bekkers, Hooghe & Stolle, 2004), interest in politics (Brady et al., 1995), and to less orthodox religious beliefs (Te Grotenhuis & De Graaf, 2004). We test whether orthodox religious beliefs lower the likelihood of post mortem organ donation, as suggested in a previous study (Bekkers, 2004a). From previous research (Bekkers & Wiepking, 2004), *we expect that postmaterialism and interest in politics increase the likelihood of charitable giving and volunteering.*

## **Data and Methods**

We use the Family Survey of the Dutch Population 2000 to test our hypotheses (see De Graaf, de Graaf, Kraaykamp & Ultee, 2001 and Bekkers (2004a) for a discussion of the design of the survey).

### *Measures of prosocial behavior*

We study five different forms of prosocial behavior: membership of voluntary associations, unpaid volunteer work, giving to charities, blood donation, and post mortem organ donation. Membership is a dichotomous measure with respondents who indicated that they were members of at least one type of voluntary association from a list of ten different types of organizations scoring 1. We also constructed a measure of the number memberships in voluntary associations. Volunteer work is a dichotomous measure with respondents saying they do unpaid volunteer work on a regular basis for at least one type of voluntary association scoring 1. Giving to charities is a dichotomous measure with respondents saying they gave money to charities in the past year scoring 1 (respondents were instructed to exclude donations through lotteries). Respondents who reported gifts also indicated the amount they donated. We log-transformed the amounts to reduce non-normality (see Bekkers, 2004a). Blood donation is a dichotomous measure with respondents saying they gave blood at a blood bank in the past year scoring 1. Post mortem organ donation is a dichotomous measure with respondents saying they registered consent or partial consent for post mortem donation scoring 1.

### *Indicators for human and financial capital*

We use the subjective evaluation of own health (on a 1 to 5 scale) as an indicator for health. The number of correct words in a vocabulary test (Gesthuizen & Kraaykamp, 2002) serves as an indicator of general cognitive ability. We use the natural log of wage income as a measure of financial capital. As measures of permanent income we use the natural log of income from wealth and a dummy for house ownership.

### *Field of study and field specific resources*

Respondents indicated whether they completed schooling in a specific field. We constructed dummy variables for schooling in the humanities or liberal arts, in agriculture, engineering, economics and business administration, law, social sciences or social work, nursery or medical school, and security or police. No specific field of education was the reference category. We constructed a measure for field-specific resources in four areas (cultural, communicative, economic and technical resources) obtained in education using aggregate scores from Van de Werfhorst & Kraaykamp (2002).

### *Indicators for social capital*

Unfortunately, we do not have direct indicators for social capital in networks obtained in education. We assume that significant effects of specific fields of education that remain when the resources obtained in the field of study have been partialled out imply effects of social capital gathered in education. We have three measures of norms: postmaterialistic values (on a 1 to 5 scale; see Bekkers, 2004a for a discussion); belief in God and belief in natural evolution (two factor scores based on six items; Eigenvalues of 2.19 and 1.44, explaining 36.45% and 23.96% of the variance and reliabilities of .587 and .670, respectively).

### **Analytical strategy**

We conduct regression analyses of examples of prosocial behavior in five steps. In a first step, we estimate baseline effects of a degree in secondary and tertiary education. In a second step, we add general indicators of human and financial capital (subjective health, cognitive ability, wage income, income from wealth and homeownership). In a third step, we add dummy variables for different fields of study. In a fourth step, we add four field-

specific resources. Finally, we add political and religious attitudes in a fifth step. We estimated probit models for the dichotomous measures, and OLS models for the number of memberships and the (log-transformed) amount donated to charities among donors. We used the Huber/White sandwich estimator to adjust the standard errors for clustering at the household level because a majority of respondents were partners from the same household.

## **Results**

### *Effects of level of education and their explanation*

First we discuss the effects of secondary and tertiary education (see model 1 of table 1). We observe significant effects of secondary and tertiary education on almost all examples of prosocial behavior. For example, graduates in tertiary education are 5% more likely to donate blood, 14% more likely to donate organs after death, 15% more likely to volunteer, 16% more likely to donate money to charities, and 21% more likely to hold at least one membership in a voluntary association than persons with primary education or less.

For all examples of prosocial behavior we observe considerably smaller differences in the fifth model than in the first model, indicating that the effect of education on prosocial behavior is indeed to a large extent due to resources. Effects of the level of education on blood donation, membership, and volunteering have disappeared in the final regression model, and effects on the number of memberships and philanthropy have decreased by 50%.

