January 2024

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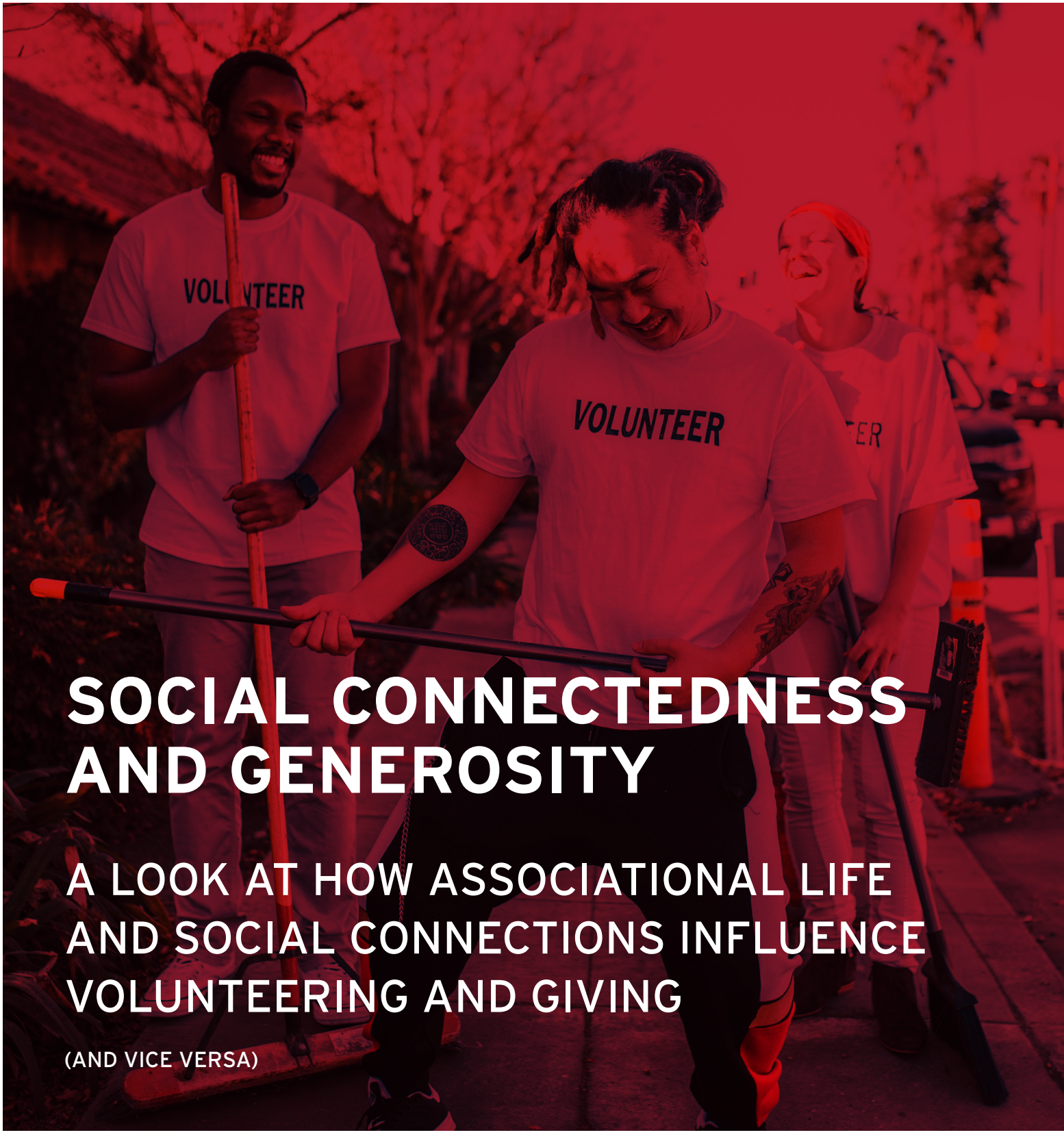

SOCIAL CONNECTEDNESS AND GENEROSITY

A LOOK AT HOW ASSOCIATIONAL LIFE AND SOCIAL CONNECTIONS INFLUENCE VOLUNTEERING AND GIVING

(AND VICE VERSA)

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EXECUTIVE SUMMARY

This report, the second of two reports that the Do Good Institute has produced for the Generosity Commission, focuses on the ways in which interpersonal relationships and participation in community associations and organizations influence the decisions people make about donating money or contributing their time to organizations. The results here extend the ones found in our first report, *Understanding Generosity: A Look at What Influences Volunteering and Giving in the United States*, which looks at the reasons why the likelihood of volunteering and giving varies across the country, and especially why national giving and volunteering rates have declined in recent years.

As with the first report, most of the data used here comes from supplements to the Current Population Survey (CPS), the US government's official survey for labor force statistics. The CPS is the main source of our *micro-level* variables (which reflect the characteristics of individuals, families and households), and we use the same *macro-level* variables, measured at the state level, as we did in *Understanding Generosity*. The data on giving and volunteering come from the CPS Supplement on Volunteering, but we also add data on social connectedness, membership and participation in groups, and trust in neighbors – which were collected from the CPS Civic Engagement Supplement – to measure the influence of social interactions, which can take place within households, neighborhoods or community organizations, on giving and volunteering.

We are able to extend the results of the first report by not only adding variables from the CPS Civic Engagement Supplement, but also by using a modeling strategy that allows us to study the relationship between different types of civic or philanthropic activities. We start by examining the relationship between giving and volunteering, two closely related activities that may very well influence each other: volunteering makes people more likely to give, and giving may also make people more likely to volunteer. Our models do not allow us to determine causality with a great deal of confidence, but our results show that volunteering does influence giving, and giving does influence volunteering, controlling for all other micro-level and macro-level factors, as well as the immediate past history of giving and volunteering for each respondent.

Preferred Citation
Dietz, Nathan. 2024. "Social Connectedness And Generosity: A Look at How Associational Life and Social Connections Influence Volunteering and Giving (and Vice Versa)." Research Report: Do Good Institute, University of Maryland.

We use the same type of modeling strategy to determine how influential *meso-level* variables like group membership, social connectedness, and trust in neighbors are for giving and volunteering. Our results suggest the following:

- **People who volunteer in the previous year are more likely to give in the current year**, by 14.5 percentage points, and **people who give in the previous year are more likely to volunteer in the current year**, by 9.3 percentage points.

- **People who belong to, or participate in, one or more community groups or organizations in the previous year are significantly more likely to volunteer (14.3 percentage points) and also significantly more likely to donate money (by 8.6 percentage points).** The strongest group influences on giving and volunteering are associated with belonging to a congregation. At the other extreme, belonging to a sports or recreation organization has a much smaller (but still positive and statistically significant) influence on both giving and volunteering.

- We can measure social connectedness by calculating the frequency of one common type of household activity (eating dinner with others in the household) and two types of neighborhood activities (talking with one's neighbors, or doing favors for one's neighbors). A scale that is formed from these three activities has a small, but significant, influence on volunteering (1.1 percentage points) but no independent effect on giving, after group membership is controlled for, along with all other factors. This suggests that **these types of social interactions promote giving mainly by encouraging people to participate in groups.**

- Finally, trust in neighbors – measured by a survey question that asks about the number of one's neighbors that people feel they can trust – has a small but significant influence on volunteering and giving that also disappears after group membership is controlled for. Like the previous results about social connectedness, this finding suggests that **trust in others (one's neighbors, in particular) has only an indirect influence on giving and volunteering by encouraging people to participate in associational life.**

Our CPS dataset also allows us to see whether giving and volunteering have an impact in which we engage with others, either through community associations or through more informal social networks. The results of these analyses suggest that:

- **Volunteering in the previous year increases the likelihood of joining one or more community groups or organizations by 24.4 percentage points, and giving in the previous year increases this likelihood by 9.9 percentage points,** controlling for all other factors – including group membership in the previous year.

- **Previous volunteering and giving does not have a significant impact on the composite measure of social connectedness that we originally constructed,** controlling for previous social connectedness, as well as other factors. **However, volunteering in the previous year does seem to encourage people to do favors for their neighbors more often,** controlling for all other factors, including how often the neighbors did favors for one another last year.

- **Previous volunteering and giving does appear to have a significant and positive impact on trust in neighbors,** controlling for all other factors. However, this result is suspect because the CPS data does not allow us to control for the previous year's value of trust, and, as previous research suggests, social trust appears to be a personality "trait" that does not change very much for adults.

- **Finally, volunteering and giving do appear to increase the likelihood that adults vote in national elections,** controlling for all other factors. Volunteering increases the turnout probability by 12.0 percentage points, while giving increases the turnout probability by 10.1 percentage points.

ACKNOWLEDGEMENTS

The Do Good Institute at the School of Public Policy, University of Maryland provides hands-on learning experiences, immersive programs and events, research and supportive resources to develop the next generation of nonprofit leaders, social innovators and civic-minded changemakers. Across campus, students engage in hands-on, project-based and research-focused social impact, philanthropy, and leadership courses, giving them needed skills to make a difference, taught by a growing group of respected scholars and accomplished practitioners. The Institute and its faculty engage in civic research to better understand and share the importance of volunteering, giving, and other community-based actions.

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The Do Good Institute thanks the Generosity Commission for their partnership and funding to launch this research. The Generosity Commission is a group of leaders from across the charitable sector committed to celebrating and supporting Americans' spirit of generosity as expressed through everyday giving, volunteering, and other forms of civic engagement. Launched in October 2021, it is an independent project of Giving USA Foundation™, whose mission is to advance research, education, and public understanding of philanthropy.

Through research and conversation, the Generosity Commission will contribute to national understanding about how individual givers and volunteers are reimagining generosity in powerful and positive ways, strengthening our society and democracy in the process.

The Generosity Commission will conclude its work in 2024 with recommendations for all sectors to support and enable everyday giving and volunteering. Ultimately, the Generosity Commission seeks to foster a culture of individual and collective generosity in the face of the social and economic challenges our society faces today.

INTRODUCTION

What effect does social interaction have on the decisions people make about making contributions of money or time? Generosity is fundamentally about doing work that helps other people, but volunteering and giving do not need to have a social component at all. However, interpersonal relationships are very important to the maintenance of the national donor pool and volunteer workforce: personal requests to volunteer or give are still the most persuasive appeals people receive.

The Do Good Institute (DGI) has prepared two separate reports for the Generosity Commission about the determinants of generosity. The first, *Understanding Generosity: A Look at What Influences Volunteering and Giving in the United States*,[1] which was published in November 2023, attempts to measure the individual-level and community-level influences on giving and volunteering in the United States. **After estimating multilevel models of both behaviors, we find that individual-level (or *micro-level*) factors have much more influence than community-level (or *macro-level*) factors.**

In this report, we investigate the degree to which social connectedness influences giving and volunteering. The literature on *social capital* – which can be described as the collective value of all the mutually beneficial relationships generated by participants in social networks[2] – frequently argues or assumes that social connectedness leads to charitable behaviors: that general connection to the community, even controlling for socioeconomic status and demographic characteristics, can encourage residents to dedicate their time and energy to solving community problems.

In particular, the social science literature on "neighborhood effects" – the ways in which relationships within small communities influence individual behavior of all sorts – has exploded in recent decades.[3] However, some of the most recent work casts doubt on earlier findings, and raises questions about how neighborhoods exert their influence on charitable behavior. One of the most plausible explanations about how neighborhood effects encourage generosity – good relations among neighbors builds social trust, which encourages giving and volunteering – has received limited empirical support in the literature.[4] A more recent article on the relationship between volunteering and neighborliness[5] suggests that contact with neighbors leads to volunteering now and ten years afterward, but that trust in neighbors does not lead to volunteering neither now nor later.

In general, many empirical studies do not consider the relationship between social connections and charitable behavior because of the lack of suitable data, especially in America. Multilevel models[6] that focus on this relationship often use data collected in Europe because of the difficulty of finding US data of comparably high quality. To overcome the problem of the availability of suitable data on American generosity, we rely on data collected by the Current Population Survey (CPS), as we did in the first of our Generosity Commission reports. The CPS is a monthly data collection primarily designed to measure labor force participation that is administered by the U.S. Census Bureau and Bureau of Labor Statistics. In most months, the CPS adds supplemental questionnaires to the basic labor force survey, which are occasionally about topics related to generosity and civic engagement.

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[1] Dietz, N. and Grimm, R. T., Jr. (2023). "Understanding Generosity: A Look at What Influences Volunteering and Giving in the United States." Research Report: Do Good Institute, School of Public Policy, University of Maryland. Available at https://dogood.umd.edu/research-impact/publications/understanding-generosity-look-what-influences-volunteering-and-giving.

[2] This definition is paraphrased from the one used by the Saguaro Seminar, which was organized by Robert Putnam and his Harvard University colleagues in the late 1990s. Available at FAQs, "What does 'social capital' mean?" (https://wayback.archive-it.org/org-1167/20170629175905/https://www.hks.harvard.edu/programs/saguaro/about-social-capital/faqs#volunteering)

[3] Sampson, R. J., Morenoff, J. D., & Gannon-Rowley, T. (2002). "Assessing 'Neighborhood Effects': Social Processes and New Directions in Research." *Annual Review of Sociology*, *28*(1), 443-478. https://doi.org/10.1146/annurev.soc.28.110601.141114.

[4] Uslaner, E. M. & Brown, M. (2005). "Inequality, trust, and civic engagement." *American Politics Research, 33*(6), 868-894. https://doi.org/10.1177/1532673X04271903.

[5] Wilson, J. & Son, J. (2018). "The Connection between Neighboring and Volunteering." *City and Community, 17*(3), 720–736. https://doi.org/10.1111/cico.12324.

