City & Community

The Connection between Neighboring and Volunteering

John Wilson*
Duke University

Joonmo Son
National University of Singapore

Sociological theory predicts that volunteers are likely to be more socially integrated into their communities than nonvolunteers. In this study, we test this theory by examining three dimensions of relations to neighbors—contact, social engagement, and the perception that neighbors trust each other. We hypothesize reciprocal relations between volunteering and these three measures. Using cross-lagged structural equation models applied to two waves of data from the National Survey of Midlife in the United States (MIDUS), we find that frequency of contact with neighbors is positively related to volunteering, but there is no reciprocal effect. Frequency of social engagement does not predict future volunteering but volunteers tend to become more socially engaged with their neighbors. Perceptions of neighbors as trusting are unrelated to volunteering.

A distinguishing feature of the sociological approach to volunteering is its focus on social integration and the premise that people are more likely to volunteer if they are embedded in a network of social relations (Hustinx et al. 2010:8; Paik and Navarre-Jackson 2011). Thus, an often-cited resource theory of volunteerism includes the possession of social capital (a measure of the number and resourcefulness of social ties) as a crucial antecedent of volunteer work (Wilson and Musick 1997).

In the research reported here, we focus on one very common form of social integration, relations with neighbors, and, using longitudinal data, examine the role they play in fostering volunteerism. Although this relationship has been researched before, previous studies have used blunt and undiscriminating measures of neighbor relations rather than treating them as multidimensional. Further, most studies have assumed that neighbor relations are the cause rather than the consequence of volunteer activity, thus ignoring the possibility that people might get to know their neighbors better and socialize with them more often as a result of their volunteer work.

*Correspondence should be addressed to John Wilson, Department of Sociology, Duke University, 268 Soc/Psych Building, Box 90088, Durham, NC 27708-0088; jwils@soc.duke.edu.
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NEIGHBORS AND VOLUNTEERING

Why should an attempt to understand more about modern volunteering include an examination of neighbor relations? First, neighboring remains an important form of social integration, even in an age when social changes might seem to have undermined its social significance (Volker et al. 2007). Neighbors continue to figure prominently in people's social lives. Forty percent of Americans can name all or most of their neighbors, nearly half (49.2 percent) have face-to-face contact with them at least once a week, and 41 percent have helped their neighbor with a household chore, loaned a tool or piece of equipment, or exchanged some other favor with a neighbor in the past six months (Hampton et al. 2009; Monti et al. 2003:148). If social integration does help explain volunteerism then the role of neighbors must be included in the investigation.

Second, most volunteer work is carried out close to home, addressing local concerns. Of all the many forms of altruism, volunteering is most distinctive for the "the proximity of [its] beneficiaries" (Hustinx et al. 2010:6). Although there are exceptions to this generalization, such as volunteering to provide disaster relief in another region or foreign country, volunteer work typically consists of community-building activities such as helping with after-school programs, planning and executing food-drives, clearing litter from local parks, door-to-door canvassing for votes in local elections, and fund-raising for a Girl Scout troop. Activities such as these are typically managed by a religious congregation in the neighborhood or the local branch of a nonprofit organization, they occur on a regular, scheduled basis, and they must take place close enough to enable the volunteer to "commute" from home. While volunteer work can certainly take us out of our neighborhood, and while other relations—with friends, workmates, and fellow church members—can certainly lead to volunteer work, the localism of volunteer work suggests an important role for neighbors.

STUDYING SOCIAL RELATIONS WITH NEIGHBORS

Neighbors are defined by proximity. They are "the people who live next door, the people who live on the block or across the road" (Unger and Wandersman 1985:140). But living physically close to people does not wholly determine the nature of the relation we have with them. The person who lives in the next apartment might be a close friend or only a nodding acquaintance. Some neighbors we interact with on a daily basis, others we encounter only occasionally. Some neighbors we gladly do favors for because we believe they will reciprocate, while others we treat with more circumspection because we deem them unreliable or not trustworthy.

The nature of our relations with our neighbors can be described in terms of behavior and attitudes (Paxton 1999:93). As measured by behavior, neighboring consists of frequent interaction with those living nearby (Wethington and Kavey 2000:207), including exchanging goods and services, sharing information, watching out for property or children, paying regular visits, and socializing in general (Guest and Wierzbicki 1999:93; Ross and Jang 2000:404). As measured by attitudes, relations with neighbors mean the perception we have of our neighbors, our feelings toward them, the expectations we have of them, and the level of attachment we have to them (Fieldhouse and Cutts 2010:296; Skjaeveland et al. 1996:418; Unger and Wandersman 1985:154). Do we see our neighbors as

approachable and friendly? Do we see them as trustworthy and reliable? Would we miss them if they moved away?