Which kind of resources explain the effects of education? The strongest decline in the effects of education we observe in model 2, where general human capital indicators are introduced. We also observe declines in the effects of education in model 3, where the field of education is introduced. Field of education is particularly relevant for organ donation, charitable giving and blood donation (although the effect of education on the latter does not

decline substantially). When field-specific resources are introduced in model 4, differences in membership and volunteering between secondary and tertiary level graduates and those with primary education or less decline further. Attitudes explain only a small part of the remaining effects of the level of education on prosocial behavior. Only the effects of secondary and tertiary education on membership in voluntary associations declines further when political values and religious beliefs are added.

#### *The role of general human capital*

We find many positive effects of three general indicators of human capital: subjective health, income from wealth and cognitive ability (see table 2). Cognitive ability turns out to be the most important factor. An increase of 1 on the vocabulary test (asking for the correct meaning of 12 words) increases the likelihood of organ donation and membership of voluntary associations with more than 1%, the likelihood of volunteering with 1.6% and giving to charity with more than 2%. Wealth promotes membership and philanthropy. Subjective health promotes blood donation, membership and the amount donated to charities. In contrast to our expectation, subjective health does not promote organ donation. Wage income increases philanthropy, but decreases volunteering and blood donation.

#### *The role of field of education*

Which fields of education are most productive for prosocial behavior? We find significant effects of the field of education on blood donation and the amount donated to charities, and marginally significant effects on post mortem organ donation (see table 3). Education in social work or social science promotes blood donation and the amount donated to charities. Education in nursery or medical school increases blood donation. Education in economics, engineering and law increases post mortem organ donation. Education in security

and agriculture increases the amount donated to charities. We do not find that graduates in economics are less prosocial than graduates in other fields of study. Economics students may behave in lab experiments as rational individuals, like their professors tell them, but outside the lab they are not less prosocial than other graduates.

#### *The role of field-specific resources*

We find fairly substantial effects of field specific resources (see table 4), although only a few are significant due to the high standard errors. We will return to this issue in the discussion section. Communicative resources obtained in education have consistently positive relationships with all examples of prosocial behavior. The strongest (and significant) effect we observe on membership of voluntary associations. Other field specific resources do not significantly increase prosocial behavior. Thus, we find no support for the hypothesis that field-specific resources promote volunteering.<sup>4</sup> Controlling for field-specific resources, all effects of field of study are reduced to nonsignificance (not shown in table; results available from authors).

#### *The role of political and religious attitudes*

We find that interest in politics is higher among volunteers and members of voluntary associations, and that the amount donated to charities increases with interest in politics (see table 5). Postmaterialism also increases membership in voluntary associations and the amount donated to charities. Political attitudes do not affect health related philanthropy. Belief in god increases the amount donated to charities, but not other examples of prosocial behavior. Belief in evolution is not related to any of the examples of prosocial behavior.

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<sup>4</sup> It could be, of course, that field-specific resources determine the kind of sector and the kind of job that people volunteer for.

## **Conclusion and discussion**

We argued that prosocial behavior should be considered as a transfer of resources in order to understand the consistently positive effects of education. We find that education indeed promotes prosocial behavior because it increases the stock of resources that people possess. We find that the most important category of resources is the category of general human capital. The higher educated have a more extensive vocabulary and live in better health. General knowledge increases all types of prosocial behavior except blood donation. Health, as expected, increases the likelihood that people give blood (but not matter for registration of consent for post mortem organ donation). Financial capital, as expected, increases traditional philanthropy but not health related philanthropy.

We also argued that resources obtained in specific fields of education promote prosocial behavior. Although we only find a few significantly positive effects of field specific resources (most importantly: a strong effect of communicative resources on membership of voluntary associations), the effects of communicative resources are consistently positive on all examples of prosocial behavior. We did not find negative effects of studying economics. We did find that medical training increases blood donation (but not organ donation) and that students in social science or social work were more often blood donors and were more generous to charities.

Several aspects of the present study may limit the validity of the conclusions drawn above. First and foremost, the study has a cross-sectional design, raising the problem of inferring causality. For several indicators of resources, we cannot be sure that the measured level of resources was the result of completing education. One could also imagine a reverse order: health and cognitive ability may increase the likelihood of completing tertiary education. To be sure, the measure for level of education refers to completed levels of education in the past, and the measures of health and cognitive ability refer to concurrent

resources. Nevertheless, present health and cognitive ability will pick up genetically inherited physical health and intelligence, which may increase the likelihood of completing higher levels of education. To disentangle causes and effects prospective panel studies are needed.

Second, the finding that only a few effects of field specific resources are significant is probably due to the use of crude indicators. We used standardized scores obtained in previous research (Van de Werfhorst & Kraaykamp, 2002) based on a different sample. The aggregate scores tell us something about the general level of resources obtained in different fields of education by highly diverse groups of students. As a result, the standard errors for the effects of field specific resources are large, lowering the likelihood of finding significant effects. If field specific resources would have been obtained directly from the respondents, the standard errors would have been smaller.

