

Values and Volunteering
A Longitudinal Study of Reciprocal Influences
in the Giving in the Netherlands Panel Study

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Abstract

This paper presents a longitudinal analysis of values and volunteering in the Netherlands. The question answered is to what extent differences between volunteers and non-volunteers in prosocial values are the result of selection or causation processes. Selection means that volunteers have more prosocial values than non-volunteers at the start of volunteering or that prosocial values reduce the likelihood to quit volunteering. Causation means that volunteering promotes prosocial values. Data from three waves of the Giving in the Netherlands Panel Survey (2002-2006) are analysed to disentangle causes and effects in the relation between values and volunteering. Volunteers have a stronger tendency to cooperate with others in social dilemma situations, are more trusting of others, feel more strongly responsible for community at large, and find helping others more important than non-volunteers. The results reveal that relations between prosocial values and volunteering are mostly due to selection. Those with more prosocial values are more likely to join the volunteer work force, and are less likely to quit. Effects of volunteering on prosocial values are limited.

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The role of values in volunteering

Volunteering takes place in a moral entourage. Volunteers often give reasons for their activity that refer to laudable motives such as altruism, social responsibility and duty (Clary & Snyder 1999). It makes good sense that people who voluntarily spend time helping others, organizing activities, presiding meetings, repairing and maintaining buildings and goods, coach sports teams, transport people, and who do these tasks without being paid a market wage are on average less strongly motivated by 'egoistic' desires than those who do not volunteer.

However, not all volunteering is altruistic (Smith 1981). Moreover, self-serving motives are never completely absent when people volunteer. The purely altruistic volunteer would not be concerned about her reputation, would not gain skills and experiences that are relevant on the labour market, would not learn anything, would not be happy upon seeing that the needs of beneficiaries are met, would not be interested in alleviating feelings of guilt, and would not get any personal satisfaction from volunteering. Such a volunteer would surely be an extraterrestrial creature. Volunteers themselves also admit self-serving reasons for volunteering when they report them in the Volunteer Function Inventory (Clary & Snyder 1999). Six out of seven of the functions of volunteering distinguished by Clary & Snyder are non-altruistic.

Nevertheless, several studies reveal that volunteers have markedly different social values than non-volunteers (Bekkers & Schuyt 2005; Bekkers & Wilhelm 2006; Reed & Selbee 2002; Unger 1991). Volunteers have more prosocial values than non-volunteers: they have a higher sense of social responsibility, a stronger concern for others, a stronger sense of duty, and a stronger belief in the trustworthiness of others. This paper is an attempt to make the direction of causality in the relationship between prosocial values and volunteering visible. Does volunteering cause prosocial values or vice versa?

Selection and causation

The differences between volunteers and non-volunteers in prosocial values may result from two very different processes: causation (or: socialization) and selection. Causation means that volunteering causes changes in social values in a more prosocial direction. Selection means that volunteers already had more prosocial values before they started volunteering and may take place before or during a volunteering episode. A description of causation and selection mechanisms in the relationship between values and volunteering are displayed in figure 1.

There are two types of selection processes: initial selection (selective joining) and selective attrition (selective quitting). Initial selection means that pre-existing differences made those with stronger prosocial values more likely to start volunteering, while those with weaker prosocial values were less likely to start volunteering. Selective attrition means that among those who started volunteering those with stronger prosocial values were more likely to continue volunteering, while those with weaker prosocial values were more likely to quit. Causation means that volunteering experiences change people's values, such that volunteering makes people endorse prosocial values more strongly.

Finding a basis for hypotheses on selection and causation

Which arguments can be given to expect that the relationship between values and volunteering is due to selection or causation? For selection processes, we need theories on how people make choices based on their social values. For causation, we need theories on how people develop social values.

Figure 1. Selection and socialization processes in the relationship between values and volunteering

<i>Name</i>	<i>Initial selection</i>	<i>Socialization</i>	<i>Selective attrition</i>
Process	Individuals with more prosocial values are more likely to start volunteering	Individuals adhere more strongly to prosocial values when volunteering	Individuals with more prosocial values are less likely to quit volunteering
Causality	Values → volunteering	Volunteering → values	Values → volunteering
Empirical evidence consistent with the process	Among non-volunteers at t_n , those who had more prosocial values at t_n are more likely to volunteer at $t_{>n}$	(1) Among non-volunteers at t_n , those who start volunteering have more prosocial values at $t_{>n}$ (2) Among volunteers at t_n , those who have quit volunteering at $t_{>n}$ have less prosocial values at $t_{>n}$	Among volunteers at t_n , those who had more prosocial values at t_n are less likely to have quit volunteering at $t_{>n}$

Selection. A straightforward argument on selection processes is that both initial selection and selective attrition will depend on the estimated costs and benefits of volunteering. Volunteering takes time that otherwise could have been used to work for pay. This is what makes volunteering a puzzling form of prosocial behaviour for economists (Freeman, 1997). From an economic point of view one would expect that individuals who are not able to increase the number of hours worked for pay and for whom spending time not working for pay is less costly (e.g., because one's market wage is lower) are more likely to volunteer. There is some evidence supporting these predictions, though the evidence is not overwhelming (Brown & Lankford 1992; Carlin 2001; Menchik & Weisbrod 1987; Simmons & Emanuele 2004). However, the economic perspective is less helpful in understanding the link between social values and the costs and benefits of volunteering. We need a theory on how people perceive the costs and benefits of volunteering. Therefore, we turn to social psychology, which offers a theory on the perception and valuation of costs and benefits. The theory of social value orientation can be used as a basis for generating hypotheses on selection effects in the relationship between values and volunteering.

Causation. How do people's values change in response to their volunteering experiences? From a group socialization perspective, one would expect that social values can be transferred onto individuals in a process of learning or social influence (Hooghe 2003a; 2003b). Individuals who start volunteering adopt the values of the group in which they volunteer. New volunteers may update their values because they gain new information as a volunteer, but also in order to become an accepted member of the group. From self-perception theory (Bem 1972) and role identity theory (Grube & Piliavin 2000) one would also expect that volunteering makes values more prosocial: volunteering is perceived as prosocial behaviour, that is consistent with a prosocial self-image and a set of prosocial values.

Selection

One theoretical framework that seems helpful to understand selection processes is the theory on individual differences in social value orientation. In contrast to economic approaches, where all individuals are assumed to be equal, social psychologists assume that individuals in social dilemma situations differ in the weight they attach to the well being of themselves and others (Van Lange 2000). Deciding whether or not to start or continue

volunteering may be characterized as a social dilemma. At a cost to oneself, volunteering contributes to the provision of collective (public or club) goods. Volunteering often entails private costs to help provide collective benefits. In many cases, there are multiple individuals who are able to do the work, and each individual has an incentive to 'free ride' on the contributions of others. These elements are characteristic of a social dilemma situation. Experiments on behaviour in social dilemmas reveal that there is always a proportion of individuals who are likely to cooperate, no matter how high the incentives for non-contributing (Marwell & Ames 1980). Such results have led researchers to assume that there are individual differences in the tendency to cooperate in social dilemma situations (Messick & McClintock 1968; Van Lange 1999). These individual differences are measured with a task consisting of a series of hypothetical allocation decisions of points to oneself and 'an anonymous other participant', preceding the actual experiment. This task is called the social value orientation measure (Van Lange et al 1997). Using this task, a majority of individuals can be characterized as 'prosocial' players, seeking a maximization of joint outcomes, or a minimization of the difference between own and other outcomes (maximization of equality). A sizeable minority of 'individualist' players pursue the best outcomes for themselves, irrespective of the outcome for the other player. Another still smaller minority of 'competitive' players seek to maximize the difference between their own and the other player's outcome. Research using the social value orientation task has found that prosocials are more likely to engage in prosocial behavior, also outside the laboratory, including helping one's psychology professor with an experiment (McClintock & Allison 1989), the donation of money to charity (Bekkers 2006; 2007; Van Lange et al forthcoming). The relationship of social value orientation with volunteering for nonprofit organizations has not yet been studied.