THE INFLUENCE OF NEIGHBORS ON VOLUNTEERING

Neighbors are only one of many social contacts we have with the world outside our household. We also have friends, coworkers, and the people we get to know through our leisure time pursuits. But focusing exclusively on neighbors, social integration theory predicts higher quality relations with them will result in more volunteering. It assumes that there is, within the population, sufficient variation in how people relate to their neighbors to bring about differences in volunteering.

Looking first at behavior patterns, there are a number of reasons why frequency of interaction with neighbors influences volunteering. First, we are more likely to volunteer if someone asks us, especially if it is someone with whom we have a personal connection, know personally, or see frequently (Freeman 1997:S164; Lim 2008; McAdam and Paulsen 1993; Musick and Wilson 2008; Paik and Navarre-Jackson 2011; Somma 2009; Walgrave and Wouters 2014:1672). If a social connection is personal, social pressure—or social incentives—to volunteer are more persuasive (Lim 2008:963). Thus, a neighbor with whom we share convivial social evenings will be more influential than a neighbor who is a stranger. Of course, we do not know that neighbors are more likely to ask us to volunteer than a friend or coworker. This part of the theory simply states that, *among neighbors*, a request to volunteer is more likely to be greeted favorably if it comes from those neighbors we know well. Second, better relations with neighbors forge an emotional bond not just to individuals or families living nearby but to the neighborhood itself (Lenzi et al. 2013:47). In this way, neighboring motivates us to work on behalf of the community and its residents (Lee et al. 1991:530; Guest and Wierzbicki 1999:92). Third, frequent socializing with neighbors enhances our sense of well-being and overall satisfaction with life in general (Wethington and Kavey 2000:190; Greenfield and Reyes 2014; Howley et al. 2015). Once again, the purpose here is not to compare relations with neighbors with relations with others. It simply means that frequent socializing with neighbors is better than socially ostracizing them when it comes to well-being. The mental health benefits of good neighboring are relevant because subjective well-being is positively related to volunteering (Son and Wilson 2012). Without good quality ties to neighbors, people are more likely to become anxious and depressed (Kim 2010). This, in turn, discourages volunteering (Li and Ferraro 2005).

When it comes to the attitudinal dimension of neighboring the most salient attitude is trust. Trust is best defined as an expectation that others can be relied upon (Rotter 1967:651) and will not exploit you (Ermisch et al. 2009:751). It is faith in the "goodwill and benign intent" of others (Yamagishi and Yamagishi 1994:131). Trust is an essential ingredient of many social transactions but it would seem to be especially important in the case of volunteering, which is a "mutually shared expectation, often expressed as confidence, that people will manifest sensible and, when needed, reciprocally beneficial behavior in their interactions with others" (Welch et al. 2005:457). Assured by trust, individuals can confidently combine to pursue collective actions and interests with others, as when neighbors band together to organize a Neighborhood Watch program or rehabilitate a local recreation facility (Realo et al. 2008:459). Research shows that trust is

positively related to volunteering (Bekkers 2012; Jennings and Stoker 2004:369; Uslaner and Conley 2003:352; Van Ingen and Bekkers 2015).

RECIPROCITY: THE INFLUENCE OF VOLUNTEERING ON RELATIONS WITH NEIGHBORS

Thus far, we have theorized that neighboring fosters volunteerism. But it could be that volunteer work brings neighbors together who consequently begin to interact more often, do so on a more intimate basis, and come to trust one another more. Many of the organizations for which people volunteer, including voluntary associations and especially religious congregations (Putnam and Campbell 2010), routinely promote neighboring behavior, providing a space for positive social interactions with others in the locality as well as teaching "values favoring social interactions with acquaintances" (Wethington and Kavey 2000:193). In addition, people new to a community might join clubs and volunteer for them in order to meet new people, including their neighbors. One of the recognized motivations for volunteering is the wish to "meet new people and make new friends" (Omoto et al. 2010:1712). In short, the prospect of reverse causality or even reciprocity between neighboring and volunteering cannot be ignored. Many authorities writing on this topic urge that more attention be paid to this possibility. Thus, Immerfall et al. (2010:12), in reviewing the research on community and voluntary associations, conclude that both self-selection effects (trusting and more sociable persons are more likely to join) and socializing effects (membership makes people more trusting and provides opportunities to make friends) are likely. Putnam (2000:137) sees trust and volunteering as "mutually reinforcing." The probability of reciprocity between neighboring and volunteering is also noted by Ajrouch et al. (2014:9), Dury et al. (2014:19) Wuthnow (1998), Gilster (2012), Prouteau and Wolff (2008), and Stukas et al. (2014:58). And yet, to our knowledge, no study has actually tested this reciprocity theory using longitudinal data.