Third, we did not have direct indicators for social capital obtained in education. We assumed that any remaining effects of field of study when controlling for field specific resources would represent effects of networks obtained in education. This is a very crude assumption. Hillygus (2005) makes similarly crude assumptions on network effects. To effectively test the hypothesis that higher education alters networks so that the social distance to nonprofit organizations decreases, we need direct measures of the composition and origin of networks of people. One study including such measures finds that networks do mediate effects of education on membership of voluntary associations (Bekkers, Völker, Van der Gaag & Flap, 2004). Future research should include measures of both networks and resources obtained in education.



Table 1. Effects of the level of education on seven measures of prosocial behavior (probit and OLS regressions)

	Model 1.	Model 2.	Model 3.	Model 4.	Model 5.
	Baseline	Human capital	Field of education	Field specific resources	Attitudes
<i>Blood donation</i> <sup>a</sup>					
Secondary	2.83	2.07	2.32	1.27	2.04
Tertiary	5.17 **	4.67 (*)	4.64 (*)	2.56	3.17
Adj. R Square	.0110	.0364	.0476	.0509	.0534
<i>Organ donation</i> <sup>a</sup>					
Secondary	10.65 ***	8.75 **	8.14 *	9.22 *	10.02 *
Tertiary	14.12 ***	9.22 *	7.07 (*)	6.40	6.71
Adj. R Square	.0224	.0275	.0322	.0320	.0330
<i>Membership</i> <sup>a</sup>					
Secondary	12.17 ***	8.84 ***	8.76 ***	5.98 (*)	5.17
Tertiary	20.87 ***	16.22 ***	15.94 ***	9.31 *	7.33 (*)
Adj. R Square	.0684	.0802	.0831	.0843	.0892
<i>Volunteering</i> <sup>a</sup>					
Secondary	11.87 ***	9.37 **	8.73 **	5.65	3.98
Tertiary	15.46 ***	11.25 **	10.60 **	6.62	3.76
Adj. R Square	.0332	.0423	.0434	.0421	.0462

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*# Memberships*<sup>b</sup>

Secondary	.483 ***	.325 ***	.318 ***	.215 *	.180
Tertiary	1.020 ***	.741 ***	.730 ***	.509 ***	.438 **
Adj. R Square	.1158	.1364	.1399	.1392	.1463

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*Gift*<sup>a</sup>

Secondary	9.71 ***	4.34 (*)	3.79	4.31	3.61
Tertiary	16.26 ***	7.63 **	6.34 *	7.04 *	7.56 *
Adj. R Square	.0729	.1074	.1109	.1170	.1209

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*Amount donated*<sup>b</sup>

Secondary	.420 ***	.194 *	.162 (*)	.215 (*)	.227 (*)
Tertiary	1.102 ***	.651 ***	.615 ***	.563 ***	.534 ***
Adj. R Square	.2077	.2490	.2581	.2614	.2798

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<sup>a</sup> Entries represent marginal probabilities for a change of 0 (primary education) to 1 (secondary or tertiary education) evaluated at the means of the dependent variables.

<sup>b</sup> Entries represent unstandardized coefficients in OLS regressions.

\*\*\* p<.000; \*\* p<.01; \* p<.05; (\*) p<.10

Table 2. Effects of general human capital indicators on prosocial behavior (model 2)

	Blood <sup>a</sup>	Organs <sup>a</sup>	Membership <sup>a</sup>	Volunteering <sup>a</sup>	Giving <sup>a</sup>	# Memberships <sup>b</sup>	€ Donated <sup>b</sup>
Health	4.34 ***	-0.48	2.39 (*)	0.74	0.31	.044	.086 (*)
Income	-1.70 *	1.40	0.88	-2.68 *	2.54 **	.031	.126 *
Wealth	0.11	0.40	0.97 *	0.74	1.04 *	.041 **	.029 (*)
Houseowner	0.73	1.74	-0.42	1.36	4.34 (*)	-.007	.071
Cognitive ability	0.08	1.21 *	1.46 **	1.61 **	2.29 ***	.066 ***	.104 ***

<sup>a</sup> Entries represent marginal probabilities for a change of 0 (primary education) to 1 (secondary or tertiary education) evaluated at the means of the dependent variables.

<sup>b</sup> Entries represent unstandardized coefficients in OLS regressions.