The social value orientation task reveals broad differences between three types (or two, when individualism and competition are collapsed to one 'proself' type) of individuals in their goals in social dilemma situations. We know fairly little about the specific mechanisms that link prosocial value orientation with prosocial behaviour. One cognitive mechanism is that prosocials and proselfs perceive social dilemma situations differently, so that they use different aspects of the situation in their decisions in such situations, which affects their decisions. A motivational mechanism is that prosocials and proselfs value the same elements in the situation differently, which affects their decisions.

Valuation of outcomes. As described above, prosocials attach more weight to outcomes for others in social dilemma situations than individualists. Why would they do this? What is the basis of this enhanced concern for outcomes of others? Van Lange's integrative model of social value orientation (Van Lange 1999) suggests that prosocials are not only concerned about the outcomes for the other, but also about equality in outcomes. Recently, a study showed that the concern for equality among prosocials is stronger than their concern for other's outcomes (Eek & Gärling 2006). A few studies have investigated the link between social value orientation and specific social values. One study found that prosocials are more strongly adhering to the value of social responsibility than proselfs (De Cremer & Van Lange 2001); another study found that prosocials are more likely to consider the future consequences of their actions than proselfs (Joireman et al 2001). Considering the future consequences of one's actions may be regarded as an aspect of social responsibility. In sum, persons with prosocial value orientations are more strongly concerned about equality in society and about socially responsible conduct. Both types of concerns may make volunteering more attractive, with the former being less universal than the latter. Volunteering is almost always the socially responsible thing to do. The effect of equality concerns on volunteering depends on the type of organization. Volunteering for organizations that seek to reduce social inequalities is more attractive for prosocials. However, only a minority of nonprofit organizations seek reduction

of inequalities. The majority of nonprofit organizations that work with volunteers are non-political (and may therefore maintain existing inequalities).

Perception of social dilemma situations. Several studies have found differences in the way prosocials and proselfs perceive the structure of social dilemmas. This is not surprising given that people tend to interpret situations from their own motivations (Kruglanski 2001; Mischel 1977; 1993). Prosocials are more likely to interpret social dilemma situations in terms of morality, while proselfs are more likely to interpret such situations in terms of might and intelligence. Prosocials are likely to consider making contributions to collective goods as the 'good thing to do' and to free ride as an immoral choice, while proselfs are more likely to think that contributing is weak and stupid, and free riding is the smart move of a strong person (Liebrand et al 1986; Van Lange & Kuhlman 1994; Van Lange & Liebrand 1991). An additional finding is that proselfs perceive the personal costs of cooperation to be higher than prosocials (Cameron et al 1998). Extrapolating these findings from the laboratory to the context of volunteering, we would predict that prosocials are more likely to perceive volunteering as a form of moral and altruistic behaviour. Because prosocials are more strongly concerned about socially responsible conduct, one would expect that prosocials find volunteering more attractive than proselfs.

From this body of research, we can assume that those who volunteer are more likely to be prosocials rather than 'proselfs' (individualists and competitors) because the decision to start volunteering in many cases is made in response to a direct request from another person, usually an existing volunteer (Bekkers 2005; Bryant et al 2003). One would expect that prosocials – once asked – are more likely to comply with such a request than proselfs because prosocials attach more weight to the collective benefits of volunteering. If recruiters are able to determine the type of social value orientation of individuals, which ongoing (unpublished) research of Michael Kuhlman at the University of Delaware suggests, one would also expect that prosocials are more likely to be asked to volunteer than proselfs. During a volunteer episode, finally, one would expect that those who have prosocial value orientations are more likely to continue volunteering because they estimate the collective benefits of volunteering to be higher than proselfs.

Causation

Two useful theoretical frameworks for hypotheses on causation processes in the relationship between values and volunteering are group socialization theory and self-perception theory.

Group socialization theory is based on theories on socialization and role behaviour in sociology (Parsons 1951). These theories assume that successful functioning of an individual in a group depends on successful socialization of these individuals within the group. Each organization has a culture that the individual needs to adopt in order to become an accepted member of the group. Adopting the culture includes internalizing the appropriate role within the group. Note that the concept of socialization in these theories is broader than the concept in theories of moral and social development in youth. In group socialization theory, socialization takes place in any group, and thus continues throughout adulthood (Etzioni 1961). Socialization within the family (including internalization of roles like 'husband', 'wife' and 'child') is just one example; socialization at school and the work place are two other examples. Socialization theories have been relinquished in organizational studies several decades ago. The work of Kohn and Schooler constitutes a relevant line of research, showing that individuals hold value orientations that are useful at the work place and that the same individuals hold related value orientations in family life (Kohn & Schooler 1973; 1978; 1982). These results suggest that values socialized at work are internalized and subsequently generalized to the family context. However, it can also be argued that pre-existing individual

differences in values and personality lead individuals to select jobs that match these preferences,

Recently, studies on the formation of ‘social capital’ have recalled attention to group socialization. One aspect of the multifaceted concept of social capital is ‘norms’ (Putnam 2000). Participation in voluntary associations is assumed to have positive consequences on one’s general outlook on human nature, and prosocial values. Individuals who start volunteering adopt the values of the group in which they volunteer (Hooghe 2003a; 2003b). Because volunteers have more trusting attitudes and prosocial values, new volunteers who may not yet be so trusting and prosocial will update their values. The new volunteer gains new information about others – seeing that others are trusting and hold prosocial values may alter one’s previous perceptions. There is also social pressure to change: in order to become an accepted member of the group, it is useful to adapt to the predominating group values. In this line of research, it has been found that members of voluntary associations have more prosocial values, especially members who have been participating since their youth (Hooghe 2003a) and members who participate in more homogeneous groups (Hooghe 2003b). However, these results have been obtained in cross-sectional studies. Thus, any differences between members and non-members may be the result of selection rather than socialization processes. One study has been conducted using panel data, which found no effect of membership on trust (Claibourn & Martin 2002).