REVIEW OF LITERATURE

Many studies have used social integration theory to explain variations in volunteerism (Musick and Wilson 2008, Chapter 12). Very few, however, have focused on variations within neighbor relations. In some cases neighbors are grouped together with family and friends to form a broad category of "close ties" as if all these ties are equally close by definition (Li and Ferraro 2005; Rossi 2001:298). In other cases, neighbor relations are measured separately but the outcome variable is something that resembles or is probably associated with volunteer work but not an actual measure of it, such as "community attachment" (Lenzi et al. 2013; Sundblad and Sapp 2011:528), membership in voluntary associations (Monti et al. 2003:149; Paxton 1999:114; Unger and Wandersman 1985:158), or participation in neighborhood organizations such as a tenants' group or a block crime watch organization (Ross and Jang 2000:413; Wandersman and Giamartino 1980).

Studies focusing specifically on variation in ties to neighbors and their consequences for volunteering are therefore uncommon. Generally speaking, they find a positive association between volunteering and various measures of neighboring, namely: the frequency of informal socializing with neighbors (Einolf and Chambre 2011); closeness of ties to

neighbors (Oliver 1984:607); trust in neighbors (Lim and Laurence 2015); and feeling strongly connected to the neighborhood (Dury et al. 2014). These studies are, however, cross-sectional and typically use single items to measure neighbor relations. They cannot compare the influence of behavior and attitudes and they cannot examine the possibility of reverse causality or reciprocity. Only by using multiple-item measures, longitudinal data, and appropriate methods to analyze them can these shortcomings be avoided.

THE CURRENT STUDY

The current study advances understanding of the contribution of neighbors to volunteering in two ways.

First, we use three measures of relations with neighbors to better capture their multidimensional nature, drawing on the distinction made above between behavior and attitudes. Our behavior measures are frequency of contact with neighbors and frequency of social engagement with neighbors. Our attitude measure is the perception that people in the neighborhood trust each other. Second, we use two-wave panel data drawn from a nationally representative U.S. sample to estimate cross-lagged structural equation models (SEM), the purpose of which is to see if the neighbor relations and volunteering are reciprocally related. Specifically, we test the following hypotheses:

H1: Neighbor contact and volunteering are reciprocally related.
H2: Neighbor engagement and volunteering are reciprocally related.
H3: The perception that neighbors trust each other and volunteering are reciprocally related.

DATA

For data we use the national random-digit-dialing sample from the National Survey of Midlife in the United States (MIDUS) two-wave panel survey. Eligible respondents were noninstitutionalized, English-speaking adults in the coterminous United States between the ages of 20 and 74. The baseline national RDD sample was selected in 1995 from working telephone banks. The respondents participated in a computer-assisted telephone interview and also completed two self-administered questionnaire booklets mailed to their households. The MIDUS I sample consists of 3,487 respondents. The response rate estimates are 70 percent for the telephone interview, 86.8 percent for the completion of the self-administered questionnaires, and 60.8 percent for the whole survey (i.e., 0.700×0.868).

A follow-up survey of the original MIDUS sample was conducted between 2004 and 2006. The retention rate of the national RDD sample is 71 percent, adjusting for mortality of the respondents. To encourage participation, incentives were used and the respondents who completed all phases of data collection received $60 (MIDUS I participants received $20). Multivariate logit regression of attrition shows that drop-outs were more likely to be nonwhite males with lower education and income levels. MIDUS offers weights to correct the data for unequal stratified probabilities of household and within-household respondent selection in 1995. In addition, a sample weight poststratifies the data to match the proportions of adults in the 1995 Current Population Survey

with regard to age, gender, race, education, marital status, MSA (i.e., metropolitan and nonmetropolitan), and region (Northeast, Midwest, South, and West).

MEASURES

ENDOGENOUS AND EXOGENOUS VARIABLES

The following variables were measured in both 1995 and 2005 and function as both endogenous and exogenous variables in the SEM.

Volunteer status: A survey question asked "On average, about how many hours per month do you spend doing formal volunteer work of any of the following types?: (1) Hospital or nursing home; (2) School or other youth-related volunteer work; (3) Political organizations or causes; or (4) Any other organization." Given that these response categories are limited in scope and detail (e.g., religious volunteering is not identified) we use a dichotomous variable indicating volunteer status where 0 = Not volunteered at all and 1 = Volunteered.

Neighbor contact: Relations with neighbors was measured using two items from MIDUS. The first item asks: "How often do you have any contact, even something as simple as saying 'hello,' with any of your neighbors?" and has six response categories ranging from "1. Never or hardly ever" to "6. Almost every day."

Neighbor engagement: The second question asks: "How often do you have a real conversation or get together socially with any of your neighbors?" and has the same six response categories.

Neighbor trust: Attitude toward neighbors was measured by an item asking respondents if people in their neighborhood trust each other, and has four response categories from "1. Not at all" to "4. A lot."