\*\*\* p<.000; \*\* p<.01; \* p<.05; (\*) p<.10

Table 3. Effects of field of study on prosocial behavior (model 3)

	Blood <sup>a</sup>	Organs <sup>a</sup>	Membership <sup>a</sup>	Volunteering <sup>a</sup>	Giving <sup>a</sup>	# Memberships <sup>b</sup>	€ Donated <sup>b</sup>
Humanities	-4.96	17.05	-10.72	4.76	6.53	-.478	-.205
Agriculture	2.50	1.88	-1.62	-0.13	5.43	-.134	.438 (*)
Engineering	5.64 *	6.27 (*)	2.63	0.30	3.26	.080	.074
Economics	2.50	6.69 (*)	0.72	4.26	2.90	.002	.104
Legal	1.96	16.80 (*)	-5.10	1.37	6.78	-.061	-.165
Social	11.00 *	8.34	10.11	0.05	5.38	.199	.393 *
Medical	6.27 *	3.74	0.34	0.17	-2.67	.046	.053
Security	3.66	21.09	-7.65	13.74	2.76	.338	1.160 *

<sup>a</sup> Entries represent marginal probabilities for a change of 0 (primary education) to 1 (secondary or tertiary education) evaluated at the means of the dependent variables.

<sup>b</sup> Entries represent unstandardized coefficients in OLS regressions.

\*\*\* p<.000; \*\* p<.01; \* p<.05; (\*) p<.10

Table 4. Effects of field specific resources (model 4)

	Blood <sup>a</sup>	Organs <sup>a</sup>	Membership <sup>a</sup>	Volunteering <sup>a</sup>	Giving <sup>a</sup>	# Memberships <sup>b</sup>	€ Donated <sup>b</sup>
Cultural	0.66	-3.82	0.14	-1.36	0.57	.049	.046
Economic	0.78	8.96 (*)	-3.02	0.56	4.14	-.021	-.107
Communicative	2.78	3.29	8.81 *	2.54	1.15	.210 *	.154
Technical	-2.41	-8.60	-2.45	4.77	-6.97	-.096	-.275

<sup>a</sup> Entries represent marginal probabilities for a change of 0 (primary education) to 1 (secondary or tertiary education) evaluated at the means of the dependent variables.

<sup>b</sup> Entries represent unstandardized coefficients in OLS regressions.

\*\*\* p<.000; \*\* p<.01; \* p<.05; (\*) p<.10

Table 5. Effects of political and religious attitudes (model 5)

	Blood <sup>a</sup>	Organs <sup>a</sup>	Membership <sup>a</sup>	Volunteering <sup>a</sup>	Giving <sup>a</sup>	# Memberships <sup>b</sup>	€ Donated <sup>b</sup>
Interest in politics	0.63	-0.35	1.90 (*)	2.60 *	-2.21 *	.059 (*)	.087 *
Postmaterialism	-0.39	2.39	3.53 *	0.85	1.41	.149 **	.128 *
Belief in God	-1.26	-1.62	0.36	1.93	0.38	.011	.122 **
Belief in evolution	-0.17	1.12	1.80	-0.70	-1.99 (*)	.029	-.007

<sup>a</sup> Entries represent marginal probabilities for a change of 0 (primary education) to 1 (secondary or tertiary education) evaluated at the means of the dependent variables.

<sup>b</sup> Entries represent unstandardized coefficients in OLS regressions.

\*\*\* p<.000; \*\* p<.01; \* p<.05; (\*) p<.10

*Table A. Correlations of level of education with four types of resources*

	Primary	Secondary	Tertiary
Health	-.146 ***	.049 (*)	.100 ***
Income	-.194 ***	-.025	.244 ***
Wealth	-.138 ***	.020	.138 ***
Houseowner	-.043 (*)	.058 *	-.000
Cognitive ability	-.286 ***	.031	.363 ***
Humanities	-.075 **	-.057 *	.149 ***
Agriculture	.048 *	-.003	-.042 (*)
Engineering	.042 (*)	-.043 (*)	.024
Economics	-.160 ***	.138 ***	.031
Legal	-.088 ***	-.068 **	.177 ***
Social	-.124 ***	-.059 *	.207 ***
Medical	.183 ***	-.032	-.145 ***
Security	-.051 *	.056 *	-.005
Cultural	-.534 ***	.295 ***	.241 ***
Economic	-.459 ***	.293 ***	.164 ***
Communicative	-.538 ***	.098 ***	.473 ***
Technical	-.250 ***	.162 ***	.086 **
Interest in politics	-.062 *	-.073 **	.148 ***
Postmaterialism	-.156 ***	-.027	.199 ***
Belief in God	-.024	.030	-.010
Belief in evolution	-.032	-.075 **	.115 ***

\*\*\* p<.000; \*\* p<.01; \* p<.05; (\*) p<.10