Self-perception theory (Bem 1972) describes how behaviour shapes one’s self-image.¹ The basic prediction from self-perception theory is that people infer their motives from their own actions. Self-perception theory is linked to cognitive dissonance theory (Festinger 1957). Behavior that is at odds with one’s values creates cognitive dissonance. In order to preserve a consistent self-image, this dissonance must be reduced. There are two strategies to reduce cognitive dissonance in this case: by a re-interpretation of the behaviour or a re-interpretation of the motives in question. Suppose a person strongly adheres to the value of social responsibility. If this person is asked to volunteer but does not do so – for whatever reason – a violation occurs of the person’s self-image as someone adhering to the value of social responsibility. An example of re-interpretation of behaviour is to attribute the failure to volunteer to external circumstances (“I had no time”). An example of re-interpretation of motives is to modify one’s self-image (“Apparently, I am less socially responsible than I thought”). In this case, the former strategy is more likely to be chosen than the latter because people generally tend to preserve a positive self-image. In contrast, the result of the preference for a positive self-image is that compliance with a request to volunteer is likely to contribute to a more positive self-image.

A large number of studies on the ‘foot-in-the-door’ effect have documented that compliance with a small request promotes subsequent compliance with a larger request (Baron 1973; Beaman et al 1983; DeJong 1979; Freedman & Fraser 1966; Pliner et al 1974; Rittle 1981; Schwarzwald et al 1983; Seligman et al 1976). Some studies provide explicit evidence that compliance with the first request promotes a self-image of being a helpful person (DeJong 1979). In line with the self-image explanation, the effect of an initial request is reduced when pay is offered in return for compliance with the initial request (Zuckerman et al 1979). Another study found that when the first request is too small to activate a helpful self-image, it does not increase compliance with the second request (Seligman et al 1976).

¹ When people form impressions of themselves, they also consider two other types of information: introspective information on their motives and the impressions that others have. The use of introspective information contributes to the stability of social values. Many social values are highly stable over considerable periods of time. Because we are seeking a basis for hypotheses on causation processes the use of introspection will not be discussed further. The processes using information from one’s own behaviour and the impressions of others constitute a more promising basis for hypotheses on causation.

Using information from impressions of the self from others, people are also likely to reinforce a prosocial self-image when engaging in prosocial behavior. When others express their admiration of a person's helpfulness, that person is more likely to infer a helpful self-image. Three experiments have documented such labelling effects, one on charitable giving (Kraut 1973) and two on volunteering (Burger & Caldwell 2003; Strenta & DeJong 1981).

From this line of research, one would expect that volunteering promotes a self-image of being a helpful person. This is exactly the prediction of role identity theory, which has been developed by Piliavin and colleagues (Grube & Piliavin 2000; Piliavin & Callero 1991). The theory was developed in the context of blood donation. After individuals overcome initial barriers to blood donation (fear, uncertainty), and have had a few positive donation experiences, they start regarding themselves as donors. In the language of role identity theory: over time, donors incorporate being a blood donor in their sense of self. Blood donors internalized an altruistic self-identity in the course of their donor career (Piliavin & Callero 1991). This is a clear example of causation. In subsequent work, the theory has been generalized and applied to volunteering (Grube & Piliavin 2000).

It is likely that volunteering not only engenders an altruistic self-image, but also contributes to the adherence to prosocial values for two reasons. The first reason is that an altruistic self-identity is positively correlated with prosocial values (Bekkers 2006). Individuals who develop an altruistic self-identity will also adhere to prosocial values. The second reason is that the same self-perception processes that promote an altruistic self-identity will also promote adherence to prosocial values. Denying the importance of helping others as a social value would create dissonance for active volunteers helping others.

Selection versus causation and the room for change

Causation and selection are not mutually exclusive processes: it may very well be that both occur at the same time. In fact, this is likely to be the case. Volunteering is likely to be a more attractive form of leisure for those with more prosocial values, and at the same time, it is likely that volunteers will increase their adherence to such values when they talk about their motives for volunteering with others. The question of the present research is to what extent causation and selection processes explain the relationship between volunteering and prosocial values. It is an empirical question to what extent the relationship between values and volunteering is due to selection or causation. There is a considerable body of research showing that political values are relatively stable over prolonged periods of time (Alwin & Krosnick 1991; De Graaf et al 1989; Marwell et al 1987; Sears & Funk 1999). However, there are very few studies available documenting the stability of prosocial values. Previous research suggests that social value orientations are not immutable traits of individuals (Van Lange, 1999, 2000). Social value orientation is fairly stable within short periods of time. In one experiment that lasted two hours, the correlation between social value orientations measured at the start and at the end of the experiment was .87 (Van Dijk et al 2002). However, in another study that measured changes in social value orientation over a period of 19 months, the correlation was only .19 (Van Lange, 1999). Additional analysis of this data reveals that only 44% of the participants had the same social value orientation at both measurements (Bekkers, 2005).

Laboratory experiments suggest that social value orientations may change in response to moods (Kopelman, 1997) and very subtle cues like the use of words connected with the concepts of might and morality in a 'scrambled sentence' test (Hertel & Fiedler, 1998; Smeesters, Warlop, Van Avermaet, Corneille & Yzerbyt, 2003; Utz, Ouwkerk & Van Lange, 2004). One study that is particularly relevant for the present research investigated changes in social value orientation in a laboratory experiment with a public goods game (Van Dijk et al 2002). The experiment showed that successful experiences in the game promoted a

prosocial value orientation. Specifically, participants who had been cheated upon by their game partners became less prosocial, and participants who engaged in mutual cooperation became more prosocial. These studies have shown that social value orientation are affected by short-term changes in circumstances. There is no research available relating changes in volunteering or any other helping behaviour to changes in social value orientation. But given the low stability of social value orientation over a two year period, and the effects of successful mutual cooperation in social dilemmas, it seems possible that volunteering experiences constitute a potential influence contributing to more prosocial value orientations, especially when these experiences involve successful collaboration with others.

Social value orientation, trust, social responsibility and altruistic values

In the present paper the relationship of volunteering with four different measures of prosocial values is examined. These measures are social value orientation, generalized trust, social responsibility and altruistic values. They differ with respect to the range of prosocial behaviors that they are likely to predict and the scope of motives for prosocial behavior.

The social value orientation measure described above is predictive of examples of cooperative behaviour in social dilemma situations, which constitutes a wide range of prosocial behaviors. The social value orientation measure taps not only altruistic motives for prosocial behavior, but also concerns for fairness (Van Lange 1999). Previous research has assumed that social value orientation is a predictor of the tendency to display prosocial behavior in social dilemma situations, and does not depend on prosocial behaviour. The analyses below will reveal to what extent this assumption is valid.

The generalized trust measure was developed more than fifty years ago (Rosenberg 1956). Trust is associated with a wide range of outcomes, but taps a more specific motive: the expectation that others will be trustworthy (Uslaner 2002). Such expectations have been shown to depend on social value orientation because individuals who enter social dilemma situations with an intention to cooperate elicit cooperative responses from others (Kelley & Stahelski 1970). Thus, it is likely that generalized trust mediates the relationship between social value orientation and changes in volunteering (selection effects). Some have claimed that through volunteering, people gain trust in the positive intentions of others (Putnam 2000). However, these claims have not been supported by empirical work using longitudinal data (Claibourn & Martin 2002). The analyses below will reveal to what extent volunteering has positive socialization effects on trust.

The social responsibility measure has been designed to predict philanthropic behaviour: formal helping behaviour in the form of volunteering or charitable giving that benefits the community at large (Schuyt et al 2004). The social responsibility measure taps motives for philanthropic behaviour related to the sense of duty as a good citizen.