[6] Glanville, J. L., Paxton, P., & Wang, Y. (2015). "Social Capital and Generosity: A Multilevel Analysis." *Nonprofit and Voluntary Sector Quarterly, 45*(3), 526–547. https://doi.org/10.1177/0899764015591366.

Our first report used data from the CPS Supplement on Volunteering, which contains questions on volunteering and giving that were consistently worded between 2008 and 2015. In this report, we also use data from two other CPS Supplements: the Supplement on Civic Engagement, which was administered in most years between 2008 and 2013, and the Supplement on Voting and Registration, which has been administered in even-numbered years for decades.

MEASURING CIVIC ENGAGEMENT USING THE CURRENT POPULATION SURVEY (CPS) SUPPLEMENTS

The CPS contains large national and statewide samples every year and collects data for a wide variety of household-level, family-level and individual-level variables, which we use as data sources for the micro-level variables in our models. In addition, the CPS structure allows us to identify the state and metropolitan area in which most households are located. We take advantage of this by adding a group of state-level variables that capture macro-level contextual influences on individual philanthropy.

A recent report published by the Do Good Institute and the Civic Innovation Center[7] uses data collected on CPS supplements from 2008 through 2018 to describe changes in the civic health of the state of Maryland. It extends the research published in a 2010 report on Maryland's civic health[8] by showing state and national trends. The indicators in the Maryland civic health report are organized into the following six categories:

- **Service,** including formal volunteering through an organization and less formal ways of helping others, such as working with neighbors to fix a community problem;
- **Political Action,** including registering to vote and voting, but also non-electoral forms of political activity;
- **Participating in a Group,** including memberships in associations and community organizations;
- **Social Connectedness,** including the informal ways that people interact with their family, friends and others in their community, such as exchanging favors with their neighbors;
- **Staying Informed,** which captures ways of accessing news and information about current events, whether in print or online; and
- **Trust and Confidence in Institutions,** a category that combines social indicators such as trust in one's neighbors along with measures of confidence in prominent institutions such as the media, public schools, and private corporations.

[7] Dietz, N. (2021). "Maryland Civic Health Report: A Look at Civic Engagement in Maryland and the U.S." Research Report: Do Good Institute, University of Maryland. Available at https://dogood.umd.edu/research-impact/publications/maryland-civic-health-report-look-civic-engagement-maryland-and-us.

[8] National Conference on Citizenship. (2010) Maryland Civic Health Index Report: Civic Voices, Civic Health. Available at https://www.ncoc.org/wp-content/uploads/2015/04/2010MarylandCHI.pdf. The National Conference on Citizenship (NCoC) defines "civic health" as the way that communities are organized to define and address public problems (https://ncoc.org/chi/).

Table 1 contains topline national percentages for the indicators in these categories. Details about the measurement of these variables can be found in the Appendix to the 2021 Maryland civic health report[9] cited above.

Our primary goal in this report is to add variables that measure participation in associational life and other measures of social connectedness to our models of giving and volunteering. We imagine that these *meso-level* variables[10] – which measure the influences of groups, organizations, social networks or other institutions – will be significantly related to giving and volunteering, even after controlling for the effects of the micro-level and macro-level variables in our models.

Table 1: National Statistics – CPS Civic Engagement Indicators

POLITICAL ACTION	RATE	YEARS (USED FOR RATE)	RATE	YEARS (USED FOR RATE)	STATISTICALLY SIGNIFICANT CHANGE?
Voting, National Election	51.1%	2008, 2010, 2012	47.9%	2014, 2016, 2018	Decrease
Registered to Vote, National Election	62.0%	2008, 2010, 2012	61.6%	2014, 2016, 2018	Not significant
Lived at Current Address - 5 Years or More	59.8%	2008, 2010, 2012	60.1%	2014, 2016, 2018	Not significant
Voting in Local Elections			58.2%	2011, 2013	
Contacted Public Official	10.7%	2008, 2009, 2010	11.6%	2011, 2013	Increase
Bought or Boycotted	10.1%	2008, 2009, 2010	12.5%	2011, 2013	Increase
SERVICE					
Volunteering	26.5%	2010, 2011, 2012	25.2%	2013, 2014, 2015	Decrease
Work with Neighbors	8.3%	2010, 2011, 2012	7.6%	2013, 2014, 2015	Decrease
Attended Public Meeting	9.1%	2010, 2011, 2012	8.2%	2013, 2014, 2015	Decrease
Gave to Charity	50.7%	2011, 2012, 2013	50.0%	2013, 2014, 2015	Decrease
SOCIAL CONNECTEDNESS					
Dinner with Household Members - Frequently (at least a few times a week)	74.3%	2008, 2009, 2010	74.3%	2011, 2013	Not significant
Talk to Family/Friends via Internet - Frequently	53.8%	2008, 2009, 2010			
Talk with Neighbors - Frequently	44.6%	2008, 2009, 2010	42.6%	2011, 2013	Decrease
Exchange Favors with Neighbors - Frequently	15.8%	2008, 2009, 2010	13.1%	2011, 2013	Decrease
See or Hear from Friends or Family - Frequently			77.3%	2011, 2013	

[9] Dietz, 2021, *op. cit*.

[10] We borrow this definition from Nesbit, R., Moldavanova, A., Cavalcante, C.E., Jochum, V., Nie, L., & Sahin, S. (2016). "Conducive meso- and micro-contexts influencing volunteering." *The Palgrave handbook of volunteering, civic participation, and nonprofit associations, Chapter 27, 607-631.* As argued in the first report, both meso-level and macro-level variables can be described as measures of how connected individuals are to their community. With meso-level variables, the interpersonal connections are more direct; macro-level variables describe the social or philanthropic culture of the community.

Table 1: National Statistics – CPS Civic Engagement Indicators

PARTICIPATING IN A GROUP	RATE	YEARS (USED FOR RATE)	RATE	YEARS (USED FOR RATE)	STATISTICALLY SIGNIFICANT CHANGE?
School Group	14.9%	2008, 2009, 2010	14.8%	2011, 2013	Not significant
Service or Civic Association	6.8%	2008, 2009, 2010	7.2%	2011, 2013	Increase
Sports or Recreation Association	10.1%	2008, 2009, 2010	10.6%	2011, 2013	Increase
Church or Religious Association	17.8%	2008, 2009, 2010	20.0%	2011, 2013	Increase
Other Group Type	5.5%	2008, 2009, 2010	5.4%	2011, 2013	Not significant
Involved with One or More Groups	34.5%	2008, 2009, 2010	36.2%	2011, 2013	Increase
Served as Group Officer or Committee Member	9.7%	2008, 2009, 2010	10.1%	2011, 2013	Increase
STAYING CONNECTED					
Discuss Politics - Frequently	34.8%	2008, 2009, 2010	28.1%	2011, 2013	Decrease
Express Opinions via Internet - Frequently			8.0%	2011, 2013	
TRUST AND CONFIDENCE IN INSTITUTIONS					
Trust in neighbors			56.2%	2011, 2013	
Confidence in corporations			63.4%	2011, 2013	
Confidence in media			58.0%	2011, 2013	
Confidence in public schools			86.0%	2011, 2013	

DATA SOURCES

MAIN DEPENDENT VARIABLES: GIVING AND VOLUNTEERING

This report builds directly on the results from the first report, in which the primary dependent variables are giving and volunteering – key indicators in the Service category of civic indicators. Annual data on both variables were collected for many years on the CPS. Between 2002 and 2015, the September CPS Volunteer Supplement began by asking respondents two primary questions about their activities in the preceding twelve months:

- This month, we are interested in volunteer activities, that is activities for which people are not paid, except perhaps expenses. We only want you to include volunteer activities that (you/NAME) did through or for an organization, even if (you/he/she) only did them once in a while. Since September 1st of last year, (have you/has NAME) done any volunteer activities through or for an organization?
- Sometimes people don't think of activities they do infrequently or activities they do for children's schools or youth organizations as volunteer activities. Since September 1st of last year, (have you/has he/has she) done any of these types of volunteer activities?

The respondent was counted as a volunteer if he or she answered "yes" to either of these two questions.

In 2008, a question about giving to charity was added:

- During the (previous year), did [you or anyone in your family] donate money, assets, or property with a combined value of more than $25 to religious or charitable organizations?

MICRO-LEVEL AND MACRO-LEVEL INDEPENDENT VARIABLES

In this report, all of the models we estimate contain the same group of independent, or explanatory, variables, which were also used in the analysis published in the first of our Generosity Commission reports. Our analysis centers on the models that use CPS data collected between 2010 and 2015, with macro-level variables added that measure state characteristics. The choice of time period is driven by the lack of available macro-level data for 2008 and 2009 (the first two years when the giving question was available on the CPS Volunteer Supplement). We focus on state-level macro variables, rather than macro variables measured for metropolitan areas, so we can include data from rural households, which are not located in metropolitan areas. The state-level data give us maximum size and diversity in our sample, which is helpful in developing our method.

Each model also contains a group of individual-level variables that describe the respondent, the respondent's family, or the respondent's household. Table 2 gives a broad summary of the results from these micro-level variables, while Table 3 summarizes the macro-level variables that were included in all of our models.

Table 2: Individual-Level Influences on Giving and Volunteering

	MOST LIKELY TO VOLUNTEER	MOST LIKELY TO GIVE
Gender	Women	Women
Race	More than one racial category	White (only) and more than one racial category
Ethnicity (Latino Origin)	Non-Latino	Non-Latino
Educational Attainment	College graduates	College graduates
Marital Status	Married people	Married people
Parenthood Status	Parents	Parents
Labor Force Participation	People working part-time	People working full-time
Family Income	Higher family income	Higher family income
Urban-Suburban-Rural Household	Rural households	Suburban households
Region of the USA	People in Western region	People in Western region
Age Groups	People in midlife	Older adults
CPS Survey Year	2010-2011	2010-2011

Table 3: State-Level (Macro-Level) Variable Definitions and Hypothesized Effects

VARIABLE	DESCRIPTION	HIGHER VALUES OF VOLUNTEERING AND GIVING ARE ASSOCIATED WITH:
Homeownership	Percent of housing units that are inhabited by the homeowner	Higher homeownership rates
Multi-Unit Housing	Percent of housing structures that contain more than one housing unit	Lower percentages of homes in multi-unit structures
Commuting Time	Mean travel time to work (in minutes) of workers aged 16 years and over who did not work at home	Lower average commuting times
Percent with HS Education	Percent of adults aged 25 and over who have a high school diploma or the equivalent	Higher percentages of residents with HS degrees
Percent with College Education	Percent of adults aged 25 and over who have a college degree (BA or BS)	Higher percentages of residents with college degrees
Unemployment Rate	Based on annual average of seasonally adjusted monthly county-level unemployment rates	Lower unemployment rates
Poverty Rate	Percent of residents with annual income at or below the poverty level	Lower poverty rates
Population Density	Estimated population divided by estimated size of land mass	Less densely populated areas
Large Nonprofits per 1000 Residents	Number of 501(c) tax-exempt organizations with more than $50,000 in gross receipts, divided by population and multiplied by 1000	More large nonprofits per 1000 residents
Small Nonprofits per 1000 Residents	Number of 501(c) tax-exempt organizations with $50,000 or less in gross receipts, divided by population and multiplied by 1000	More small nonprofits per 1000 residents
Median Income	Median household income (not adjusted for inflation)	Higher median income

Table 3: State-Level (Macro-Level) Variable Definitions and Hypothesized Effects

VARIABLE	DESCRIPTION	HIGHER VALUES OF VOLUNTEERING AND GIVING ARE ASSOCIATED WITH:
Congregations per 1000 Residents	Number of congregations, divided by population and multiplied by 1000	More congregations per 1000 residents
Blau Index of Racial Heterogeneity	Calculated as the likelihood that two randomly chosen individuals from the population do not share the same racial background	Lower index values (more homogeneous populations)
Gini Index of Income Inequality	Measures the amount of dispersion in the distribution of household income	Lower index values (less income inequality)
Putnam Social Capital Index	State-level Comprehensive Social Capital Index, based on 14 indicators of civic and associational activities	Higher index values

ANALYTIC APPROACH: MEASURING THE SIMULTANEOUS INFLUENCES OF GIVING AND VOLUNTEERING

One of our primary goals for this report is to develop models that allow us to measure the influence of one type of charitable behavior on the likelihood of acting charitably in other ways. We start by analyzing the relationship between giving money and volunteering time, which are two of the most basic and common forms of generosity. Most scholars agree that these activities are related, but economists have tended to view them as substitutes: the more time you spend volunteering, the less money you donate, and vice versa. However, most empirical studies find that people who give are also more likely to volunteer – that is, giving and volunteering are complementary behaviors.

VOLUNTEERING AND GIVING AS LINKED BEHAVIORS

The connection between contributing time and contributing money has inspired a large social science literature with both theoretical and empirical components. One strand of this literature was inspired by economic research that studied the influence of tax incentives on the amount of money people contribute to charity, and focused on estimating the tax-price elasticity – how responsive donations are to changes in tax incentives (see Peloza and Steel 2005[11] for an overview of these studies). Empirical studies such as Long (1977),[12] Menchik and Weisbrod (1987),[13] and Brown and Lankford (1992)[14] used the few datasets that contained information about both contributions of time and money to explore the relationship between these two activities. Most of these empirical analyses were motivated by two types of theories: the consumption model, in which the donor benefits directly from giving time or money; and the public goods model, in which donors are trying to optimize the amount of charity, but do not benefit directly from the gifts they themselves make (Feldman 2010, 105).[15] Menchik and Weisbrod (1987)[16] also propose the investment model, in which people volunteer to sharpen their job skills and expand their professional networks. In many of these studies, the dependent variables are the amount of money and/or the amount of time contributed to charity. Exceptions include Cappellari *et al*. (2011)[17] and Almunia *et al*. (2020),[18] which analyze data collected in Italy and England, respectively, and focus on the decision to contribute time or money to charitable causes at all, rather than the amount contributed, or the decision to support a given organization.