CONTROL VARIABLES

The profile of the typical volunteer is very similar to that of the socially engaged neighbor (Lee et al. 1991; Shaw 2005:514; Putnam 2007; Hampton et al. 2009; Nation et al. 2010), and for this reason, it is possible that any relation we discover between volunteering and neighboring is spurious, attributable to a third factor to which both neighboring and volunteering are related. Because our lagged-effect models are estimating changes between 1995 and 2005 in the dependent variables (i.e., neighboring and volunteering), control variables are demanded if they are known to be associated with both of these changes. Unfortunately, studies in this field rarely measure or seek to explain changes over time in either neighboring or volunteering, which creates uncertainty as to what qualifies as a control variable. On the grounds that it is better to over- than undercontrol, we draw on the mainly cross-sectional studies for information as to which variables we should include as controls in the SEM model.

Characteristics that have been found related to both neighboring and volunteering are: homeownership, paying off a mortgage, and length of residence in the neighborhood (Hampton et al. 2009; McCabe 2013; Nation et al. 2010; Rotolo et al. 2010; Swaroop and Morenoff 2006); income (Musick and Wilson 2008); age (Cornwell et al. 2008); physical health (Shaw 2005); gender (Campbell and Lee 1990:496; Hampton et al. 2009); marital

and parental statuses (Hampton et al. 2009; Musick and Wilson 2008); education (Campbell and Lee 1990:496; Musick and Wilson 2008; Putnam 2007); race (Hampton et al. 2009; Musick et al. 2000; Putnam 2007); and frequency of church attendance (Welch and Baltzell 1984; Wilson and Janoski 1995). The operationalization of the control variables is as follows:

Homeowner: A dichotomous variable where 1 = Owning home outright, 0 = Not owning.
Mortgage: A dichotomous variable where 1 = Paying on a mortgage, 0 = Not paying on a mortgage.
Length of residence: A continuous variable counting the number of years lived in current neighborhood or township (rural area) by the time of the second-wave survey.
Age: A continuous variable ranging between 20 and 74 (Even though the survey was designed to range in age from 25 to 74 at baseline, it included some respondents aged between 20 and 24).
Gender: A dichotomous variable where 1 = Female, 0 = Male.
Race: A dichotomous variable where 1 = White, 0 = Other.
Marital status: A dichotomous variable where 1 = Married, 0 = Not married.
Parental status: A dichotomous variable where 1 = Parent (of biological, step, or adopted children), 0 = Nonparent.
Education: A variable indicating the highest educational grade of the respondent: (1) some grade school to some high school; (2) GED or high school diploma; (3) some college (no bachelor's degree); or (4) bachelor's degree or more advanced degree.
Income: A 31-category measure of personal income in the past year.
Physical health: A self-evaluation of physical health status where 1 = poor, 2 = fair, 3 = good, 4 = very good, and 5 = excellent.
Church attendance: A variable measuring frequency of attending religious service where 1 = never, 2 = less than once a month, 3 = one to three times a month, 4 = about once a week, and 5 = more than once a week.

METHOD

We employ a cross-lagged SEM because we are interested in the reciprocal association between volunteer status and three measures of neighbor relations. This method enables us to determine whether the four variables of interest form a causal relationship across the two waves of data collection. It takes into account the likelihood that there exists strong "state dependence" in both volunteerism and neighbor-related measures across time (Halaby 2004:37) and then examines the cross-lagged association between them. The model also takes the within-wave correlations between the focal variables into account.

To deal with the problem of data missing due to lack of response and attrition we use multiple imputation method jointly with the cross-lagged SEM, employing 10 imputed data sets (Allison 2001). Multiple imputation (MI) is described as "superior to other approaches when analyzing data sets with missing values" (Johnson and Young 2011:928). MI uses the distribution of the observed data to estimate a set of plausible values for the missing data using correlations between observed variables. Random components are incorporated into these estimated values to reflect their uncertainty. Multiple data sets are created and then analyzed individually but identically to obtain a set of parameter estimates. These estimates are combined to obtain the overall estimates, variances, and

confidence intervals. Specifically, the imputation procedure recovers missing values using the MICE (Multiple Imputation by Chained Equations) technique under the assumption of MAR (Missing-At-Random) (Royston 2005; Van Buuren et al. 1999). Each chained equation uses a set of predictors known to be related to the measure being imputed.

RESULTS

As shown in Table 1, 38 percent of MIDUS respondents volunteered in 1995, rising to 42 percent in 2005. Respondents reported a score of about 5 on the neighbor contact measure in 1995 and 4.9 in 2005. (Recall that 4 means about once a week and 5 means several times a week). The neighbor engagement scores, indicating more intimacy with neighbors, were predictably lower: 3.0 in 1995 and 2.9 in 2005. In other words, MIDUS respondents engaged socially with their neighbors on average one to three times a month in both waves. Together, these measures portray average respondents as interacting quite intensively with their neighbors. When asked if people in their neighborhood trust each other the average response in 1995 was 3.1 and in 2005 3.2, indicating a rather low assessment of "a little" (a mean of 4 would indicate "some" and a mean of 5 would indicate "a lot").