Data

It is clear that cross-sectional data are not suited to answer our questions on selection and causation. Cross-sectional surveys can merely establish differences between volunteers and non-volunteers, but cannot disentangle selection and causation processes. Even surveys that contain retrospective questions on volunteering in the past (Hooghe 2003a) cannot establish how starting or quitting volunteering change prosocial values. If prosocial values are fairly stable phenomena, it is likely that past volunteering depended on past values. Longitudinal panel data are needed that contain multiple measures of volunteering and prosocial values. The Giving in the Netherlands Panel Survey provide such data. The GINPS is fielded in May bi-annually since 2002. Thus far, three waves have been completed. Table 1 provides an overview of the data available in the three waves. Wave 3 was completed in two separate sessions. In the first session, fielded in April, the measures of social value orientation

and generalized social trust were included. One month later, the main questionnaire was completed in a second session, including questions on altruistic values, social responsibility and volunteering.

Table 1. Overview of data on values and volunteering in the GINPS

	2002	2004	2006a	2006b
Total n	1964	1316	1804	1474
Longitudinal n since 2002	-----	1246	825	703
Longitudinal n since 2004	-----	-----	881	762
Social value orientation	X		X	
Generalized social trust	X	X	X	
Altruistic values	X	X		X
Social responsibility	X	X		X
Volunteering	X	X		X

The three waves of the GINPS completed thus far span a time period of four years. This is a relatively short period for detecting socialization and selection processes. Each year, only a minority of individuals quit and join the volunteer work force. A majority of individuals either sustain volunteering or non-volunteering. The two years separating each wave seem to be suitable for the detection of socialization effects. If there are socialization effects of volunteering on social values, they are unlikely to become apparent immediately upon joining or quitting the volunteer work force. It is more likely that people slowly adapt their values to their new situation.

A potential methodological problem in the measurement of relations between behaviour and corresponding traits is the so-called justification effect. If respondents have a desire to give a consistent self-impression, they may adapt their adherence to values to their reported prosocial behaviour. To avoid justification-effects, values in the 2004 and 2006 surveys were measured before the questions on giving and volunteering were completed.

Measures

Volunteering activities in all three GINPS waves are measured in an extensive ‘Method-Area’ module (Rooney et al 2004). Respondents indicated whether they had performed 13 different types of volunteer activities and whether they had performed these activities for 15 different types of voluntary associations in the 12 months prior to the survey. Volunteering was defined as ‘regular, unpaid work on behalf of an organization or group’ without monetary compensation. Only respondents who mentioned a concrete activity for at least one type of voluntary association are considered as volunteers. *Volunteer hours* were measured with the question ‘How many hours do you typically spend volunteering per month?’.

The measure of *social value orientation* included in GINPS1 and GINPS3 was taken from previous research (Van Lange et al 1997). Respondents selected the preferred distribution of ‘valuable points’ for themselves and an ‘anonymous other’ out of three potential distributions, and did this in nine tables. In each table, a prosocial distribution was offered with equal points for self and other and the highest total number of points; an individualistic distribution was offered with a higher number of points for self than for other (and a lower total number of points than in the prosocial distribution); and a competitive distribution in which the difference between the outcome for self and other was maximized. Respondents who made at least six choices of the same type were classified; the other respondents were classified as inconsistent respondents.

In 2002, a question order experiment was conducted the social value orientation measure, such that half of the respondents (in the ‘during survey’ condition) completed the social value orientation task during the GINPS questionnaire in a module among other measures of prosocial values. This module was placed after the giving and volunteering modules. The other half of the respondents completed the social value orientation task before the GINPS questionnaire started (the ‘prior to survey’ condition). Thus, these respondents first completed the social value orientation measure, then the giving and volunteering modules, and then the prosocial values module. Though the distribution of social value orientation was different in the two experimental groups², the two groups are combined in the present paper because the level of stability of social value orientation was not different in the two groups and neither was the relationship with volunteering (results available upon request). Combining the two groups, the resulting classification was 9.9% inconsistent, 13.3% competitive, 27.7% individualistic, and 49.0% prosocial. This distribution is fairly common in research on social value orientation (Van Lange 2000).

In 2006, social value orientation was measured in a separate questionnaire fielded four to six weeks before the GINPS main questionnaire. In 2006, a much larger proportion of the respondents could not be classified using the criterion of at least six consistent choices (26.3%). The proportions of competitors (13.9%) and individualists (24.3%) were roughly similar to 2002. The proportion of prosocials (35.9%) however was lower in 2006 than in 2002.

In addition to the measure of social value orientation, three other measures of prosocial values were included in each wave of the GINPS: generalized trust, social responsibility, and altruistic values.

Generalized trust was measured with two statements, originally from Rosenberg (1956): “In general, most people can be trusted” and “You can’t be too careful in dealing with other people”. Usually, these sentences are presented to respondents as two extreme poles of one survey item. To increase the reliability of the trust measure, the two statements were presented separately to the respondents. Response categories ranged from 1 (completely disagree) to 5 (completely agree). The second statement was reverse coded so that a higher score represents more trust.

Social responsibility was measured with four items: “We have to leave this world a better place for the next generation”; “Society is in danger because people are less concerned about each other nowadays”; “The world needs responsible citizens” and “I give money to charitable causes, no matter what the government does”. Response categories ranged from 1 (completely disagree) to 5 (completely agree). The social responsibility variable is the mean score of these items.

Altruistic values were measured with a Dutch translation of eight items on “benevolence” from Gordon’s (1976) Interpersonal Values scale (adapted from Lindeman 1995): “I rather work for my own well being than for that of others” (r); “I strive to work for the well being of society”; “I would sacrifice little to help others” (r); “I find it important to share my possessions with others”; “I don’t like spending time to help others” (r); “I find it important to make an effort on behalf of others”; “I do not like to engage in charity” (r); “I find it important to give help to the poor and those who need it”. Response categories ranged from 1 (completely disagree) to 5 (completely agree). The altruistic values variable is the mean score of these items.

² The distribution of types was statistically different in the two conditions (Chi Square (df=3)=68.91, p<.000). The proportion of respondents with a prosocial value orientation was markedly higher in the during survey condition (57.4%) than in the prior to survey condition (40.9%), while the proportions of competitors and individualists were lower in the during survey condition (8.4% and 24.9%, respectively) than in the prior to survey condition (18.2% and 30.6%, respectively).

Results

1. Differences in prosocial values between volunteers and non-volunteers

The basic assumption of the present article is that volunteers adhere more strongly to prosocial values than non-volunteers. How large are these differences anyway? Table 2 reveals bivariate differences between volunteers and non-volunteers in social value orientation, generalized social trust, altruistic values, and social responsibility. In 2002, all contrasts between volunteers and non-volunteers were significant and in the expected direction: volunteers held more prosocial values than non-volunteers. In 2006, the differences between volunteers and non-volunteers in generalized trust, altruistic values and social responsibility were in the expected direction and significant. The differences in prosocial value orientation were also in the expected direction, but not significant.