[11] Peloza, J. & Steel, P. (2005). "The price elasticities of charitable contributions: a meta-analysis." *Journal of Public Policy & Marketing, 24*(2), 260-272.
[12] Long, S. (1977). "Income Tax Effects on Donor Choice of Money and Time Contributions." *National Tax Journal, 30*, 207-212.
[13] Menchik, P. L. & Weisbrod, B. A. (1987). "Volunteer labor supply." *Journal of Public Economics, 32*(2), 159-183.
[14] Brown, E. & Lankford, H. (1992). "Gifts of money and gifts of time estimating the effects of tax prices and available time." *Journal of Public Economics, 47*(3),321-341.
[15] Feldman, N. E. (2010). "Time is money: Choosing between charitable activities." *American Economic Journal: Economic Policy, 2*(1), 103-130.
[16] Menchik and Weisbrod, 1987, *op. cit*.
[17] Cappellari, L., Ghinetti, P., and Turati, G. (2011). "On time and money donations." *The Journal of Socio-Economics, 40*(6),853-867.
[18] Almunia, M., Guceri, I., Lockwood, B. and Scharf, K. (2020). "More giving or more givers? The effects of tax incentives on charitable donations in the UK." *Journal of Public Economics, 183*,104-114.

In many of these studies, the primary question is whether contributions of time and money tend to be complements or substitutes.[19] Many consumption-based theories[20] predict that people will tend to have clear preferences for one activity or the other, depending on their circumstances. However, although most empirical studies show that these activities are complements – that people who perform one activity are more likely to perform the other – rather than substitutes, they vary in their explanation why. Andreoni *et al*.[21] attribute this result to the influence of self-image (the "warm glow" of satisfaction that donors experience) while Cappellari *et al*.[22] argue that social esteem also plays a part, given that contributions send signals about the strength of one's commitment to charity. In contrast, Duncan (1999)[23] shows that within a public goods model, where people value the total amount of support given to charity rather than their own contribution, time and money are substitutes rather than complements.

Because most empirical studies find that contributions of time and money are positively associated, the focus then turns to explanations of how external actors – other people and groups – can influence an individual's decision to donate time and/or money to charitable causes. For instance, Feldman,[24] who finds that the positive correlation between the two activities outweighs the modest substitution effect, attributes her results to social influences: people who donate to organizations are more likely to be asked to volunteer. These social influences can affect the giving decision differently than the volunteering decision, and can vary across individuals, based (for instance) on the structure and characteristics of a person's social networks[25] and on other social and community activities.[26]

[19] Menchik and Weisbrod, 1987, *op. cit*.
[20] Andreoni, J., Gale, W. G., Scholz, J. K., & Straub, J. (1996). "Charitable contributions of time and money." University of Wisconsin-Madison Working Paper; Feldman, 2010, *op. cit*.; and Cappellari *et al*., 2011, *op. cit*.
[21] Andreoni *et al*., 1996, *op. cit*.
[22] Cappellari *et al*., 2011, *op. cit*.
[23] Duncan, B. (1999). "Modeling charitable contributions of time and money." *Journal of Public Economics, 72*(2),213-242.
[24] Feldman, 2010, *op. cit*.
[25] Apinunmahakul, A. and Devlin, R.A. (2008). "Social networks and private philanthropy." *Journal of Public Economics, 92*(1-2), 309-328.
[26] Jones, K.S. (2006). "Giving and volunteering as distinct forms of civic engagement: The role of community integration and personal resources in formal helping." *Nonprofit and Voluntary Sector Quarterly, 35*(2), 249-266.

MODEL SPECIFICATION: INCORPORATING HISTORY AND UNMEASURED VARIABLES

The first report focused on empirical models of giving and volunteering that ignored the relationship between these two activities. Although the CPS datasets are large and diverse enough to allow analysts to explore many different types of research questions, there is little consensus about how best to use the data to study the relationship between giving and volunteering. One simple approach is to calculate bivariate correlations: although large portions of the adult population neither give nor volunteer in any given year, the two activities are positively correlated, which shows that volunteers are more likely to give, and vice versa.

This finding raises questions about causality that are impossible to answer with these simple correlations, due to the likelihood that the relationship between giving and volunteering is one of mutual causation. Although our models contain a large number of micro-level and macro-level variables, the main challenge we face is *identification*: how to develop a model that measures the effect of giving on volunteering (for instance) that recognizes that volunteering may also influence giving. Analysts often use *instrumental variables* (IV) techniques to identify such a model: if you can find proxy variables (or *instruments*) for giving that are not directly correlated with volunteering, you can substitute these proxy variables for the giving variable in a model that attempts to predict volunteering. Models specified in this way can give analysts some leverage over the question of whether giving has a larger effect on volunteering, or whether the opposite causal relationship is stronger.[27]

The main obstacle to using IV techniques to estimate the relationship between volunteering and giving is that most of the micro-level variables included in both models are all significant predictors of both activities, which means none of them can be excluded from either equation and used as instruments for giving or volunteering. Given the difficulty we would face in using IV techniques to identify the giving and volunteering equations, the models used in this report have a different structure that is flexible enough to allow us to study the influence of social connections on giving and volunteering, while accounting for the relationship between these activities.

Our models exploit a key feature of the CPS sample design: all adult respondents who receive the September Volunteer supplement are able to answer the giving and volunteering questions twice, in two successive years. After a household is selected for the CPS sample, all adult residents answer the main survey, and all monthly supplements, eight times: four consecutive months, followed by an eight-month break, and concluding with four more monthly surveys. This design means that in every CPS sample, there are eight subsamples, each defined by the month when their CPS rotation began. Table 4 below shows how half the households in the September 2010 CPS sample, based on their first month in the rotation, were also included in the September 2011 sample. This means we have giving and volunteering data for both years for these respondents – as well as data from 2009 and 2010 for members of the other September 2010 households.

[27] Even in more sophisticated models, the identification problem is often not well described, and the solutions are not fully justified. This is frequently the case in studies that use structural equation modeling. Structural equation models depend on valid identification strategies as much as IV methods do, but very few structural equation models do more than present an argument for the assumptions they make to identify their models.

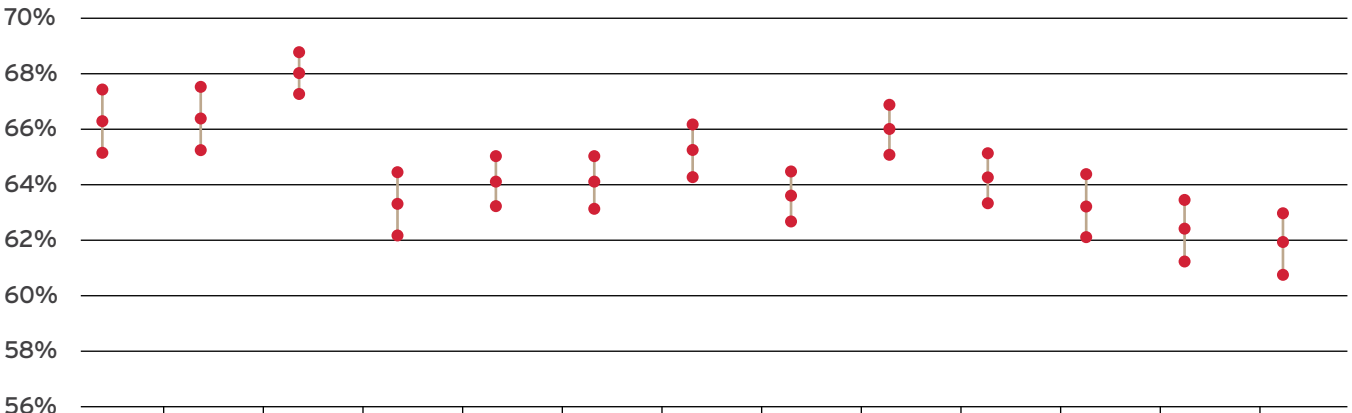
This allows us to add *lagged* values of giving and volunteering to both equations – measures of giving and volunteering in the previous year – which allows us to determine the impact of recent past decisions to give time or money to charitable causes on present decisions. The addition of these lagged variables to our models is important because it has been well established that the volunteer workforce and the donor pool both experience considerable amounts of churn: every year, while some individuals maintain their status as (non-)volunteers or (non-) donors, many others change their behavior. Figures 1a and 1b show historical trends for retention (the percentage of volunteers and donors in a given year who also volunteer or give the following year), while Figures 2a and 2b show trends for acquisition (the percentage of non-volunteers and non-donors in a given year who decide to volunteer or give the following year), where the bars around each rate represent 95 percent confidence intervals.[28]

Table 4: CPS Sample Rotation Defined by First Month in Sample, 2010-2011

SEPTEMBER 2010	SEPTEMBER 2011
June 2009	**June 2010**
July 2009	**July 2010**
August 2009	**August 2010**
September 2009	**September 2010**
June 2010	June 2011
July 2010	July 2011
August 2010	August 2011
September 2010	September 2011

[28] These figures were originally published in Grimm, R. T., Jr. and N. Dietz. (2019). "A Less Charitable Nation: The Decline of Volunteering and Giving in the United States." Paper presented at USC CPPP Policy Symposium, March 2019. Available at https://cppp.usc.edu/wp-content/uploads/2019/03/Grimm-Robert-Dietz-and-Grimm_A-Less-Charitable-Nation_March-2019-USC-Conference-Paper.pdf.

Figure 1a: Volunteer Retention - 2002-2003 to 2014-2015

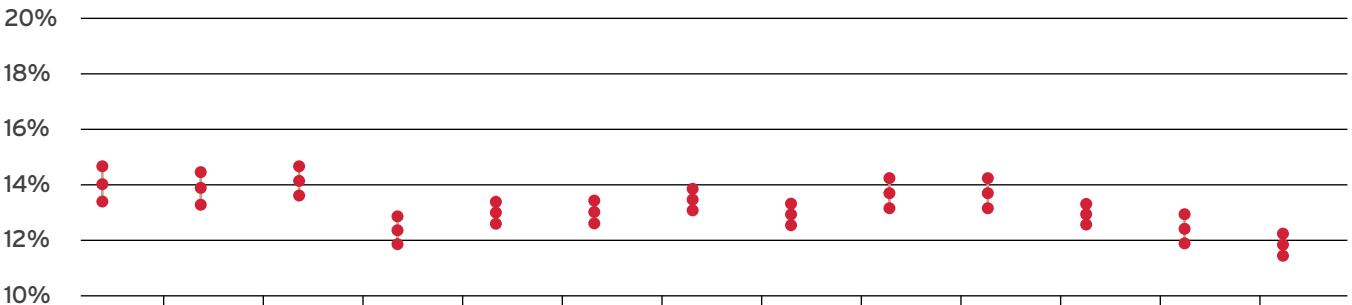


	2002-03	2003-04	2004-05	2005-06	2006-07	2007-08	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15
Low	65.5%	65.7%	67.0%	62.6%	63.3%	63.4%	64.5%	62.6%	65.0%	63.4%	62.1%	61.3%	60.7%
Med	66.4%	66.7%	68.0%	63.5%	64.3%	64.4%	65.4%	63.6%	66.0%	64.5%	63.2%	62.5%	61.9%
High	67.3%	67.6%	68.9%	64.5%	65.3%	65.3%	66.4%	64.5%	67.0%	65.5%	64.3%	63.6%	63.1%

Figure 1b: Donor Retention - 2008-2009 to 2014-2015

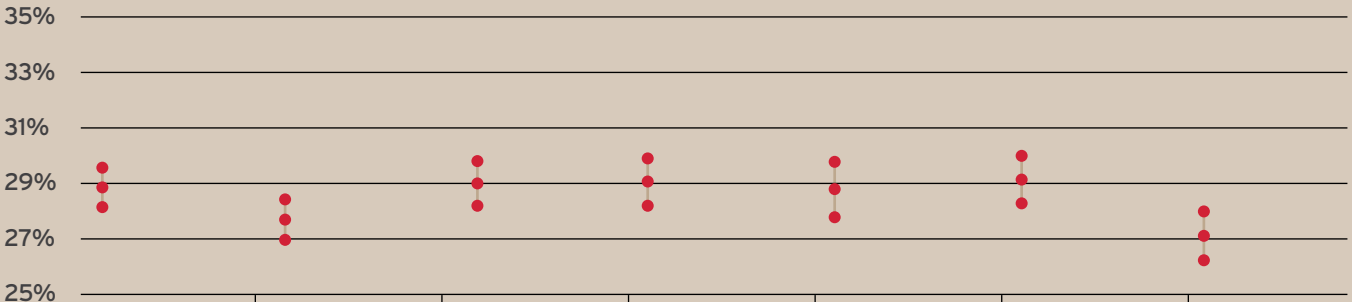
	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15
Low	73.7%	74.9%	75.4%	75.6%	73.9%	74.3%	73.1%
Med	74.4%	75.5%	76.1%	76.3%	74.6%	75.1%	73.9%
High	75.0%	76.2%	76.8%	76.9%	75.4%	75.8%	74.7%

Figure 2a: Volunteer Acquisition - 2002-2003 to 2014-2015



	2002-03	2003-04	2004-05	2005-06	2006-07	2007-08	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15
Low	13.6%	13.3%	13.7%	11.9%	12.5%	12.6%	13.0%	12.4%	13.2%	13.2%	12.5%	11.9%	11.4%
Med	14.1%	13.8%	14.2%	12.3%	12.9%	13.0%	13.4%	12.9%	13.7%	13.7%	13.0%	12.4%	11.9%
High	14.6%	14.4%	14.7%	12.8%	13.4%	13.5%	13.9%	13.3%	14.2%	14.2%	13.5%	12.9%	12.4%

Figure 2b: Donor Acquisition - 2008-2009 to 2014-2015



	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15
Low	28.1%	27.0%	28.2%	28.2%	27.9%	28.3%	26.3%
Med	28.9%	27.8%	29.0%	29.1%	28.8%	29.2%	27.2%
High	29.7%	28.6%	29.9%	30.0%	29.7%	30.1%	28.2%

These figures help explain why the typical year-to-year changes in the adult volunteer and giving rates are fairly small, even when they are statistically significant.[29] However, between 2010 and 2015, the declines in both the retention and acquisition rates were statistically significant for both giving and volunteering. If the year-by-year churn in the volunteer and donor pools tends to result in declining overall numbers, then any analysis of the declines in volunteering and giving needs to take changes in individual behavior into account.