Other columns in the table provide a partial correlation matrix of all the variables in the study. To save space, we comment only on the four variables of principal interest in this study, omitting a description of the control variables. Looking first at column three, volunteer status in 1995 is quite strongly correlated with volunteer status in 2005 (0.27^{***}). The state dependency of the neighbor relations variables is similar. For neighbor contact the correlation is 0.21^{***}, for neighbor engagement the correlation is 0.22^{***}, and for trust the correlation is 0.28^{***}. Within the second wave (i.e., cross-sectionally), the neighbor relation measures are positively correlated, although not always very powerfully. In 2005, the strongest interneighbor relations correlation was between engagement and contact (0.33^{***}). Most importantly, volunteer status in 2005 is positively correlated with: neighbor contact measured in both 1995 (0.09^{***}) and 2005 (0.06^{***}), neighbor engagement measured in both 1995 (0.06^{**}) and 2005 (0.04^{*}), and neighbor trust in both 1995 (0.11^{***}) and in 2005 (0.09^{***}).

The hypotheses this study is intended to test are all couched in terms of reciprocity: between neighbor contact and volunteering; between neighbor engagement and volunteering; and between neighbor trust and volunteering.

Table 2 and Figure 1 show the results of testing these hypotheses using reciprocal cross-lagged SEMs between volunteering and neighboring. (The figure does not display the coefficients for the control variables for the sake of clarity.)

Table 2 shows the state dependency between the four principal variables in the study. In other words, levels in 1995 are good predictors of levels in 2005 of the same variables. The question is whether neighboring and volunteering have any relation once these strong lagged dependencies are controlled. These hypotheses are effectively tested with both cross-lagged and lagged effects summarized in Figure 1. None of the reciprocity hypotheses is supported but there are nevertheless interesting associations shown in the figure.

First, neighbor contact in 1995 is positively related to volunteer status in 2005. Simply saying hello on a frequent basis with your neighbor is enough to increase your chances of volunteering. The impact size of neighbor contact on volunteering (0.06^{*}) is on par

TABLE 1. Variables in the Analyses (Multiply-Imputed Data [$N = 3{,}257$], Sample Weighted)

Measure	Mean (S.D.) or Percentage	Range	Correlation with Volunteer Status at the 2nd Wave	Correlation with Neighbor Contact at the 2nd Wave	Correlation with Neighbor Engagement at the 2nd Wave	Correlation with Neighbor Trust at the 2nd Wave
Endogenous variables (the 2nd wave)						
Volunteer status	0.42 (0.49)	0 – 1	—	—	—	—
Neighbor contact	4.89 (1.32)	1 – 6	0.06***	—	—	—
Neighbor engagement	2.91 (1.61)	1 – 6	0.04*	0.33***	—	—
Neighbor trust	3.16 (0.80)	1 – 4	0.09***	0.12***	0.13***	—
Main exogenous variables (the 1st wave)						
Volunteer status	0.38 (0.49)	0 – 1	0.27***	0.07***	0.11***	0.07***
Neighbor contact	4.97 (1.27)	1 – 6	0.09***	0.21***	0.17***	0.17***
Neighbor engagement	3.02 (1.60)	1 – 6	0.06**	0.18***	0.22***	0.10***
Neighbor trust	3.08 (0.83)	1 – 4	0.11***	0.11***	0.17***	0.28***
Home ownership & Length of residence						
Homeowner	22%	0 – 1	0.02	0.06***	0.16***	0.11***
Mortgage	52%	0 – 1	0.06***	−0.02	−0.05**	0.12***
Rent (reference)	26%	0 – 1	−0.09***	−0.03	−0.09***	−0.24***
Length of residence[a]	16.18 (13.84)	0 – 80	0.02	0.06**	0.12***	0.11***
Controls[b]						
Age	45.46 (12.86)	20 – 74	−0.06***	0.13***	0.26***	0.12***
Female	51%	0 – 1	0.08***	−0.05**	0.00	−0.01
White	87%	0 – 1	0.05**	−0.03	0.04*	0.12***
Married	63%	0 – 1	0.11***	−0.00	0.04*	0.14***
Parent	82%	0 – 1	−0.00	0.01	0.02	0.01
Education	2.92 (0.96)	1 – 4	0.25***	0.04*	−0.06**	0.08***
Income	17.83 (9.96)	1 – 31	0.06**	−0.03	−0.08***	0.08***
Self-rated physical health	3.50 (0.98)	1 – 5	0.16***	0.05**	0.03	0.14***
Church attendance	2.76 (1.34)	1 – 5	0.19***	0.11***	0.08***	0.08***

[a]This variable was measured at the second wave. [b]All the control variables were measured at the first wave. *$p < 0.05$; **$p < 0.01$; ***$p < 0.001$ (two-tailed test).