Table 2. Mean scores on measures of prosocial values by volunteering in 2002 and 2006

	Prosocial value orientation (0-1)	Prosocial value orientation	Generalized trust	Altruistic values	Social responsibility
2002					
Non-volunteers	45.2%	4.37	3.18	3.41	3.72
Volunteers	55.5%	5.17	3.35	3.73	3.91
Significance	.000	.000	.000	.000	.000
2006					
Non-volunteers	33.6%	3.89	3.07	3.45	3.72
Volunteers	37.5%	4.08	3.19	3.74	3.89
Significance	.118	.307	.003	.000	.000

2. Room for change

The scope for socialization effects of volunteering on prosocial values is inversely related to the level of stability of prosocial values. We can get an indication of the level of stability by examining the correlations between the same measure of prosocial values at different points in time. An important caveat here is that correlations are compromised by the degree of measurement error. Measurement error is inversely related to the number of items comprising a scale. A rule of thumb is that the 'true' correlation between two measures is the raw correlation multiplied by the root of the reliability of the measures involved. For example, a correlation of .50 of two scales measured with a reliability of .60 represents a true correlation of $.50 / .77 = .65$. This figure represents a moderately high level of stability, but also leaves room for change. Table 3 shows correlations of the prosocial value orientation, generalized trust, altruistic values and social responsibility over time as well as the reliability coefficients (Cronbach's alpha) of the scales.

The results in table 3 reveal that generalized trust is relatively stable. Dividing the mean intertemporal correlation between the scales at the three measurements (.46) by the root of the mean reliability coefficients of the scales (.55), the level of stability is .83. Similar exercises for social responsibility and altruistic values reveal .72 and .78, respectively. These estimates are relatively high. They are similar to estimates of the stability of the 'Big Five' personality traits (Roberts & DelVecchio 2000). Thus, generalized trust, altruistic values and social responsibility are relatively stable social values that do not change much among the majority of the respondents. Social value orientation seems to be less stable given the correlation of only .22 between the number of prosocial choices in 2002 and 2006, though this figure cannot be corrected for unreliability because the measure is the result of nine discrete

choices. Cronbach's alpha can be computed only for variables measured on an ordinal scale. Thus the 'true' stability of prosocial value orientation is likely to be higher than .22 but cannot be computed.³

Table 3. Reliability coefficients and correlations among prosocial values

	Social value orientation (svo)		Generalized trust (Tr)			Social responsibility (Re)			Altruistic values (Alt)			
	2002	2006	2002	2004	2006	2002	2004	2006	2002	2004	2006	
Svo02	---											
Svo06	.234	---										
Tr02	.121	.109	<i>.590</i>									
Tr04	.120	.107	.459	<i>.495</i>								
Tr06	.086	.089	.446	.484	<i>.574</i>							
Re02	.098	.094	.128	.091	.084	<i>.614</i>						
Re04	.122	.091	.092	.096	.108	.384	<i>.567</i>					
Re06	.182	.039	.159	.135	.053	.361	.503	<i>.559</i>				
Alt02	.223	.120	.281	.199	.213	.378	.359	.395	<i>.815</i>			
Alt04	.148	.114	.199	.171	.200	.280	.427	.468	.633	<i>.815</i>		
Alt06	.181	.054	.252	.217	.081	.256	.319	.489	.617	.665	<i>.819</i>	

Reliability coefficients (Cronbach's alpha) appear in italics on the diagonal.

All correlations are significant at $p < .05$.

3. Development of prosocial values

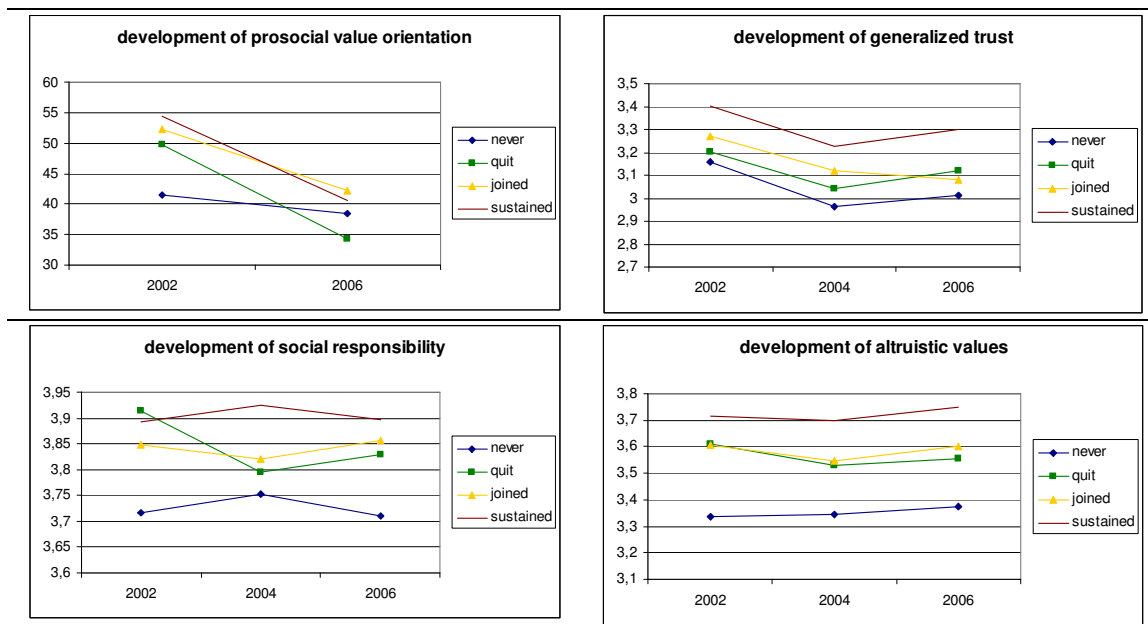
A crude indication of the prevalence of causation processes can be obtained from the four panels displayed in figure 2, where the mean scores of four groups of respondents are graphed: the group of respondents who never volunteered during the study period 2002-2006; those who joined the work force at some point; those who quit the work force; and those who sustained volunteering throughout the period. If there is a positive relationship between volunteering and prosocial values, we expect to see that those who sustained volunteering during the period have the highest scores on prosocial values, followed by those who joined the volunteer work force, those who quit, and those who never volunteered. Socialization effects would reveal themselves in a declining trend in the group of respondents who quit volunteering and increasing trends in the group of respondents who joined volunteering. Selection effects cannot be confirmed from these graphs, but if we see the same order of the four groups at all measurement periods (sustained > joined > quit > never) and do not see groups trading places we may assume prosocial values are stable. It should be noted that the trends apparent in mean scores are to some extent misleading because the composition of the groups of joiners and quitters changes over time. Those who joined in the period 2002-2004 are not able to join again in 2004-2006, and may quit again in that period. Thus, the same individual may appear in both the group of joiners and quitters.

³ An indication of the unreliability is the proportion of respondents who made at least six but less than nine prosocial choices. These partially inconsistent respondents make one, two or three times an individualistic or competitive choice. Such partial inconsistency can be considered as due to measurement error, in a way similar to the measurement error associated with generalized trust, social responsibility and altruistic values. The proportion of partially inconsistent respondents is 23.8% in 2002 and 29.7% in 2006. There is no standard of comparison for these values, but three quarters of the respondents making entirely consistent choices in nine different tables seems relatively high.