[29] For example, if the giving rate is typically about 50 percent, and the retention rate among donors is about 75 percent, that means that about a quarter of the donor pool drops out in a given year. To replace these donors, organizations must "acquire" about 25 percent of non-donors from the previous year. The retention rates in Figure 1b fluctuate around 75 percent, while the acquisition rates in Figure 2b are slightly higher than 25 percent. The national rate is still fairly stable because people who enter the target population in year 2 – mostly very young adults and immigrants – tend to have lower giving rates than American adults as a whole. The math works similarly for the volunteer rate, which tends to be between 25 and 30 percent, even though retention rates and acquisition rates for volunteering are lower than they are for giving.

Along with adding last year's volunteer status (that is, lagged volunteering) to the volunteering equation, and adding lagged giving to the giving equation, we also make two other changes to the models estimated in the first report. We add the lagged values of giving to the volunteering equation and the lagged values of volunteering to the giving equation, and we link the two equations by allowing for correlation between the disturbance terms.[30] The resulting model, known as *bivariate probit*, may not allow us to estimate the causal impact of volunteering on giving (or the opposite causal impact),[31] but it does have several attractive features.

First, the inclusion of lagged values of giving and volunteering is an accurate description of how organizational leaders search for volunteers and donors: the best information they could use for recruitment comes from the recent past. However, our modeling decisions also allow us to handle the absence of important missing variables in a defensible way. The CPS survey does not capture information about certain relevant behaviors – most notably, attendance at religious services – and collects very little data about the respondent's beliefs and attitudes. There is little doubt that religious beliefs, political attitudes, and motivations to help others are all significant influences on the decision to give money or perform volunteer work. But because these factors influenced last year's giving and volunteering decisions, the lagged variable should control for them to some extent. What the lagged variables cannot measure are the impacts of contemporaneous unmeasured factors, which can include changes in beliefs or attitudes, but also other changes in life circumstances. These unmeasured factors are all included in the disturbance terms of the equations; if, together, they have an effect on both giving and volunteering, this should be reflected in the correlation between the disturbances.

Although the scholarly literature on the use of lagged dependent variables focuses much more on potential problems than on best practices, the model we used here to study the relationship between giving and volunteering – and other forms of social interaction – seems to be consistent with best practices in social science methodology.[32] Social psychologists who study behavioral changes use the terms "trait" and "state" to refer to the long-term, or permanent, influences and the short-term, or time-specific, influences on attitudes or actions. Adding lagged values of the dependent variables to the equations for giving and volunteering helps us control for the "trait" characteristics associated with generosity: the factors that have had long-lasting influences on the choices people make. The correlation between the disturbances in the two equations captures the characteristics of the "state" – the circumstances in which people make their decisions about giving and volunteering – that influence both decisions. And adding the lagged value of giving to the volunteering equation (and lagged volunteering to the giving equation) allows us to simulate the real-life situation that community leaders must confront: they need to decide which potential volunteers and donors to approach, based on their recent past behavior as well as other relevant micro- and macro-level variables.

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[30] Other studies that analyze multiple forms of philanthropic and civic activities use a similar multivariate probit model to account for unmeasured factors that influence each of the decisions. Lee and Brudney (2012) use bivariate probit to model formal and informal volunteering decisions, and Osili (2017) uses a trivariate probit model (three equations, where correlation among all three disturbance terms is estimated) to study volunteering, donations of money to charitable organizations, and donations of money to informal networks by immigrants. See Osili, U. O. (2017). "Do immigrants contribute to public goods? Recent evidence from the US." Working Papers Series from Swedish Entrepreneurship Forum; and Lee, Y. J. & Brudney, J. L. (2012). "Participation in formal and informal volunteering: Implications for volunteer recruitment." *Nonprofit Management and Leadership*, *23*(2), 159-180.

[31] The literature on the appropriate way of estimating causal impacts of one activity on another is overwhelmingly pessimistic about whether any multivariate modeling technique can accomplish this goal. Political scientist Jas Sekhon seems to reflect the overall consensus on this point when he concludes: "Without an experiment, natural experiment, a discontinuity, or some other strong design, no amount of econometric or statistical modeling can make the move from correlation to causation persuasive." See Sekhon, J. S. (2009). "Opiates for the matches: Matching methods for causal inference." *Annual Review of Political Science*, *12*, 487-508.

[32] The debate is still very active in the political science literature, as detailed by Wilkins (2018), who argues that dynamic models (where past values influence present values of key variables) should err on the side of including more lagged terms rather than fewer, to test hypotheses about the complexity of the dynamic structure. Since the CPS data only allows us to use data from last year in a model of this year's activity, our model follows this recommendation. Experimental studies conducted by Wilkins and Keene and Kelly (2006) suggest that although the estimated effects of the lagged variables may be biased, the bias is downward – meaning that the model's estimates may understate the effects of lagged giving and volunteering on present activity. See Wilkins, A. S. (2018). "To lag or not to lag?: Re-evaluating the use of lagged dependent variables in regression analysis." *Political Science Research and Methods*, *6*(2), 393-411; and Keele, L. & Kelly, N. J. (2006). "Dynamic models for dynamic theories: The ins and outs of lagged dependent variables." Political Analysis, 14(2), 186-205.

RESULTS FROM THE BASIC MODEL: THE RELATIONSHIP BETWEEN VOLUNTEERING AND GIVING

The results of our basic model of giving and volunteering show that prior giving has a significant positive influence on current volunteering, and prior volunteering has a significant positive influence on current giving, controlling for all other micro-level and macro-level factors. Tables 5a and 5b contain the full results from both models; these tables also include the estimated marginal effects from the original model specifications used in the first report, for comparison. Adding lagged giving and volunteering to the original model specification reduces the sample size considerably, since the sample for each year is limited to those respondents who have already completed four months of their CPS rotation – somewhat less than half the annual sample, given that the analysis is limited to respondents who have actually answered the giving and volunteering questions in both years.

Table 5a: Bivariate Probit - Results from volunteering equation, 2010-2015

Dependent Variable: Formal Volunteering (Unpaid Work Through or For an Organization), 2010-2015 (pooled) - with state-level macro-level variables

VARIABLE	CATEGORY	COEFFICIENT	STANDARD ERROR	Z-SCORE	P-VALUE	MARGINAL EFFECT (DY/DX)
	Volunteered Last Year	1.273	0.009	137.86	0.000	38.2%
	Gave Last Year	0.309	0.010	30.12	0.000	9.3%
Gender	Male			Reference Category		
	Female	0.128	0.009	14.30	0.000	3.8%
Race	White			Reference Category		
	Black	-0.059	0.017	-3.58	0.000	-1.8%
	American Indian, Alaskan Native	-0.160	0.052	-3.09	0.002	-4.9%
	Asian	-0.282	0.024	-11.77	0.000	-8.5%
	Native Hawaiian / Pacific Islander	-0.034	0.111	-0.31	0.757	-1.0%
	More than one race category	0.054	0.040	1.36	0.173	1.6%
Ethnicity (Latino Origin)	Latino	-0.184	0.016	-11.30	0.000	-5.5%
	Non-Latino			Reference Category		
Educational Attainment	Less than HS Diploma			Reference Category		
	HS Grad	0.009	0.016	0.57	0.569	0.2%
	Some college	0.169	0.016	10.40	0.000	4.6%
	College grad +	0.367	0.017	21.47	0.000	10.6%
Own Children under 18	No own children under 18			Reference Category		
	Own children under 18	0.178	0.013	14.21	0.000	5.3%
Marital Status	Single - Never married			Reference Category		
	Married - spouse present	0.076	0.015	5.10	0.000	2.3%
	Other marital status	0.011	0.017	0.64	0.523	0.3%
Labor Force Participation	Employed, full-time			Reference Category		
	Employed, part-time	0.182	0.014	12.59	0.000	5.3%
	Unemployed	0.241	0.024	10.14	0.000	7.0%
	Not in labor force	0.074	0.012	6.24	0.000	2.2%
Family Income	Less than $35,000			Reference Category		
	Between $35-$50,000	0.079	0.014	5.53	0.000	2.2%
	Between $50-$75,000	0.105	0.013	7.83	0.000	3.0%
	$75,000 and over	0.188	0.013	14.57	0.000	5.5%
Urban-Suburban-Rural Household	Urban (principal city)	-0.061	0.013	-4.74	0.000	-1.9%
	Suburban (balance)	-0.031	0.011	-2.93	0.003	-1.0%
	Rural (nonmetropolitan)			Reference Category		
	Not identified			Reference Category		

Table 5a: Bivariate Probit - Results from volunteering equation, 2010-2015
Dependent Variable: Formal Volunteering (Unpaid Work Through or For an Organization), 2010-2015 (pooled) - with state-level macro-level variables

VARIABLE	CATEGORY	COEFFICIENT	STANDARD ERROR	Z-SCORE	P-VALUE	MARGINAL EFFECT (DY/DX)
Region of the USA	East			Reference Category		
	Midwest	0.002	0.024	0.07	0.945	0.1%
	South	-0.051	0.023	-2.23	**0.025**	-1.5%
	West	-0.016	0.030	-0.54	0.592	-0.5%
Age Groups	Ages 16 to 24	0.262	0.025	10.47	**0.000**	7.4%
	Age 25 to 34	0.024	0.023	1.07	0.283	0.7%
	Age 35 to 44	0.137	0.022	6.29	**0.000**	3.8%
	Age 45 to 54	0.105	0.020	5.34	**0.000**	2.9%
	Age 55 to 64	0.091	0.018	5.02	**0.000**	2.5%
	Age 65 to 74	0.126	0.018	6.92	**0.000**	3.5%
	Age 75 and Over			Reference Category		
CPS Survey Year	Year = 2010			Reference Category		
	Year = 2011	0.059	0.017	3.54	**0.000**	1.8%
	Year = 2012	0.038	0.020	1.94	0.053	1.1%
	Year = 2013	0.009	0.023	0.40	0.690	0.3%
	Year = 2014	-0.015	0.027	-0.56	0.579	-0.5%
	Year = 2015	-0.034	0.031	-1.09	0.276	-1.0%
State-Level Variables	Population Density	-0.056	0.041	-1.36	0.174	-1.7%
	Homeownership Rate	-0.011	0.014	-0.81	0.417	-0.3%
	Multi-Unit Housing Rate	-0.025	0.010	-2.42	**0.015**	-0.7%
	Commuting Time	-0.013	0.011	-1.19	0.235	-0.4%
	Percent High School Graduates	-0.025	0.014	-1.82	0.069	-0.8%
	Percent College Graduates	0.040	0.015	2.67	**0.008**	1.2%
	Poverty Rate	-0.012	0.019	-0.64	0.525	-0.4%
	Large Nonprofits per 1000 Residents	-0.012	0.032	-0.38	0.706	-0.4%
	Small Nonprofits per 1000 Residents	-0.021	0.016	-1.29	0.197	-0.6%
	Median Income	-0.056	0.043	-1.30	0.194	-1.7%
	Unemployment Rate	-0.011	0.012	-0.87	0.386	-0.3%
	Congregations per Capita	0.025	0.008	3.03	**0.002**	0.7%
	Blau Index of Racial Heterogeneity	0.023	0.012	1.94	0.053	0.7%
	Gini Index of Income Inequality	-0.043	0.014	-3.17	**0.002**	-1.3%
	Putnam Social Capital Index	0.040	0.013	3.03	**0.002**	1.2%
Constant	Constant	-1.745	0.039	-44.75	**0.000**	

Table 5b: Bivariate Probit - Results from giving equation, 2010-2015
Dependent Variable: Giving to Charity, 2010-2015 (pooled) - with state-level macro-level variables