TABLE 2. Cross-Lagged SEM of Volunteer Status and Neighbor-Related Measures (Multiply-Imputed Data [$N = 3,257$], Sample Weighted)

	Model 1: Volunteer Status at the 2nd Wave	Model 2: Neighbor Contact at the 2nd Wave	Model 2: Neighbor Engagement at the 2nd Wave	Model 2: Neighbor Trust at the 2nd Wave
Main exogenous variables (the 1st wave)				
Volunteer status	0.14 (0.03)***	0.01 (0.03)	0.08 (0.03)**	0.04 (0.04)
Neighbor contact	0.06 (0.03)*	0.15 (0.03)***	0.07 (0.02)**	0.12 (0.03)***
Neighbor engagement	0.00 (0.03)	0.07 (0.03)*	0.14 (0.03)***	0.01 (0.03)
Neighbor trust	0.04 (0.03)	0.04 (0.03)	0.04 (0.03)	0.16 (0.02)***
Home ownership & Length of residence				
Homeowner	0.02 (0.04)	0.02 (0.04)	0.08 (0.04)*	0.12 (0.03)***
Mortgage	−0.02 (0.04)	0.01 (0.03)	0.04 (0.03)	0.12 (0.03)***
Length of residence	0.03 (0.03)	−0.02 (0.03)	−0.01 (0.02)	0.02 (0.02)
Controls				
Age	−0.09 (0.04)*	0.09 (0.04)*	0.15 (0.04)***	0.08 (0.03)*
Female	0.08 (0.03)**	−0.07 (0.02)**	−0.05 (0.03)	0.07 (0.04)
White	0.07 (0.03)*	−0.03 (0.03)	−0.01 (0.04)	0.09 (0.03)**
Married	0.07 (0.03)*	−0.03 (0.03)	0.00 (0.03)	0.07 (0.03)*
Parent	0.02 (0.04)	−0.04 (0.03)	−0.07 (0.02)**	−0.07 (0.03)*
Education	0.21 (0.03)***	0.02 (0.03)	−0.04 (0.03)	0.02 (0.03)
Income	0.05 (0.03)	−0.04 (0.03)	−0.03 (0.03)	0.10 (0.04)**
Self-rated physical health	0.06 (0.03)*	0.06 (0.02)**	0.05 (0.02)*	0.09 (0.03)**
Church attendance	0.16 (0.03)***	0.04 (0.03)	0.02 (0.03)	0.04 (0.03)
Model fit indices				
R^2	0.18	0.08	0.11	0.16
CFI		1.00		
TLI		1.00		
RMSEA		0.00		

Notes: Sample weighted; All estimates standardized; CFI = Comparative Fit Index, TLI = Tucker-Lewis Index, RMSEA = Root Mean Square Error of Approximation; the SEM models utilized a MLM (maximum likelihood parameter estimates with standard errors and a mean-adjusted chi-square test statistic) estimator; Number of imputed data sets = 10; $N = 3,257$; *$p < 0.05$, **$p < 0.01$, ***$p < 0.001$ (two-tailed).

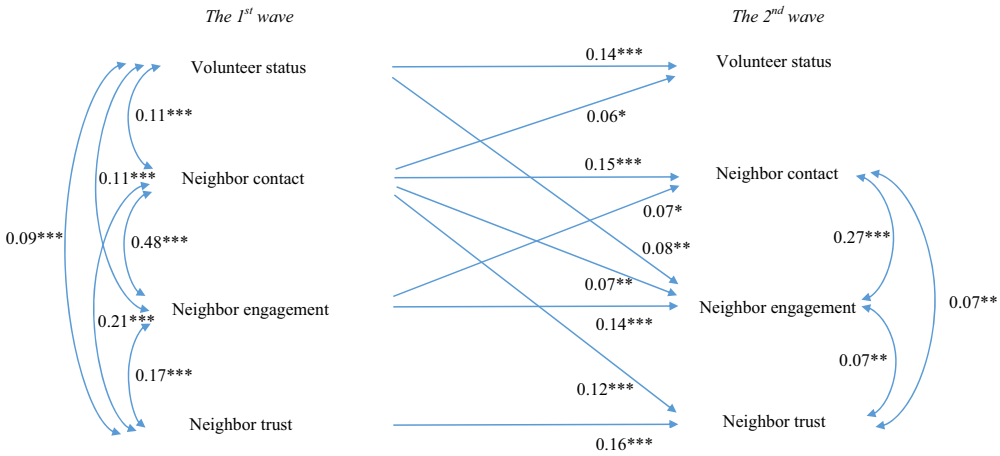

FIG. 1. Cross-lagged SEM path model.
Notes: All estimates standardized and based on Table 2; $^{*}p < 0.05$, $^{**}p < 0.01$, $^{***}p < 0.001$ (two-tailed).
[Color figure can be viewed at wileyonlinelibrary.com]