The patterns in figure 2 differ between panels, suggesting that selection and causation processes play out differently for different prosocial values.

For *prosocial value orientation* (upper left panel) we see that those who quit volunteering were much less likely to have a prosocial value orientation in 2006 than in 2002. While one would associate this pattern with a socialization effect, it is important to compare the trend among those who quit volunteering with the trend among those who sustained volunteering in the same period. We see that those who sustained volunteering were also less likely to have a prosocial value orientation in 2006 than in 2002. Thus, the same development in the group of respondents who quit volunteering is not specific for the group of respondents who quit volunteering, but also present in the group of sustained volunteers. In this group one would expect to see no decline if volunteering contributes to maintenance of prosocial value orientation. An other set of developments is visible among respondents who never volunteered or joined the volunteer work force during the four years under study. Those who joined the volunteer work force between 2002 and 2006 were not more likely to have a prosocial value orientation in 2006 than in 2002, which one would expect from a socialization perspective. In fact, the decline in prosocial value orientation among those who joined is almost as strong as the decline among those who quit and those who sustained. Prosocial value orientation among respondents who never volunteered declined only slightly from 2002 to 2006. If volunteering has a positive socialization effect on prosocial values, one would expect that those who never volunteered did not change, while those who joined the volunteer work force would become more prosocial. In sum, the pattern of development apparent in the graph of the upper left panel is not consistent with socialization effects of volunteering on social value orientation.

Figure 2. Mean scores on measures of prosocial values by volunteering status



The development of *generalized trust* (upper right panel) suggests a high level of stability. Those who sustained volunteering were most trusting in 2002, followed by those who joined volunteering, quit volunteering and those who never volunteered. In 2006, the quitters and joiners are still in between the never and sustained volunteers but have traded

places. One would expect the converse if there is a positive socialization effect of volunteering on generalized trust.

The development of *social responsibility* (bottom left panel) is largely consistent with a positive socialization effect. Those who quit volunteering had lower social responsibility scores in 2006 than in 2002, while those who sustained volunteering initially increased but ended in 2006 at the same level as in 2002. Among those who did not volunteer in 2002, we do not see the expected development if we look at the entire period. The values of those who entered the volunteer work initially became less socially responsible (while we would expect them to increase) but ended at a level in 2006 that is similar to the level of 2002. Conversely, those who never volunteered initially increased in social responsibility, but ended in 2006 at a level comparable to 2002. However, if we look only at the development since 2004, we do see the expected pattern: social responsibility declined among those who never volunteered, and increased among those who joined.

The development of *altruistic values* (bottom right panel) is somewhat consistent with a positive socialization effect. The values of those who quit volunteering became less altruistic relative to those who sustained volunteering. And relative to those who never volunteered, the values of those who joined the volunteer work force became more altruistic in the period 2004-2006, after an initial decrease in the period 2002-2004.

In sum, the overall picture is one of relatively high stability in social values. Within this limited scope for systematic change, the patterns of development in social responsibility and altruistic values suggests some socialization effects, while the patterns of development in social value orientation and generalized trust do not.

4. Selective joining

Table 4 reveals bivariate differences between joiners and non-joiners in social value orientation, generalized social trust, altruistic values, and social responsibility at base line. If joining the volunteer work force is selective with respect to prosocial values, we expect to find that those with stronger prosocial values in 2002 are more likely to join volunteering in the period 2002-2006. The results in table 4 are consistent with these expectations. Non-volunteers in 2002 with more prosocial value orientations, a more trusting attitude towards others, and more altruistic and socially responsible values were more likely to have started volunteering in the period 2002-2006.

Table 4. Mean scores on prosocial values in 2002 among non-volunteers in 2002 who joined or did not join the volunteer work force in 2002-2006 (n=1233)

	Prosocial value orientation		Generalized	Altruistic	Social
	(0-1)	(#)	trust	values	responsibility
Non-joiners	43.4%	4.23	3.15	3.37	3.68
Joiners	52.2%	4.93	3.27	3.59	3.84
Significance	.013	.014	.024	.000	.000

(0-1) dichotomous variable; (#) mean number of prosocial choices

Table 5 presents an multiple regression analysis of joining the volunteer work force, entering the four different measures of prosocial values one by one. Model 1 starts with the most general measure, prosocial value orientation; subsequently, the more specific measures of generalized trust, altruistic values, and social responsibility are added in models 2 through 4.

The analysis in table 5 reveals that each prosocial value has a positive effect, mediated by the more specific measure entered in the subsequent model. Model 4 reveals an effect of

only altruistic values. The effect sizes are pretty large. Those with a prosocial value orientation are 5.7% more likely to join the volunteer work force than proselves, where the joining rate is 19.8%. Thus, the effect of prosocial value orientation is about a quarter of the base rate. A somewhat smaller effect is observed for generalized trust in model 2. A unit increase in generalized trust is associated with a 3.1% increase in the likelihood of joining the volunteer work force. Controlling for trust, the effect of social value orientation is still significant, though it is reduced somewhat. A unit increase in social responsibility is associated with a 6.2% increase, controlling for social value orientation and trust. Trust becomes non-significant in model 3. Finally, model 4 reveals that a unit increase in altruistic values is associated with a 9.0% increase in the likelihood of joining the volunteer work force. Altruistic values mediate the relationship of prosocial value orientation, trust and social responsibility with joining the volunteer work force.

Table 5. Marginal effects in probit regression of joining the volunteer work force on prosocial values among non-volunteers in 2002 (n=1233)

	Coeff.	SE	Coeff.	SE	Coeff.	SE	Coeff.	SE
Prosocial value orientation (0-1)	5.67	2.30	5.11	2.30	4.79	2.30	3.48	2.31
Generalized trust			3.14	1.53	2.60	1.52	1.17	1.56
Social responsibility					6.23	1.89	3.73	1.96
Altruistic values							8.95	2.31
Predicted probability	19.75		19.67		19.43		19.09	
Pseudo R Square	.0050		.0083		.0176		.0309	

Coefficients significant at the p<.05 level in bold

5. Selective attrition

Table 6 reveals bivariate differences between quitters and non- quitters in social value orientation, generalized social trust, altruistic values, and social responsibility at base line. If quitting the volunteer work force is selective with respect to prosocial values, we expect to find that those with stronger prosocial values in 2002 are less likely to quit volunteering in the period 2002-2006. The results in table 6 are largely consistent with these expectations. Volunteers in 2002 with more prosocial value orientations, a more trusting attitude towards others, and more altruistic values were less likely to have quit volunteering in the period 2002-2006. The differences in prosocial value orientation are not very strong, but in the expected direction. The relationship between social responsibility and quitting is not significant.