VARIABLE	CATEGORY	COEFFICIENT	STANDARD ERROR	Z-SCORE	P-VALUE	MARGINAL EFFECT (DY/DX)
	Volunteered Last Year	0.367	0.010	37.99	0.000	14.5%
	Gave Last Year	0.827	0.009	95.43	0.000	32.7%
Gender	Male			Reference Category		
	Female	0.126	0.008	15.25	0.000	5.0%
Race	White			Reference Category		
	Black	-0.070	0.015	-4.72	0.000	-2.7%
	American Indian, Alaskan Native	-0.176	0.048	-3.65	0.000	-6.9%
	Asian	-0.248	0.021	-12.02	0.000	-9.8%
	Native Hawaiian / Pacific Islander	0.009	0.092	0.10	0.919	0.4%
	More than one race category	-0.022	0.038	-0.59	0.555	-0.9%
Ethnicity (Latino Origin)	Latino	-0.146	0.014	-10.39	0.000	-5.8%
	Non-Latino			Reference Category		
Educational Attainment	Less than HS Diploma			Reference Category		
	HS Grad	0.151	0.014	11.01	0.000	6.0%
	Some college	0.336	0.014	23.78	0.000	13.4%
	College grad +	0.535	0.015	34.97	0.000	21.3%
Own Children under 18	No own children under 18			Reference Category		
	Own children under 18	0.066	0.012	5.54	0.000	2.6%
Marital Status	Single - Never married			Reference Category		
	Married - spouse present	0.290	0.013	21.81	0.000	11.5%
	Other marital status	0.087	0.015	5.91	0.000	3.5%
Labor Force Participation	Employed, full-time			Reference Category		
	Employed, part-time	0.001	0.014	0.06	0.956	0.0%
	Unemployed	-0.160	0.022	-7.27	0.000	-6.2%
	Not in labor force	-0.202	0.011	-18.27	0.000	-8.0%
Family Income	Less than $35,000			Reference Category		
	Between $35-$50,000	0.168	0.013	13.18	0.000	6.7%
	Between $50-$75,000	0.236	0.012	19.63	0.000	9.4%
	$75,000 and over	0.370	0.012	31.24	0.000	14.7%
Urban-Suburban-Rural Household	Urban (principal city)	-0.006	0.012	-0.53	0.597	-0.2%
	Suburban (balance)	0.056	0.010	5.57	0.000	2.2%
	Rural (nonmetropolitan)			Reference Category		
	Not identified			Reference Category		

Table 5b: Bivariate Probit - Results from giving equation, 2010-2015
Dependent Variable: Giving to Charity, 2010-2015 (pooled) - with state-level macro-level variables

VARIABLE	CATEGORY	COEFFICIENT	STANDARD ERROR	Z-SCORE	P-VALUE	MARGINAL EFFECT (DY/DX)
Region of the USA	East	Reference Category				
	Midwest	-0.046	0.022	-2.07	0.039	-1.8%
	South	-0.130	0.021	-6.06	0.000	-5.1%
	West	-0.036	0.028	-1.29	0.196	-1.4%
Age Groups	Ages 16 to 24	-0.753	0.023	-32.76	0.000	-27.5%
	Age 25 to 34	-0.599	0.021	-29.02	0.000	-21.8%
	Age 35 to 44	-0.480	0.020	-23.91	0.000	-17.4%
	Age 45 to 54	-0.363	0.018	-20.13	0.000	-13.1%
	Age 55 to 64	-0.253	0.017	-15.07	0.000	-9.0%
	Age 65 to 74	-0.062	0.017	-3.64	0.000	-2.2%
	Age 75 and Over	Reference Category				
CPS Survey Year	Year = 2010	Reference Category				
	Year = 2011	0.040	0.016	2.58	0.010	1.6%
	Year = 2012	0.027	0.019	1.43	0.152	1.0%
	Year = 2013	0.006	0.022	0.26	0.797	0.2%
	Year = 2014	-0.006	0.026	-0.24	0.813	-0.2%
	Year = 2015	-0.059	0.029	-2.05	0.040	-2.3%
State-Level Variables	Population Density	-0.238	0.038	-6.23	0.000	-9.4%
	Homeownership Rate	0.016	0.013	1.20	0.230	0.6%
	Multi-Unit Housing Rate	0.030	0.010	3.12	0.002	1.2%
	Commuting Time	-0.043	0.010	-4.29	0.000	-1.7%
	Percent High School Graduates	0.002	0.013	0.18	0.860	0.1%
	Percent College Graduates	0.060	0.014	4.19	0.000	2.4%
	Poverty Rate	0.068	0.018	3.77	0.000	2.7%
	Large Nonprofits per 1000 Residents	-0.137	0.030	-4.50	0.000	-5.4%
	Small Nonprofits per 1000 Residents	0.037	0.016	2.34	0.019	1.5%
	Median Income	0.238	0.040	5.92	0.000	9.4%
	Unemployment Rate	0.018	0.011	1.65	0.100	0.7%
	Congregations per Capita	0.065	0.008	8.34	0.000	2.6%
	Blau Index of Racial Heterogeneity	0.017	0.011	1.52	0.129	0.7%
	Gini Index of Income Inequality	-0.062	0.013	-4.85	0.000	-2.5%
	Putnam Social Capital Index	-0.042	0.012	-3.40	0.001	-1.7%
Constant	Constant	-0.793	0.036	-22.23	0.000	

Model statistics:

N = 159,734
Log likelihood = -4.186 x 108
Wald χ^2 (104) = 59905.42
Prob > χ^2 < 0.0001

Correlation between disturbances in the equations:

Rho(p) = 0.428 (std. error: 0.005)

Wald test of Prob (ρ = 0): χ^2 (1) = 4843.91

Prob > χ^2 < 0.0001

Controlling for all other factors, volunteering last year is estimated to increase the likelihood of volunteering this year by about 38 percentage points, and giving last year is estimated to increase the likelihood of giving this year by about 33 percentage points. Both effects are statistically significant, as is the difference between them. This difference indicates that volunteering tends to be somewhat "stickier" than giving, all else being equal, given the churn that we tend to see in the national adult volunteer workforce and donor pool. That is, controlling for other generally strong influences on volunteering (like educational attainment) and on giving (like age), the act of volunteering last year tends to have more of an impact on volunteering this year than the act of giving last year does on this year's decision to donate.

In addition, the influence of volunteering on giving (14.5 percent) is significantly greater than the influence of giving on volunteering (9.3 percent), controlling for other factors.[33] The substantive interpretation of these positive marginal effects is that giving and volunteering actually are distinct but complementary activities, and that (prior) giving has an influence on (current) volunteering, even after controlling for (prior) volunteering. The positive and significant correlation (0.428) between the disturbances – rho or ρ, in the notation of the bivariate probit model – supports this conclusion: the unmeasured influences for, or against, volunteering tend to influence giving in the same way.

[33] The structure of our model is very similar to that of the "cross-lagged panel model," which is often used by social psychologists to measure behavioral change from one period to the next. Proponents of the cross-lagged panel model would argue that a difference like the one we observe indicates that volunteering has a greater causal impact on giving than giving has on volunteering. We stop short of endorsing this interpretation because of convincing evidence that the cross-lagged panel model does not enable analysts to identify causal influences. Even when controlling for all measurable factors, the presence of omitted "trait"-like variables that influence both activities, which are present in the disturbance terms of both equations, can lead to misleading inferences about causality. See Hamaker, E. L., Kuiper, R. M., & Grasman, R. P. (2015). "A critique of the cross-lagged panel model." Psychological Methods, *20*(1), 102-116; and Lucas, R. E. (2023). "Why the cross-lagged panel model is almost never the right choice." *Advances in Methods and Practices in Psychological Science*, *6*(1), 1-22.

Although many of the micro-level and macro-level variables in the model influence the lagged values for giving and volunteering as well as the current values, the lagged values do not simply "steal" all the explanatory power of the other independent variables: they add explanatory value to the models without affecting the estimated influence of the other variables.[34] However, because the lagged variables control for previous giving and volunteering activity, the marginal effects of the micro-level and macro-level variables in the model can be interpreted as influences on behavioral change.[35] Most of the micro-level variables have a smaller influence on changes in giving and volunteering than they did before the lagged variables were added to the model, but very few micro-level variables that were significant in the original models used in the first report become insignificant, or change signs.

In contrast, the effects of the macro-level variables sometimes change in interesting ways when lagged variables are added to the equations. Several macro-level variables become statistically significant in the giving equation with these additions, but only a few of these changes are statistically significant, when accounting for the fact that the marginal effects are estimated with error. The exception is the Putnam index, which becomes statistically significant and negative; this suggests that in places where associational life has historically been strong, people are less likely to give, controlling for all other factors. In the volunteering equation, the state poverty rate becomes insignificant, while the Blau index of racial heterogeneity nearly becomes significant ($p = 0.053$, where the conventional standard for significance is $p = 0.05$) and is positive, contrary to expectations. This result would suggest that people are more likely to volunteer, controlling for past history, in more racially diverse states.

Two other changes, both found in the volunteering equation, are worth noting. In the original model from the first report, young adults (under age 25) are significantly more likely to volunteer than those in the oldest age group (age 75 or over), and adults aged 25-34 are significantly less likely to volunteer than the oldest adults. Rather than the bump in midlife that we tend to see in the population, this first report's model suggests that the age groups in the middle are about as likely to volunteer, controlling for the other factors, as the oldest adults, controlling for other factors. When lagged values are added, the familiar increase in midlife is again present. The year effects are also different when lagged variables are added to the model: the likelihood of volunteering increases between 2010 and 2011, and stays at that level through 2015 without significantly declining. This suggests that the people who are new to the sample in a given year – generally, young adults and immigrants – may be responsible for the declines in the volunteer rate that we saw in the first report. However, the difference between 2010 and 2015 of -1.0 percent is estimated with error, and it cannot be ruled out that the difference is actually similar to the one seen in the first report (-3.1 percent).

[34] Wilkins (2018, *op. cit.*, 394) discusses the reluctance of some political scientists to add lagged dependent variables to their models because they might cause the other independent variables to become statistically insignificant, which would impair their ability to test hypotheses about them. As Wilkins argues, this is not a justifiable reason to exclude lagged variables if analysts have theoretical reasons to believe that history matters when modeling current activity.

[35] Some analysts simply subtract last year's value of the dependent variable from this year's value, and estimate change directly that way. However, as Wilkins (2018, *op. cit.*, 396) points out, this is equivalent to assuming that the coefficient of last year's activity is equal to one, and that leaving the lagged value on the right-hand side of the equation allows the analyst to test this assumption. In addition, subtracting last year's value of the dependent variable from this year's value is problematic when the dependent variables are binary (yes or no), as they are here, rather than continuous.

EXTENSIONS OF THE BASIC MODEL: ADDING CIVIC ENGAGEMENT MEASURES (GROUP MEMBERSHIP, SOCIAL CONNECTEDNESS, AND TRUST IN NEIGHBORS)

The results so far suggest that our model of giving and volunteering generates a plausible picture of the ways in which these two forms of generosity interact, and are affected by micro-level and macro-level variables. The strongest influences on current volunteering and current giving (that is, whether someone did unpaid work through or for an organization, or donated money or goods valued at $25 or more to a religious or charitable organization, one or more times in the previous year) are whether someone volunteered or gave in the year before that. However, past giving also has a significant and positive influence on the likelihood of current volunteering, and past volunteering has a positive, and slightly larger, influence on current giving – controlling for all other micro- and macro-level factors. The unmeasured factors that influence giving and volunteering are captured by the lagged dependent variables in each model, and by the disturbance terms, which account for influences on this year's behavior that are not measured. Despite the addition of these features, the models for giving and volunteering produce results that are largely similar to the results we discussed in the first report.

The performance of the model gives us confidence that we can estimate the effect of group membership, social connectedness, and trust in neighbors on giving and volunteering by adding these meso-level variables to the model. The data source for these variables is the Current Population Survey (CPS) Civic Engagement Supplement, which was conducted by the U.S. Census Bureau in November between 2008 and 2013 as part of the CPS. The November 2008 CPS Civic Engagement Supplement was administered to about 90,000 adults (ages 18 and over) in 54,000 households nationwide, with a representative sample drawn from each state and the District of Columbia.

A cut-down version of the survey, with several questions deleted, was fielded again the following year, November 2009, but only to one-fourth of CPS households. The 2009 version of the survey was administered to all CPS households in November 2010. In 2011, several questions were added to the survey instrument, including questions about voting in local elections, expressing opinions on the Internet, trust in one's neighbors, and confidence in institutions. This larger survey was administered to all CPS households in November 2011. Census did not field a Civic Engagement Supplement in November 2012, but did administer the November 2011 survey instrument in 2013 to one-half of CPS households.

To extend the logic of our current model, we would like to include lagged values of some of these new civic engagement measures to the model, which already contains lagged values of giving and volunteering. Once again, the CPS sample design makes this feasible: because the Civic Engagement supplements were conducted in November, half of the sample that took the September survey that year also took the November survey. In fact, as the figure below shows, in years (such as 2010 and 2011) when the Civic Engagement supplement was administered to the entire CPS sample, we have data on civic engagement activities from the current and prior years, as well as data on giving and volunteering for the same two years, for two of the eight segments of the sample, where the segment are defined by the month in which the household began its CPS rotation. This enables us to model current giving and volunteering in 2011 as a function of giving and volunteering in 2010 and civic engagement (group membership, social connectedness, and trust in neighbors) in 2010.

Table 6: CPS Sample Overlap for 2010 and 2011 September Volunteer and November Civic Engagement Supplements, by first month in sample

September 2010	November 2010	September 2011	November 2011
June 2009	August 2009	June 2010	August 2010
July 2009	September 2009	July 2010	September 2010
August 2009	October 2009	August 2010	October 2010
September 2009	November 2009	September 2010	November 2010
June 2010	August 2010	June 2011	August 2011
July 2010	September 2010	July 2011	September 2011
August 2010	October 2010	August 2011	October 2011
September 2010	November 2010	September 2011	November 2011

VOLUNTEERING, GIVING AND GROUP MEMBERSHIP

Participation in groups, along with political participation, is generally acknowledged to be a key indicator of civic engagement. Robert Putnam, in his landmark study *Bowling Alone*,[36] used decreases in participation in traditional social and civic groups to support his argument that interest in active civic engagement was declining during the late 20th century. Putnam argued that declines in group involvement and political participation (voting in elections) over this period both indicated a troubling overall decline in social capital – which can be described as the collective value of all the mutually beneficial relationships generated by participants in social networks.[37]

Group participation and political action both provide opportunities for people to become personally and directly involved in community affairs, by working together with others to address a particular problem. In fact, because group participation often requires or encourages more direct personal activity than political participation, many scholars argue that group participation is a better indicator of community civic engagement, and especially social capital, than political action is. A recent cross-national study[38] shows that group membership, much more so than volunteering through these groups, significantly influences the important outcome measures of healthy civil society in European nations.