with the effect of physical health. Second, volunteer status in 1995 is positively related to neighbor engagement in 2005. Earlier, we cited a number of articles in which authors had recommended looking at the "potential causal effect of volunteering on the quality of social relations" (Anderson et al. 2014:13). These recommendations proved to be well-founded. Volunteering increases the likelihood that you will become friends with your neighbors and socialize with them on a regular basis. Note that the effect size of volunteer status on neighbor engagement (0.08^{**}) is similar to that of neighbor contact (0.07^{**}) according to the standardized coefficients. The effect of volunteer status on neighbor engagement is similar to being a homeowner in the neighborhood (0.08^{*}). However, volunteer status does not have a reciprocal relation back to neighbor contact. Third, neighbor trust is unrelated to subsequent volunteering nor does volunteering increase the likelihood that respondents will think their neighbors trust each other. We will discuss the implications of this finding below. Fourth, neighbor contact is the only exogenous variable that affects all four key endogenous variables of neighboring and volunteering. This indicates that frequent contact with neighbors offers a higher chance of forming more engaging and trustful relations and of volunteering. Fifth, the only reciprocal relation established is between neighbor contact and engagement. That is, neighbor contact increases social engagement among neighbors and engagement with neighbors promotes even more frequent contact with them; the impact sizes of these two reciprocal paths are identical (0.07^{**}; 0.07^{*}).

Space limitations preclude a detailed description of the control variables in the model, but the first column in Table 2 shows the adjusted coefficients for volunteer status in 2005. With controls, tenure status and income are no longer associated with volunteering but aside from these changes the SEM results resemble the pairwise correlations shown in Table 1. Volunteers in 2005 are younger and more likely to be female, white, married, highly educated, healthy, and frequent churchgoers. With regard to the three neighboring outcomes, the only two covariates that consistently mattered for all of them are age

and physical health. This indicates that, as people get older and yet maintain their health, they are more likely to contact and engage with neighbors, and perceive stronger trust among their neighbors.

DISCUSSION

The influence of social connections on volunteering has been carefully researched in a number of studies guided by a theory that a person is more likely to volunteer if he or she is socially integrated (Lim 2008; Paik and Navarre-Jackson 2011). The study reported here focuses on one type of social integration: relations with neighbors. We should first reiterate that we could not confirm that there is reciprocity between neighboring and volunteering. This is because volunteer status in 1995 had a positive influence on a change only in neighbor engagement and this particular neighbor item measured in 1995 is not related to a subsequent change in volunteering. Nevertheless, we do find that people who have frequent contact with their neighbors are more likely to volunteer than people who have only occasional contact with their neighbors and this is a solid contribution to the research in this area. Why should neighbor contact have a positive influence on later volunteering but engagement does not? Engagement seems to be a more intimate and close mode of relations to neighbors, whereas contact with neighbors can be more distant and even casual. It might well be the case that simple contact is enough to increase the chances of being asked to volunteer whereas engagement is more likely to result in engaging in social support of a more private kind. (We are indebted to a reviewer for making this point.)

Despite the fact that we found no direct reciprocal relation between any neighboring item and volunteering interesting patterns emerged. We found that more contact with neighbors increases volunteering and that volunteering results in more socializing with neighbors, or engagement. Volunteering seems to be bringing neighbors closer together. One explanation for this is that the rather more superficial mode of neighbor relations—contact—is useful for drawing people into volunteer work. Respondents are much more likely to score high on the contact measure than on the socializing measure. The contact is acting as a conduit to volunteer opportunities. As a result of performing volunteer work, however, the respondent deepens his or her engagement in the social life of the community resulting in a change in neighbor relations from a casual acquaintance to a friendship manifested in more frequent socializing. While there might not be an exact reciprocity between each individual neighbor item and volunteering there is obviously a reciprocal link between neighboring and volunteering taken as a whole.

The attitudinal measure of neighbor relations—the perception that people in the neighborhood trust each other—is unrelated across time with any of the other variables in the model. [According to Figure 1, within waves, trust at T1 is related to contact (0.21^{***}), engagement (0.17^{***}), and volunteering (0.09^{***}) and at T2 with contact ($.07^{**}$) and engagement (0.07^{**}) but not volunteering.] This is somewhat surprising given the research cited above showing a positive relation between trust and volunteering. There are two ways in which the lack of support for the trust hypothesis can be explained. First, any effect trust might be having is being overwhelmed by the effect of contact, with which it is correlated. Second, the item measures the respondent's perception of the trustworthiness of neighbors, not the respondent's level of trust of people in general, the more

conventional measure of generalized trust. Perhaps it takes the more general form of trust to motivate volunteering and in turn volunteering is likely to increase trust in people in general rather than alter the judgment we make about the trustworthiness of our neighbors. Third, the measure of volunteering we use does not specify that the volunteer work be performed on behalf of the neighborhood or the people living in it such as Neighborhood Watch. Judgments about the trustworthiness of neighbors might have had a stronger effect had this kind of volunteer work been singled out for attention.