Table 6. Mean scores on prosocial values in 2002 among volunteers in 2002 who quit or did not quit the volunteer work force in 2002-2006

	Prosocial value orientation (0-1)	Generalized trust (#)	Altruistic values	Social responsibility
Sustained	57.0%	5.30	3.40	3.92
Quit	50.3%	4.67	3.20	3.90
Significance	.138	.081	.005	.733

(0-1) indicates dichotomous variable; (#) number of prosocial choices

Table 7 presents an multiple regression analysis of quitting the volunteer work force, designed like the analysis of joining presented in table 5. The results are similar to the results in table 5. Social value orientation, generalized trust and altruistic values have negative

effects, though the effect of social value orientation is significant only at the $p < .10$ level in model 1. Other differences with the analysis in table 5 are that social responsibility does not predict quitting; the effect of generalized trust remains negative throughout models 3 and 4; the effect of trust on quitting also seems to be somewhat stronger than its effect on joining; the effect of altruistic values on quitting seems to be somewhat weaker than its effect on joining.

Table 7. Marginal effects in probit regression of quitting the volunteer work force on prosocial values among volunteers in 2002 ($n=731$)

	Coeff.	SE	Coeff.	SE	Coeff.	SE	Coeff.	SE
Prosocial value orientation (0-1)	-4.54	3.08	-3.45	3.07	-3.47	3.09	-2.36	3.11
Generalized trust			-5.32	1.95	-5.23	1.98	-4.49	2.03
Social responsibility					1.27	2.64	1.91	2.84
Altruistic values							-6.27	3.11
Predicted probability	21.41		21.19		21.19		21.07	
Pseudo R Square	.0029		.0122		.0122		.0170	

Coefficients significant at the $p < .05$ level in bold

6. Socialization

Table 8 presents regression analyses of social value orientation, generalized social trust, altruistic values, and social responsibility in 2006 on joining the volunteer work force and increases in the number of hours volunteered among non-volunteers in 2002, controlling for social values at base line. The analyses reveal no socialization effects of volunteering on prosocial value orientation and generalized trust. Joining the volunteer work force or increasing the number of hours volunteered are not associated with increases in prosocial value orientation and trust. We do see positive socialization effects of joining the volunteer work force on altruistic values and social responsibility (the latter significant only at $p < .10$). Increasing the number of hours worked is not associated with increases in altruistic values and social responsibility.

Table 8. Coefficients in OLS regressions of prosocial values on changes in volunteering among non-volunteers in 2002

	Prosocial value orientation		Generalized trust		Social responsibility		Altruistic values	
	Coeff.	SE	Coeff.	SE	Coeff.	SE	Coeff.	SE
Base line	.210	.041	.487	.047	.292	.050	.585	.043
Joined	.266	.337	.003	.068	.105	.045	.073	.049
Δ hours	-.001	.009	-.001	.002	-.001	.001	.001	.001
Constant	3.110	.251	1.492	.151	2.616	.192	1.424	.147
R^2	.0558		.2037		.1331		.3445	
n	502		502		435		435	

*** $p < .001$; ** $p < .01$; * $p < .05$; (*) $p < .10$.

Reference category: remained non-volunteer.

Table 9 presents regression analyses of social value orientation, generalized social trust, altruistic values, and social responsibility in 2006 on quitting the volunteer work force and increases in the number of hours volunteered among volunteers in 2002, controlling for social values at base line. The analyses reveal no significant socialization effects of volunteering on prosocial value orientation and generalized trust. Quitting the volunteer work

force or increasing the number of hours volunteered are not associated with significant decreases in prosocial value orientation and trust, though the negative effect of quitting on trust is in the expected direction. We do see a negative ‘desocialization’ effects of quitting the volunteer work force on altruistic values. The effect on social responsibility is also negative, but not significant. Decreasing the number of hours worked is not associated with increases in altruistic values and social responsibility. The relationship of changes in the number of hours worked with prosocial value orientation is positive. This finding suggests a positive socialization effect of the intensity of volunteering on prosocial value orientation.⁴

Table 9. Coefficients in OLS regressions of prosocial values on changes in volunteering among volunteers in 2002 (n=323)

	Prosocial value orientation		Generalized trust		Social responsibility		Altruistic values	
	Coeff.	SE	Coeff.	SE	Coeff.	SE	Coeff.	SE
Base line	.229	.050	.399	.063	.309	.058	.606	.054
Quit	.239	.418	-.109	.091	-.088	.060	-.147	.056
Δ hours	.008	.004	.000	.001	-.000	.001	.000	.001
Constant	2.974	.348	2.009	.229	2.720	.222	1.572	.213
R ²	.0675		.1700		.1212		.3889	
n	323		323		268		268	

*** p<.001; ** p<.01; * p<.05; (*) p<.10.

Reference category: sustained volunteering

Though the analyses in tables 8 and 9 are informative, they do not ‘prove’ socialization effects because within and between subject variance components are combined in OLS regression analysis. Such analyses usually overestimate longitudinal effects within respondents (Halaby 2004). In our case, overestimation of effects of volunteering are mitigated by presenting separate analyses among volunteers and non-volunteers in 2002. However, the more appropriate – and stringent – models for the analysis of panel data is either random effects or fixed effects GLS (generalized least squares). Which model is appropriate depends on the presence of random effects and the difference between coefficients obtained in random and fixed effects models (Greene 1993). A test for the presence of random effects is the Breusch and Pagan Lagrange Multiplier test. This test is significant for all four measures of prosocial values, indicating that OLS is not appropriate. A test for the difference between coefficients obtained in random and fixed effects is the Hausman test. This test is significant in the analyses of trust, altruistic values and social responsibility, and approaches significance in the analysis of prosocial value orientation. These tests indicate that fixed effects models are appropriate rather than random effects models. The fixed effects model can be thought of as an ordinary regression model including a series of dummy variables for each individual capturing the ‘unit effects’ (Halaby, 2004). As a result, only variables that change within individuals over time can be included in a fixed effect regression model. In the analyses presented below, the four measures of prosocial values are regressed on a dummy variable for volunteering status (no/yes), a variable for the number of volunteer hours in the past month, and two dummy variables for the year of survey (2004 and 2006; 2002 is the reference category). The year dummies are included to control for general declines or increases in the measures in specific survey years. The effect of the volunteering variable reflects the

⁴ In a logistic regression analysis of the dichotomous prosocial value orientation measure, the relationship of changes in the number of hours worked with prosocial value orientation in 2006 is also positive, controlling for prosocial value orientation in 2002.

combined effects of a change from non-volunteering to volunteering and vice versa. In other words, the effect of joining and quitting the volunteer work force are assumed to be opposite and equally strong in this analysis. The analyses in table 8 and 9 revealed that the effects of quitting and joining are indeed running in opposite directions for trust, social responsibility and altruistic values, and are roughly equal in size. The opposite sign – equal size assumption is not valid for the effects of quitting and joining on social value orientation. Quitting and joining the volunteer work force were both positively associated with social value orientation. Changes in the number of hours are almost nil in tables 8 and 9 (except for social value orientation) but go in opposite directions.

Results of fixed effects models of social value orientation, generalized social trust, altruistic values, and social responsibility as well as the statistics for the Breusch and Pagan Lagrange Multiplier tests and the Hausman tests are presented in table 10.