[36] Putnam, R.D. (2000). *Bowling alone: The collapse and revival of American community*. New York: Simon and Schuster.
[37] This definition is paraphrased from the one used by the Saguaro Seminar, which was organized by Putnam and his Harvard University colleagues in the late 1990s. Available at FAQs, "What does 'social capital' mean?" https://wayback.archive-it.org/org-1167/20170629175905/https://www.hks.harvard.edu/programs/saguaro/about-social-capital/faqs#volunteering
[38] Dekker, P. & Van den Broek, A. (1998). "Civil society in comparative perspective: Involvement in voluntary associations in North America and Western Europe." *Voluntas: International Journal of Voluntary and Nonprofit Organizations*, 9, 11-38.

In addition, many scholars treat participation in associational life as an important prerequisite to participation in formal acts of generosity, such as donating time or money through or for an organization.[39] However, the literature differs on how group membership and social capital influence giving and volunteering through organizations. For instance, group membership is often seen as a primary measure of social capital, but while Putnam considers volunteering to be a consequence of social capital, others believe that volunteering is simply social capital in a different form, and use giving as a better example of one of the influences of social capital.[40] Similarly, Jones (2006) finds support for her hypothesis that membership in community associations, as well as the frequency of participation in these organizations, has a significant effect on the amount of time spent volunteering, but not on the amount of money donated.[41]

To test the effect of group membership on giving and volunteering, we add a measure of group membership in the previous year to our structurally related models of giving and volunteering. The data source for the group membership variables is the CPS Civic Engagement Supplement, which asked respondents whether they participated in five different types of groups over the past twelve months. These questions were patterned after the "standard questions" about group involvement that were included for decades on the General Social Survey (GSS). Although they were originally created decades ago, the "standard" GSS questions remain relevant sources of data on associational life in America. Recent research[42] suggests that the GSS questions may miss some of the informal groups in which people participate, but that they generally capture involvement in groups that have standard formal features, such as a federated structure, written bylaws and regulations, and fixed locations within the community. Due to space considerations, only a subset of the GSS group types were included on the survey instrument for the CPS Civic Engagement Supplement.

In every year it was fielded between 2008 and 2013, the CPS Civic Engagement Supplement asked respondents whether they participated in five different types of groups over the past twelve months. The survey included questions about participation in the following group types:

- The next questions are about the groups or organizations in which people sometimes participate. I will read a list of types of groups and organizations.

Please tell me whether or not you participated in any of these groups during the last 12 months, that is between November 20XX and now:

a. A school group, neighborhood, or community association such as PTA or neighborhood watch group

b. A service or civic organization such as American Legion or Lions Club

c. A sports or recreation organization such as a soccer club or tennis club

d. A church, synagogue, mosque, or other religious institution or organization, NOT COUNTING (your/his/her) attendance at religious services

e. Any other type of organization that I have not mentioned

The variable "group membership" takes on a value of 1 for people who indicated that they participated in one or more of these groups in the previous year, and 0 if they answered "no" to each group-types question.

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[39] See, for example, Brown, E. & Ferris, J. M. (2007). "Social capital and philanthropy: An analysis of the impact of social capital on individual giving and volunteering." *Nonprofit and Voluntary Sector Quarterly*, *36*(1), 85-99.

[40] Wang and Graddy (2008) treat both volunteering and giving as outcomes of social capital, and also recap the scholarly debate about how these activities are related to social capital. They cite Brooks (2005) as an example of an author who considers giving to be a better measure of generosity than volunteering. See Wang, L. & Graddy, E. (2008). "Social capital, volunteering, and charitable giving." *Voluntas: International Journal of Voluntary and Nonprofit Organizations*, *19*, 23-42; and Brooks, A. (2005). "Does social capital make you generous?" *Social Science Quarterly*, *86*(1), 1–15.

[41] Jones, 2006, *op. cit.* Jones uses two different specifications for her models of volunteering and giving, and the resulting decision of how much time and money to donate, which makes it difficult to compare the influence of group membership on the two activities.

[42] Paxton, P. & Rap, R. (2016). "Does the standard voluntary association question capture informal associations?" *Social Science Research*, *60*, 212-221.

In all the years when the November CPS Civic Engagement Supplement was administered, about half of the households were also included in the sample for that September's CPS Volunteer Supplement. Although the Civic Supplement was conducted in November, it is likely that these respondents were describing their involvement in giving, volunteering, and group membership over the same general time period. To address the likelihood that group membership is jointly influenced by giving and volunteering, we add a lagged value of group membership to the model.

Tables A-1 and A-2 in the Appendix contain the full set of results from the bivariate probit models of current giving and volunteering, with lagged group membership added to each equation. The sample size is much diminished from the previous analysis, since we can only include respondents who answered the questions about group involvement in 2009, 2010, 2011 and 2013 on the November Civic Engagement Supplements,[43] as well as the giving and volunteering questions on the September Volunteer Supplements for these years, and the giving and volunteering questions on the 2010, 2011, 2012 and 2014 Volunteer Supplements.

The key result in these tables is that membership in one or more groups in the previous year (lagged group membership) is positively and significantly associated with both current volunteering and current giving, controlling for all other micro- and macro-level variables, including lagged giving and volunteering. However, it is possible that some of the results from the earlier models might change when (lagged) group membership is controlled for; group membership may mediate or moderate the relationship between giving and/or volunteering and the other independent variables.

With only a few exceptions, the results of the previous models do not change significantly – in part because the marginal effects of the independent variables are estimated with much more error in the models with lagged group membership, because the sample size is so much smaller. The main exceptions are educational attainment in the volunteering model and parenthood in the giving model. Educational attainment actually has a greater influence on volunteering after controlling for group involvement, which suggests that its influence is suppressed when group membership is not controlled. Meanwhile, parenthood no longer has a significant influence on giving after controlling for group membership, which indicates that those with small children are more likely to give (or not give) primarily because they belong (or don't belong) to associations.

Overall, the results demonstrate that those who belong to, or participate with, groups and associations are more likely not only to volunteer – as the social capital literature suggests – but also to donate money, although group membership appears to have a greater influence on volunteering than on giving. However, the five questions about group membership do not really form a coherent scale: Cronbach's alpha, a statistic that measures the reliability of the scale formed from the main common dimension of the five group membership questions, takes on a very low value (0.47, where 0.7 is considered "good"). This suggests that membership in different types of groups may have different influences on volunteering and giving, which is apparent in Table 7 (below). The table shows the marginal effect of (lagged) membership in each type of group on volunteering and giving, along with the endpoints of the 95 percent confidence intervals around each effect estimate.

[43] As noted earlier, the 2009 and 2013 Civic Supplements were only administered to randomly selected households within each segment (defined by the month when the household started its CPS rotation). This reduces the sample size for these models even more, but fortunately, at least some households within each segment received the supplement.

Table 7: Effect of lagged group participation, by group type, on volunteering and giving

GROUP TYPE	VOLUNTEERING			GIVING		
	Est. Marginal Effect	Low	High	Est. Marginal Effect	Low	High
A school group, neighborhood, or community association	10.8%	9.5%	12.1%	6.7%	5.0%	8.5%
A service or civic organization	11.6%	9.9%	13.3%	7.4%	5.1%	9.7%
A sports or recreation organization	8.1%	6.6%	9.7%	3.6%	1.7%	5.6%
A church, synagogue, mosque, or other religious institution or organization	12.3%	11.1%	13.5%	12.4%	10.8%	13.9%
Any other type of organization	14.2%	12.3%	16.1%	7.4%	4.8%	10.0%

All the estimated effects of both volunteering and giving are positive and statistically significant, but the confidence intervals are wider for some of the less common group types.[44] Being a member of a congregation has the largest effect on giving, and one of the largest effects on volunteering, although membership in school groups, community groups, and civic or service organizations have comparably sized influences on volunteering. Belonging to a sports or recreation organization has the smallest influence on both giving and volunteering; this is the only group type that has a significantly smaller influence on each activity than being a member of a congregation or religious organization.

VOLUNTEERING, GIVING AND SOCIAL CONNECTEDNESS

An organized group or association is one of many social networks an individual may belong to. Other regular but less formal interpersonal relationships generate social capital by strengthening "norms of reciprocity and trustworthiness" within social networks.[45] In 2014, the National Academies of Science published a report whose title, *Civic Engagement and Social Cohesion*,[46] derives from the notion that social capital is generated by both civic engagement and social cohesion, and that the two forces support each other. In communities where social cohesion is stronger, its citizens are more engaged in civic affairs, and are less engaged in places where these informal relationships are weaker or encourage less trust and reciprocity.[47]

A full accounting of the social networks of individuals would capture both close and weak interpersonal ties, both of which are important measures of social connectedness. People with few close ties to others in their social networks – people who have few, if any, close friends who they see often – may be at risk of alienation from their neighborhoods or communities. However, weak ties are also important because they provide opportunities to meet and build relationships with people outside their regular social networks. Although people with weak ties to one another may only be in contact once in a while, they may be able to tell each other about employment opportunities, community needs, and group activities that build social capital.

[44] The "other" group type, which seems to have a large positive influence on volunteering, was only chosen by between 5 and 6 percent of adult respondents. However, the public use dataset does not contain details about which group(s) these respondents may have had in mind when they answered "yes" to this question.
[45] Putnam, *Bowling Alone, op. cit.*, chapter 8.
[46] National Research Council. (2014). "Civic engagement and social cohesion: Measuring dimensions of social capital to inform policy". National Academies Press.
[47] However, a neighborhood or small community with strong social cohesion can be located in a larger area where ties across communities are weak: "Equally, a society in which citizens had a strong sense of place attachment and loyalty to their respective cities could be in conflict with any sense of common national purpose, or macro-cohesion." Forrest, R. & Kearns, A. (2001). "Social cohesion, social capital and the neighbourhood." *Urban Studies, 38*(12), 2128-2129. Quoted in National Research Council, *Civic engagement and social cohesion*, 2-3.

While an in-depth analysis of a respondent's social networks[48] is not possible given the space limitations of the CPS Civic Engagement Supplement, the survey includes a group of questions that assess the frequency and nature of contact between individuals and others in their families or neighborhoods, to capture both strong and weak ties. The November 2008 CPS Civic Engagement Supplement contained three measures of social connectedness – eating dinner with others in the household, talking with one's neighbors, and trading favors (small acts of kindness) with one's neighbors – that were also included on the CPS Civic Engagement Supplements of 2009-2011 and 2013.[49] To further explore the relationship between social connectedness and individual philanthropy, we create an indicator of social connectedness from these three questions from the CPS Civic Engagement Supplement:

- During a TYPICAL MONTH in the past year, how often did you eat dinner with any of the other members of your household – basically every day, a few times a week, a few times a month, once a month, or not at all?[50]
- During a TYPICAL MONTH in the past year, how often did you talk with any of your neighbors – basically every day, a few times a week, a few times a month, once a month, or not at all?
- During a TYPICAL MONTH in the past year, how often did you and your neighbors do favors for each other? By favors we mean such things as watching each other's children, helping with shopping, house sitting, lending garden or house tools, and other small acts of kindness – basically every day, a few times a week, a few times a month, once a month, or not at all?

To construct a single indicator of social connectedness from these three questions, we convert each indicator into a number representing the percentage of days during a typical month when the respondent performed the activity, and use principal components analysis to construct a composite measure of social connectedness.[51] As with group membership, we can add lagged values of this measure to both equations in the model for giving and volunteering. Thus, we would expect social connectedness in 2009, 2010, 2011 and 2013 to influence giving and volunteering in 2010, 2011, 2012 and 2014, respectively. The sample size is again small because it only includes respondents who participated in two September and two November CPS supplements; the sample size is slightly smaller than the one used for the group membership analysis, because the response rate was lower for the questions about social connections.

The results from the micro-level variables already show how family ties encourage giving and volunteering through social networks: people who are married or live with their own children tend to have weak ties with more people, which means they are exposed to more opportunities to give or volunteer. Given this, we would expect the constructed measure to be positively associated with both giving and volunteering – although social connectedness might have a stronger relationship with volunteering than with giving. This would support the conclusions of Jones,[52] who argues that community ties influence volunteering much more than giving, and that giving is driven more by "personal resources and helping values."

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[48] For details about the proper measurement of social networks, see McPherson, M., Smith-Lovin, L., & Brashears, M. E. (2006). "Social isolation in America: Changes in core discussion networks over two decades." *American Sociological Review*, *71*(3), 353-375.
[49] The 2008 survey also contained a question about the respondent's network of friends: "NOT COUNTING family members, about how many CLOSE FRIENDS do you currently have, if any? These are people you feel at ease with, can talk to about private matters, or call on for help." This question was removed from the survey after 2008.
[50] The original question was recoded so that people who live alone are combined with those who "never" eat dinner with the people in their household, which is appropriate if we want to create a measure of regular social interaction with others in the family or household.
[51] Because of changes in the response categories in 2011 and 2013, the original response options were recoded into three new categories: Frequently (a few times a week or basically every day), Occasionally (once or a few times a month), and Never (not at all). The three new categories were given the numerical values of 0.5 (Frequently, i.e., about every other day), 0.14 (Occasionally, i.e,. about once a week, or 1/7 of the month), and 0 (Never).
[52] Jones, 2006, *op.cit.*

The relationship between social connectedness and volunteering is fairly well-established in the literature, but how these relationships should affect giving is less clear. Wilson and Musick (1998) find that the frequency of informal social interactions with neighbors and friends, and the number of friends in one's social network, both affect the number of volunteer activities performed and the total hours volunteered, even after controlling for formal social interactions (group membership and church attendance).[53] Meanwhile, a study that compares the influence of group participation with that of social connectedness argues that group involvement has a much larger influence on giving.[54] Another shows that the diversity of one's network of friends (which measures, according to the authors, the extent to which people belong to "bridging" social networks) is positively associated with giving, while an index that describes the frequency of one's informal social actions does not influence giving, controlling for other factors.[55]

Tables A-3 and A-4 in the Appendix contain the results of the model after adding the lagged value of our constructed measure of social connectedness to the giving and volunteering equations. The effect of social connectedness is small but statistically significant in both equations: a one-unit increase[56] in social connectedness increases the likelihood of volunteering by about 1.7 percentage points, and increases the likelihood of giving by about 1.8 percentage points, controlling for all other factors. These effects are much smaller than the effects of group membership that emerged from Tables A-1 and A-2; surprisingly, social connectedness has about the same effect on giving as it does on volunteering.