The results suggest that, when it comes to mobilizing volunteers, behaviors are more important than attitudes. As shown by the within-wave SEM correlations, people who have frequent contact with their neighbors and socialize with them on a regular basis are more likely to think that trust levels are high in their neighborhood, but this perception has no independent effect on volunteering. The cross-lagged relations in Figure 1 support this interpretation: that trust is encouraged by frequent contact with one's neighbors but trust has no reciprocal effect on frequency of contact with them.

Finally, it should be noted that, although we use a simple binary measure of volunteer status, neighboring might have an effect on how *much* a person volunteers. MIDUS asks respondents about hours devoted to volunteering. Supplementary analyses of the data using the same cross-lagged SEM showed that volunteer hours in 1995 were unrelated to any of the neighbor relations measures in 2005 and also none of the three neighboring measures in 1995 was related to volunteer hours in 2005. Thus, it seems that neighbor contact increases the chances of volunteering but does not increase how much a person volunteers. This would support the speculation that the reason why contact is so important is that it increases the chances of being asked not the amount of time volunteered.

LIMITATIONS

First, although we have a three-item measure of neighbor relations, we are unable to measure the structure of neighbor ties. We do not know: the number of neighbor ties to which respondents have access, the so-called network size (Campbell and Lee 1990); how many of their neighbors know or interact with each other (network density); how many friends they have in the neighborhood (role relations); or how different the neighbors are from each other in key demographic characteristics such as gender or race (network heterogeneity) (Paik and Navarre-Jackson 2011).

Second, we treat all volunteer activities as if they were the same. We do not distinguish between them because the categorization of types in MIDUS is not detailed enough. Only three types (health, school and youth, politics) are identified, together with an amorphous "other" category. Crucially, religious volunteering is not separately measured.

Third, we treat all volunteer activities as if they were equally local. It stands to reason that neighboring promotes interest in local issues—schools, churches, civic life, sports, and recreation. But how much of the volunteer work MIDUS respondents contribute to the local community is unknown. If it were possible to distinguish more localized volunteering, our estimates of the role of neighboring might prove to be too conservative. We cannot say for sure that neighbor engagement and neighbor trust are unrelated to volunteering, only that, given our imprecise measure, we failed to support the hypotheses.

Fourth, although our analysis benefits from using longitudinal data, the 10-year time interval between MIDUS 1 and 2 is too long to draw firm conclusions about the mutual

influence of volunteering and neighboring. Although our control for length of residence should eliminate some of the variability in neighboring that might result from geographical mobility, a lapse of 10 years allows for many respondents to have moved from one neighborhood to another, sometimes on more than one occasion, and this might be affecting our results. Similarly, respondents are asked about their volunteer work in the previous 12-month period not the previous 10 years. We know nothing about volunteer activities in the interim. To make up for this limitation due to the long gap between the waves, we conducted a supplementary analysis in which the difference scores of time-varying variables (i.e., marital status, parental status, self-rated physical health) between the two time points (Allison 2009) were included. The relationships between volunteering and neighbor relations did not change with the time-varying covariates (we appreciate the anonymous reviewer for the suggestion of checking results by time-varying covariates).

CONCLUSION

The results reported here suggest that neighboring functions as a source of social capital. Future research should be directed at more detailed measurements of volunteer work, where it is done, and to whom it is directed, so that the significance of neighbors and the neighborhood is more central. It would also be preferable to have data points closer to each other in time. Research should also be directed at assessing how traditional and more modern forms of social integration exist side by side. Since MIDUS 2 was administered in 2005 social relations have become more mediated by the Internet. Between 2005 and 2015, the proportion of Americans using social media increased from 7 percent to 65 percent (Goodspeed 2017). It is reasonable to expect that traditional notions of community, as being situated physically in social space, are declining in importance. This raises the question of whether neighbor relations are as valuable as they once were as a form of social capital. Perhaps it no longer matters how well we know our neighbors because other forms of social integration are more effective in creating social capital. On the other hand, it has been argued that neighboring becomes easier in the age of the Internet, which supplements rather than replaces actual contacts we might have with our neighbors (Hampton and Wellman 2003; Wellman et al. 2001). Social networking does not make us strangers to our neighbors, quite the reverse (Hampton et al. 2011). It is easier to organize a Neighborhood Watch group if we can contact our neighbors via Facebook in addition to having face-to-face contact with them. Those who use neighborhood e-mail lists form a larger number of local, weak ties and the longer they have been using the Internet the more neighborhood ties they form over time (Hampton et al. 2011). Social media can thus be used to enhance relations with neighbors rather than replace them. Future studies of neighboring would, however, need to supplement measures of contact and engagement that were constructed on the assumption of physical proximity, with measures of relations with neighbors that are mediated by the Internet.

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