Table 10. Coefficients in fixed effects regression analyses of prosocial values on volunteering

	Prosocial value orientation		Generalized trust		Social responsibility		Altruistic values	
	Coeff	SE	Coeff	SE	Coeff	SE	Coeff	SE
Volunteering	.088	.292	-.009	.037	.038	.028	.052	.022
Volunteer hours	.006	.005	.000	.001	-.000	.001	.000	.000
Year 2004			-.149	.022	.009	.017	-.012	.014
Year 2006	.620	.151	-.103	.028	-.018	.021	.036	.017
Constant	3.396	.129	3.243	.020	3.783	.015	3.511	.012
#obs	3438		4754		4754		4754	
#groups	2735		2783		2783		2783	
Adj. R	.0066		.0064		.0605		.0605	
Breusch&Pagan test (Chi ² , p)	29.91	.000	490.4	.000	333.7	.000	915.8	.000
Hausman test (Chi ² , p)	4.13	.248	24.8	.000	31.4	.000	102.9	.000

The results in table 10 reveal only one significant socialization effect of volunteering: respondents gain stronger altruistic values by joining the volunteer work force, and conversely, lose altruistic values by quitting the volunteer work force. The effect of social responsibility is in the expected direction, but not significant (p<.174). The effect of a change in volunteer hours is negligible in three of the four analyses. In the analysis of social value orientation, however, a positive coefficient is found, but this is not significant (p<.188).

These results are largely consistent with the results of table 8 and 9. We found effects of quitting and joining on altruistic values that were opposite in sign and roughly equal in size in tables 8 and 9, and find a positive effect in table 10. The fact that we do not see a positive effect of volunteering on social responsibility in table 10 is consistent with the absence of a negative effect of quitting on social responsibility in table 9. We did not see relations between quitting and joining and prosocial value orientation and trust, and we do not find such relations in table 10.

The size of the effects of volunteering on values is quite small. Quitting volunteering reduces altruistic values with only .05. This is a small deviation from the mean of 3.51. Because the fixed effects model assumes that the effect of joining the volunteer work force on altruistic values is the same, the difference between a volunteer who joined and a former volunteer is about 4%.

Conclusion

This paper investigated the relationship between values and volunteering in the Giving in the Netherlands Panel Study, spanning four years (2002-2006). The data show that volunteers adhere more strongly to prosocial values than non-volunteers. Volunteers are more likely to have a prosocial value orientation, to be trusting of others, to feel socially responsible for the community at large, and to have altruistic values. Theoretically, these relationships may be due to selection and causation processes. Selection means that individuals with more prosocial values are more likely to join the volunteer work force and are less likely to quit. Causation means that joining the volunteer work force and increasing the intensity of volunteering promotes adherence to prosocial values, and quitting the volunteer work force and decreasing the intensity of volunteering decrease adherence to prosocial values.

The results presented imply that the bulk of the relationship between values and volunteering is the result of selection processes, and a minor part is due to causation processes. Prosocial values are relatively stable over time, leaving limited room for causation processes. While our data are not experimental and cannot strictly speaking be interpreted as support for causal statements, it is very likely that causal effect running from prosocial values and volunteering is much stronger than the effect in the reverse order. The results give no support for causation of social value orientation and generalized trust.

Substantively, these results imply that people make decisions on volunteering based on their prosocial values. For people with more prosocial values, volunteering is a more attractive form of leisure than for people with less prosocial values. People with more prosocial values are more likely to join and less likely to quit the volunteer work force. This means that prosocial values promote length of volunteer service. While we do not have information on joining and quitting specific organizations (but only on joining and quitting the volunteer work force), it is not unreasonable to assume that individuals with more prosocial values are also more likely to join and quit specific organizations. For volunteer managers, this is important information. Individuals with more prosocial values are more likely to comply with a request to start volunteering, and they are also likely to stay longer.

The general lack of socialization effects implies that drawing people into volunteering is not likely to result automatically in an increase in prosocial values. In contrast to claims about 'virtuous circles of participation' (Putnam 2000), people do not become more trusting or more cooperative in social dilemma situations through volunteering. For two specific social values, however, socialization effects were found. People are increasing their adherence to altruistic and social responsibility values after they have started volunteering. People increasingly find that the world needs responsible citizens and they are more likely to say that helping others is important to them after they have started volunteering. After they have quit volunteering, people are less likely to say helping others is important to them.

It is not very surprising that changes in volunteering lead to changes in the personal importance attached to being a helpful and socially responsible person, while changes in volunteering do not change people's general tendency to display cooperative behaviour in social dilemma situations or people's general outlook on others. The former two values are more closely connected to volunteering. Several items in the altruistic values scale specifically refer to 'giving' and 'helping'. The wording of the generalized trust items has no obvious connection with volunteering. Obviously, this also holds for the social value orientation task because it is a mathematical exercise.

Methodologically, the results imply that researchers can assume that prosocial values largely precede changes in volunteering. Previous studies using the GINPS data have assumed that prosocial values are stable characteristics of persons that are established before individuals decide on charitable contributions and volunteering (Bekkers & Schuyt 2005). The results of the present paper support this assumption. When analyzing volunteering

behaviour, the measures of prosocial values examined here can be included as predictors, without bothering too much about potential problems of reverse causality. Though a part of the relationship of altruistic values and social responsibility with volunteering is due to causation, this is only a minor part. The major part of the correlation between social values and volunteering is due to selection, and not to causation.

Discussion

It should be noted that the present study has several potential shortcomings. First of all, selectivity in survey participation is not accounted for. Individuals with more prosocial value orientations are more likely to sustain participation in survey research; after all, completing an online survey is to some extent also a form of volunteer work. Thus, our analyses are likely to be based on a sample of individuals with above average prosocial values. This reduced variance in prosocial values relative to the population reduces the likelihood that survey participants report quitting, and hence reduces the likelihood of finding negative selection effects. In addition, participants whose values became less prosocial over time are more likely to have left the panel. This reduces the likelihood of finding negative socialization effects. Conversely, participants whose values were more prosocial at base line and participants whose values became more prosocial over time are more likely to have continued participation in the panel study. Indeed we observed stronger and a higher number of significant effects of social values on joining in table 5 than on quitting in table 7. This problem does not affect conclusions on the relative importance of selection and causation. Both types of processes will appear to be less strong than they are in reality.

Second, the timing of measurements and the time span of the study are limiting factors. While bi-annual surveys enable the detection of effects of volunteering on the medium to long term, they do not allow for detection of short-term changes. It is likely that changes in volunteering have short term effects on self-perceptions, which are not noticed. Obviously, the time span of only 4 years limits the observed level of change. Over the years 2002-2006 covered by the panel study, social values have a relatively high level of stability. In other words, social values change too slowly to be able to detect much change in a relatively short period of time. Once again, this limits the likelihood of detecting both socialization as well as selection effects.

Third, while the results shed light on the relative importance of selection and causation, it is not clear how selection and causation processes work. Selection processes may be the result of direct selection by individuals based on their preferences for the kind of volunteer work to be done, for the type of organization, or for the company of those who are already active as volunteers in the organization. Selection may also come about indirectly. The majority of volunteers are asked to volunteer by existing volunteers or members of the organization. It may be that individuals with more prosocial value orientations are more likely to have the kind of social networks that increase the likelihood of being asked, and/or that they are recognized as more attractive for the organization by recruiters. Future research should investigate these issues. Future research should also investigate whether causation processes are the result of changes in self-perception and/or group socialization.

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