As with group membership, adding the social connectedness variable to the model only results in a few statistically significant changes in the effects of the other variables. None of the estimated marginal effects in the giving equation change when social connectedness is added to the model, but the effect of educational attainment and lagged volunteering increases after controlling for social connectedness. As with group membership, controlling for social connectedness increases the influence of educational attainment – but it also slightly increases the influence of last year's volunteering on current volunteering.

However, as we also saw with group membership, the constructed social connectedness variable is not very reliable: the Cronbach's alpha statistic is 0.53, which casts doubt that the three CPS indicators should all be included in the same constructed measure of social connectedness. In fact, as Table 8 below shows, the three variables each have somewhat different influences on giving and volunteering.

Table 8: Effect of lagged social connectedness, by type of activity, on volunteering and giving

ACTIVITY	VOLUNTEERING			GIVING		
	Est. Marginal Effect	Low	High	Est. Marginal Effect	Low	High
Eat dinner with any of the other members of your household	3.2%	-1.9%	8.2%	13.2%	7.8%	18.6%
Talk with any of your neighbors	8.9%	6.4%	11.5%	8.6%	5.6%	11.5%
You and your neighbors do favors for each other	11.6%	8.5%	14.7%	10.2%	6.5%	13.9%

[53] Wilson, J. & Musick, M. (1998). "The contribution of social resources to volunteering." *Social Science Quarterly*, *79*(4), 799-814.
[54] Schervish, P. G. & Havens, J. J. (1997). "Social participation and charitable giving: A multivariate analysis." *Voluntas: International Journal of Voluntary and Nonprofit Organizations*, *8*(3), 235-260.
[55] Wang and Graddy, 2008, *op. cit.*
[56] The constructed variable has a mean of about -0.5 and a standard deviation of about 1.25, so a one-unit increase is an increase of less than one standard deviation.

For each of the three variables, the marginal effects on both giving and volunteering are greater than the effect of the constructed social connectedness variable – except for eating dinner with others in the household, which has no significant influence on volunteering. Although previous research suggests that volunteering is driven more by ties to others in the community and giving is influenced more by personal resources and attitudes, it is still a surprise to see that eating dinner with others does not seem to encourage volunteering, controlling for other factors, but does have a sizable influence on the likelihood of giving.[57] Doing favors for one's neighbors has a relatively large and significant positive influence on both giving and volunteering, but talking with one's neighbors also has a significant and positive influence on both activities. A social connectedness variable constructed from these two indicators of "neighboring" activity (talking with neighbors and doing favors for one's neighbors) would give fairly reliable measures of social connectedness, but the results in Table 8 show how the frequency of relations with one's neighbors is related to individual philanthropy.

VOLUNTEERING, GIVING AND TRUST IN NEIGHBORS

Although the concepts of trust in others and confidence in institutions were not part of the original CPS Civic Engagement Supplement questionnaire, later editions of the survey instrument contained questions about trust in one's neighbors and confidence in various social institutions. Civic engagement and trust tend to be mutually reinforcing; when individuals trust others, they are more likely to work with them to address community issues, and working with others on community issues tends to generate trust. When individuals develop trust in those outside of their close networks and across cultural, social, and economic divisions, they produce "bridging" or "linking" social capital, and are more likely to collaborate with others of different backgrounds for the common good.[58]

For this reason, interpersonal or social trust has been used as a primary indicator of social capital in almost all official data collections[59] and scholarly studies[60] of social capital. The most commonly used survey question about social trust has a distinctive but controversial wording: respondents are asked whether they believe that "most people can be trusted" or that "you can't be too careful." Although this wording has frequently been criticized for being "double-barrelled" (where people can agree with both statements, because they are not in opposition), the CPS question, which asks about trust in neighbors, has been shown to be highly correlated with measures constructed from the "standard" trust question.[61]

To see how trust in one's neighbors was related to giving and volunteering, we use data from a question that was included on the 2011 and 2013 CPS Civic Supplement:

- We'd like to know how much you trust people in your neighborhood. Generally speaking, would you say that you can trust all the people, most of the people, some of the people, or none of the people in your neighborhood?

As with the social connectedness indicators, the original response categories were recoded into numerical values to approximate the percentage of time that respondents felt like they could trust their neighbors.[62]

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[57] However, because the confidence intervals overlap, we cannot say that having dinner with others in the household has a larger influence on giving than on volunteering.
[58] See, e.g., Paxton, P. (2002). "Social capital and democracy: An interdependent relationship." *American Sociological Review*, 254-277.
[59] Examples include the Australian and World Bank surveys of social capital. For the Australian survey, see Western, J., Stimson, R., Baum, S., & Van Gellecum, Y. (2005). "Measuring community strength and social capital." *Regional Studies*, *39*(8), 1095-1109; for the World Bank survey, see Grootaert, C. (Ed.). (2004). *Measuring social capital: An integrated questionnaire* (No. 18). World Bank Publications. Available at http://ndl.ethernet.edu.et/bitstream/123456789/20846/1/12.pdf.
[60] Costa, D. L. & Kahn, M. E. (2003). "Civic engagement and community heterogeneity: An economist's perspective." *Perspectives on politics*, *1*(1), 103-111.
[61] Brehm, J. & Rahn, W. (1997). "Individual-level evidence for the causes and consequences of social capital." *American Journal of Political Science*, *41*(3), 999-1023. For a defense of the standard trust question, see Uslaner, E. M. (2015). "Measuring generalized trust: In defense of the 'standard' question," in Lyon, F., Möllering, G., & Saunders, M. N. (Eds.). (2015). *Handbook of research methods on trust*. Edward Elgar Publishing.
[62] The numerical values assigned to the original response categories were: 1.00 = All the people, 0.67 = Most of the people, 0.33 = Some of the people, and 0 = None of the people.

Because trust is often seen to be a key dimension of social capital, it is frequently included in models of civic engagement or individual philanthropy along with other measures of associational or social involvement. For instance, one study shows that trust and group membership are both significantly associated with the likelihood of both religious and secular volunteering and giving,[63] while another (multilevel, cross-national) study finds that trust and social networks are both strong predictors of giving and volunteering.[64] However, as seen in the latter study (Glanville et al. 2016), trust seems to have more of an impact on individual philanthropy (giving money or time to organizations) than on informal helping. This result illustrates how and why generalized trust in others influences giving and volunteering: these activities often require people to contribute to organizations that provide collective benefits to people they may never know personally.

Unlike the questions that form the group membership and social connectedness variable, the trust-in-neighbors question was only included on the CPS Civic Engagement supplement in November 2011 and November 2013. That means we can combine data on lagged volunteering and giving (from the September 2011 and 2013 CPS Volunteer Supplements) with other data from the September 2012 and 2014 Volunteer Supplements to form our model of giving and volunteering in 2012 and 2014. The resulting sample is much smaller than the ones used for the previous analyses of group membership and social connectedness. This is because the earliest CPS Civic Engagement Supplements did not contain the trust question (and the 2013 Supplement was not administered to all CPS households) and also because the response rate for this question was lower than for the others on the survey, because it appeared at the end of the survey and asked about personal beliefs, which may have discouraged some respondents from replying.

Tables A-5 and A-6 contain the complete results from the giving and volunteering equations. The results suggest that people with more trust in their neighbors are slightly (but significantly) more likely to contribute time and money, controlling for the other main forms of generosity. Controlling for all other factors, every one-unit increase in the trust variable raises the likelihood of volunteering by 6.3 percentage points, and raises the likelihood of giving by 7.6 percentage points. The marginal effects change significantly for only a few micro-level and macro-level variables. In the giving equation, the effect of living in a suburban household increases after controlling for trust in neighbors. In the volunteering equation, the effect of educational attainment and lagged volunteering increases after controlling for social connectedness – which also happens when social connectedness is added to the model – and so does the effect of living in a state where congregations are more prevalent. Meanwhile, the marginal effect of being in the 65-74 age group diminishes.

[63] Brown and Ferris, 2007, *op. cit.*
[64] Glanville, Paxton, and Wang, 2016, *op. cit.*

GIVING AND VOLUNTEERING: THE COMPLETE MODEL

Although the results presented so far suggest that the included civic engagement measures each add something substantial to the explanation, the best test of the influence of these civic engagement measures on giving and volunteering is to include them all in the same model. Adding all three of the main measures to the model will further our understanding about how civic engagement, in general, works in multiple ways to influence giving and volunteering. The sample size with all three measures added is slightly smaller than the one used for the trust-in-neighbors analysis, because of nonresponse to the group membership and social connectedness questions.

Tables 9a and 9b present the full results for this model, which has an overall sample size of 10,562 with lagged values of group membership, social connectedness, and trust in neighbors all included in both the giving and volunteering equations. The table includes marginal effect estimates for all lagged civic engagement measures, for lagged giving and volunteering, and for all micro-level and macro-level variables from the original model specification. When the civic engagement measures are each entered separately, the marginal effect of each of the measures is statistically similar to those presented in the earlier models, which suggests that our results are not driven by the characteristics of the reduced sample. However, because of the smaller sample, the confidence intervals around all the estimated marginal effects are much larger than they are in the basic model of giving and volunteering.

The most important finding in this model is that social connectedness and trust in neighbors no longer have significant influences on both giving and volunteering, after controlling for group membership. Trust in neighbors is no longer significant in either equation, which suggests that trust seems to affect volunteering and giving mainly through group membership. The bivariate relationships show that people who trust more of their neighbors are more likely to belong to groups, and that people who belong to one or more groups or associations have a higher likelihood of giving and volunteering. Similarly, the significant influence of the composite social connectedness measure in the giving equation disappears when group membership is added to the model, indicating that social interactions influence giving mainly by bringing people into contact with others in the context of organized groups or associations. Social connectedness remains significant in the volunteering equation, however, and this result appears to be driven by contact with neighbors and doing favors for neighbors. The marginal effect of group membership in both equations is basically unchanged when the other two civic engagement measures are added to the model, though, which suggests that group membership is the primary mechanism by which social connectedness influences giving and volunteering.

Table 9a: Bivariate Probit - Volunteering equation with all three civic engagement measures added
Dependent Variable: Formal Volunteering (Unpaid Work Through or For an Organization), 2010-2015 (pooled) - with state-level macro-level variables

VARIABLE	CATEGORY	COEFFICIENT	STANDARD ERROR	Z-SCORE	P-VALUE	MARGINAL EFFECT (DY/DX)
	Group Membership Last Year	0.446	0.036	12.44	0.000	14.3%
	Social Connectedness Last Year	0.035	0.015	2.27	0.023	1.1%
	Trust in Neighbors Last Year	0.057	0.072	0.79	0.428	1.8%
	Volunteered Last Year	1.223	0.036	33.78	0.000	39.3%
	Gave Last Year	0.202	0.042	4.80	0.000	6.5%
Gender	Male	Reference Category				
	Female	0.092	0.035	2.63	0.009	3.0%
Race	White	Reference Category				
	Black	0.025	0.069	0.37	0.713	0.8%
	American Indian, Alaskan Native	-0.125	0.172	-0.73	0.465	-4.1%
	Asian	-0.414	0.094	-4.42	0.000	-13.3%
	Native Hawaiian / Pacific Islander	-0.006	0.329	-0.02	0.987	-0.2%
	More than one race category	0.156	0.182	0.86	0.392	5.1%
Ethnicity (Latino Origin)	Latino	-0.086	0.064	-1.34	0.180	-2.7%
	Non-Latino	Reference Category				
Educational Attainment	Less than HS Diploma	Reference Category				
	HS Grad	0.275	0.077	3.55	0.000	6.8%
	Some college	0.465	0.079	5.91	0.000	12.2%
	College grad +	0.552	0.080	6.90	0.000	15.1%
Own Children under 18	No own children under 18	Reference Category				
	Own children under 18	0.142	0.047	3.03	0.002	4.6%
Marital Status	Single - Never married	Reference Category				
	Married - spouse present	0.171	0.065	2.65	0.008	5.5%
	Other marital status	-0.025	0.074	-0.34	0.733	-0.7%
Labor Force Participation	Employed, full-time	Reference Category				
	Employed, part-time	0.136	0.056	2.44	0.015	4.3%
	Unemployed	0.050	0.107	0.47	0.638	1.6%
	Not in labor force	0.066	0.046	1.42	0.156	2.1%
Family Income	Less than $35,000	Reference Category				
	Between $35-$50,000	0.037	0.059	0.63	0.529	1.1%
	Between $50-$75,000	0.066	0.054	1.23	0.218	2.0%
	$75,000 and over	0.154	0.053	2.93	0.003	4.9%

Table 9a: Bivariate Probit - Volunteering equation with all three civic engagement measures added
Dependent Variable: Formal Volunteering (Unpaid Work Through or For an Organization), 2010-2015 (pooled) - with state-level macro-level variables

VARIABLE	CATEGORY	COEFFICIENT	STANDARD ERROR	Z-SCORE	P-VALUE	MARGINAL EFFECT (DY/DX)
Urban-Suburban-Rural Household	Urban (principal city)	-0.037	0.051	-0.72	0.469	-1.2%
	Suburban (balance)	-0.061	0.042	-1.45	0.147	-2.0%
	Rural (nonmetropolitan)	Reference Category				
	Not identified	Reference Category				
Region of the USA	East	Reference Category				
	Midwest	-0.062	0.092	-0.67	0.505	-2.1%
	South	-0.152	0.090	-1.68	0.092	-4.9%
	West	-0.018	0.114	-0.16	0.871	-0.6%
Age Groups	Ages 16 to 24	0.150	0.124	1.21	0.228	4.7%
	Age 25 to 34	0.016	0.088	0.18	0.854	0.5%
	Age 35 to 44	0.095	0.085	1.12	0.264	3.0%
	Age 45 to 54	0.120	0.077	1.56	0.118	3.8%
	Age 55 to 64	0.039	0.070	0.56	0.575	1.2%
	Age 65 to 74	-0.101	0.071	-1.41	0.157	-3.1%
	Age 75 and Over	Reference Category				
CPS Survey Year	Year = 2010	Data Not Available				
	Year = 2011	Data Not Available				
	Year = 2012	-0.012	0.058	-0.21	0.830	-0.4%
	Year = 2013	Data Not Available				
	Year = 2014	Reference Category				
	Year = 2015	Data Not Available				
State-Level Variables	Population Density	0.241	0.164	1.47	0.141	7.8%
	Homeownership Rate	-0.011	0.056	-0.19	0.846	-0.4%
	Multi-Unit Housing Rate	0.008	0.040	0.21	0.836	0.3%
	Commuting Time	-0.045	0.044	-1.03	0.303	-1.4%
	Percent High School Graduates	-0.063	0.054	-1.17	0.242	-2.0%
	Percent College Graduates	0.183	0.056	3.25	**0.001**	5.9%
	Poverty Rate	-0.101	0.079	-1.28	0.199	-3.3%
	Large Nonprofits per 1000 Residents	-0.116	0.127	-0.91	0.360	-3.7%
	Small Nonprofits per 1000 Residents	-0.065	0.070	-0.93	0.354	-2.1%
	Median Income	-0.360	0.164	-2.19	**0.028**	-11.6%
	Unemployment Rate	0.045	0.055	0.81	0.420	1.4%
	Congregations per Capita	0.140	0.034	4.18	**0.000**	4.5%
	Blau Index of Racial Heterogeneity	0.060	0.045	1.34	0.180	1.9%
	Gini Index of Income Inequality	-0.070	0.050	-1.39	0.166	-2.2%
	Putnam Social Capital Index	0.097	0.052	1.86	0.062	3.1%
Constant	Constant	-1.817	0.179	-10.13	**0.000**	

Table 9b: Bivariate Probit - Giving equation with all three civic engagement measures added
Dependent Variable: Giving to Charity, 2010-2015 (pooled) - with state-level macro-level variables

VARIABLE	CATEGORY	COEFFICIENT	STANDARD ERROR	Z-SCORE	P-VALUE	MARGINAL EFFECT (DY/DX)
	Group Membership Last Year	0.233	0.035	6.58	0.000	8.6%
	Social Connectedness Last Year	0.009	0.014	0.62	0.535	0.3%
	Trust in Neighbors Last Year	0.098	0.066	1.50	0.133	3.6%
	Volunteered Last Year	0.303	0.039	7.85	0.000	11.2%
	Gave Last Year	0.811	0.035	22.99	0.000	30.0%
Gender	Male	Reference Category				
	Female	0.109	0.033	3.26	0.001	4.0%
Race	White	Reference Category				
	Black	0.024	0.062	0.39	0.695	0.9%
	American Indian, Alaskan Native	-0.649	0.205	-3.17	0.002	-23.9%
	Asian	-0.152	0.078	-1.95	0.051	-5.6%
	Native Hawaiian / Pacific Islander	0.361	0.282	1.28	0.200	13.3%
	More than one race category	-0.103	0.162	-0.64	0.523	-3.8%
Ethnicity (Latino Origin)	Latino	-0.099	0.056	-1.77	0.077	-3.6%
	Non-Latino	Reference Category				
Educational Attainment	Less than HS Diploma	Reference Category				
	HS Grad	0.196	0.061	3.23	0.001	7.7%
	Some college	0.328	0.063	5.21	0.000	12.8%
	College grad +	0.434	0.066	6.57	0.000	16.8%
Own Children under 18	No own children under 18	Reference Category				
	Own children under 18	-0.038	0.045	-0.85	0.396	-1.4%
Marital Status	Single - Never married	Reference Category				
	Married - spouse present	0.346	0.055	6.29	0.000	12.8%
	Other marital status	0.069	0.065	1.07	0.285	2.7%
Labor Force Participation	Employed, full-time	Reference Category				
	Employed, part-time	0.011	0.056	0.19	0.848	0.4%
	Unemployed	-0.230	0.088	-2.60	0.009	-8.2%
	Not in labor force	-0.238	0.043	-5.47	0.000	-8.8%
Family Income	Less than $35,000	Reference Category				
	Between $35-$50,000	0.189	0.052	3.61	0.000	7.4%
	Between $50-$75,000	0.250	0.047	5.25	0.000	9.7%
	$75,000 and over	0.416	0.049	8.57	0.000	15.8%

Table 9b: Bivariate Probit - Giving equation with all three civic engagement measures added
Dependent Variable: Giving to Charity, 2010-2015 (pooled) - with state-level macro-level variables

VARIABLE	CATEGORY	COEFFICIENT	STANDARD ERROR	Z-SCORE	P-VALUE	MARGINAL EFFECT (DY/DX)
Urban-Suburban-Rural Household	Urban (principal city)	0.062	0.048	1.29	0.198	2.4%
	Suburban (balance)	0.165	0.040	4.17	0.000	6.1%
	Rural (nonmetropolitan)	Reference Category				
	Not identified	Reference Category				
Region of the USA	East	Reference Category				
	Midwest	-0.046	0.087	-0.53	0.595	-1.7%
	South	-0.107	0.085	-1.26	0.207	-4.0%
	West	0.006	0.109	0.05	0.958	0.2%
Age Groups	Ages 16 to 24	-0.845	0.107	-7.86	0.000	-26.4%
	Age 25 to 34	-0.621	0.081	-7.65	0.000	-20.1%
	Age 35 to 44	-0.438	0.080	-5.46	0.000	-14.0%
	Age 45 to 54	-0.337	0.072	-4.65	0.000	-10.7%
	Age 55 to 64	-0.242	0.068	-3.57	0.000	-7.6%
	Age 65 to 74	-0.078	0.069	-1.14	0.254	-2.4%
	Age 75 and Over	Reference Category				
CPS Survey Year	Year = 2010	Data Not Available				
	Year = 2011	Data Not Available				
	Year = 2012	0.075	0.055	1.37	0.169	2.8%
	Year = 2013	Data Not Available				
	Year = 2014	Reference Category				
	Year = 2015	Data Not Available				
State-Level Variables	Population Density	-0.098	0.155	-0.63	0.526	-3.6%
	Homeownership Rate	-0.002	0.055	-0.03	0.977	-0.1%
	Multi-Unit Housing Rate	0.027	0.038	0.71	0.479	1.0%
	Commuting Time	-0.078	0.042	-1.87	0.061	-2.9%
	Percent High School Graduates	-0.148	0.053	-2.81	0.005	-5.5%
	Percent College Graduates	0.069	0.057	1.22	0.223	2.5%
	Poverty Rate	-0.049	0.073	-0.67	0.505	-1.8%
	Large Nonprofits per 1000 Residents	-0.021	0.123	-0.17	0.867	-0.8%
	Small Nonprofits per 1000 Residents	0.082	0.070	1.16	0.245	3.0%
	Median Income	0.078	0.158	0.49	0.622	2.9%
	Unemployment Rate	0.016	0.053	0.30	0.765	0.6%
	Congregations per Capita	0.089	0.032	2.79	0.005	3.3%
	Blau Index of Racial Heterogeneity	-0.007	0.044	-0.17	0.868	-0.3%
	Gini Index of Income Inequality	-0.013	0.048	-0.28	0.779	-0.5%
	Putnam Social Capital Index	-0.031	0.050	-0.62	0.534	-1.2%
Constant	Constant	-0.792	0.165	-4.81	0.000	

Model statistics:

N = 10,562
Log likelihood = -26368602
Wald χ^2 (102) = 4411.64
Prob > χ^2 < 0.0001

Correlation between disturbances in the equations:

Rho(p) = 0.416 (std. error: 0.021)

Wald test of Prob (ρ = 0): χ^2 (1) = 294.55

Prob > χ^2 < 0.0001

Even with the reduced sample size, the estimated marginal effects of several of the micro-level and macro-level variables in each equation change significantly when the civic engagement measures are added to the model, indicating that group membership, social connectedness and/or trust in neighbors can indirectly change the way these variables influence giving and volunteering. As seen in the earlier results, when group membership is included in the model, the effect of educational attainment on volunteering is larger, indicating that better-educated people are more likely to become volunteers, on average, even after controlling for their past history of generosity and their history of joining community associations.[65] Also, whereas the basic model suggests that people in the age 65-74 group – which includes many recent retirees – are more likely to become volunteers, this finding disappears when the other activity measures are added to the model. If the original finding reflects the likelihood that people are more likely to become volunteers when they retire, this finding suggests that retirement makes people more likely to engage in associational life, which then leads to more volunteer opportunities.

[65] As noted earlier, because the model contains lagged values of giving and volunteering, the effects of the micro-level and macro-level variables can be interpreted as influences on change in these activities. These equations are now modeling the likelihood of philanthropic activity today, controlling for philanthropic activity last year. Given that the national donor pool and volunteer workforce both include people who "drop into" and "drop out of" each activity, statistically significant variables with positive marginal effects can be interpreted as factors that make people more likely to become volunteers and donors (on average, all else being equal), and variables with negative marginal effects can be interpreted as factors that make people less likely to become volunteers and donors.

Meanwhile, several macro-level effects on volunteering – such as multi-unit housing, racial heterogeneity, and income inequality - become statistically insignificant in the volunteering equation after adding the civic engagement measures. So, too, does the state-level "Putnam index" of social capital, which probably loses its influence because the model now contains micro-level measures of civic engagement. Adding these measures of civic engagement also reduces the effects of living in states with greater prevalence of college graduates and congregations, and also makes state-level median income significant. Although the confidence interval around median income is larger than those of most other macro-level factors, this finding is unexpected: median income is significant and negative, suggesting that people are more likely to become volunteers in less affluent states, controlling for their own history of generosity and civic engagement.

In the giving model, the marginal effects of the micro-level variables generally stay the same (no statistically significant changes) when the civic engagement measures are added. The only variable not measured at the state level that does change significantly is for suburban households: all else being equal, people living in suburban areas are significantly more likely to give than people living in cities, but the difference is significantly greater when the civic measures are added. That is, controlling for past giving and volunteering, as well as personal characteristics such as educational attainment and household income, people living in the suburbs are more likely to become givers, on average, than people living in cities – and after controlling for past civic engagement, particularly trust in neighbors, this difference becomes even more pronounced. Several of the macro-level variables in the giving model become insignificant when the civic engagement measures are added, probably due to diminished statistical power resulting from the smaller sample size. One surprising finding is that people are significantly less likely to become donors in states with higher levels of high school graduates – controlling for all other factors, including personal educational attainment and the percentage of college graduates in the state.

THE EFFECTS OF GIVING AND VOLUNTEERING ON OTHER FORMS OF CIVIC ENGAGEMENT

In this section, we consider the mirror image of our original research question: What is the influence of giving and volunteering on other forms of civic engagement? Although the Generosity Commission's primary goal is to learn about ways to increase generosity in America, this analysis could lend additional weight to the enterprise. Our civic engagement measures may not all properly be termed measures of "generosity," but they do measure the strength of civil society at the community level. Thus, our goal with the analysis in this section is to produce evidence that volunteering and giving strengthen civil society.

The CPS dataset that we have created from the Volunteer and Civic Engagement Supplements is also well suited for this analysis. Since we have macro-level data for 2010 through 2015, and measures of group involvement and social connectedness from 2010, 2011 and 2013 (with trust in neighbors available for 2011 and 2013), we are looking for evidence that volunteering and giving in 2009, 2010 and 2012 influence civic engagement in the following years.

We use the same micro-level and macro-level variables in our multivariate models, and control for state-level clustering by estimating mixed-effects models, similar to the ones estimated in the first report. Because, to our knowledge, our CPS civic engagement measures have not been used in multivariate analysis,[66] we will pay particular attention here to the results for the micro-level and macro-level variables. We compare our results for these variables from those reported in earlier studies, including our first report.

DO VOLUNTEERING AND GIVING INFLUENCE GROUP MEMBERSHIP?

Do volunteering and giving promote group activities? Most empirical studies of generosity treat group membership as a predictor of giving and volunteering, rather than an outcome. Evidence supporting the claim that volunteering can encourage active and productive group involvement can be found in studies of the effect of national service programs, such as AmeriCorps, on program participants. One longitudinal evaluation of AmeriCorps programs found that, compared to people who expressed interest in the program but did not enroll, AmeriCorps members are more active in community affairs both four years and eight years after service. Other effects that persist over this time period are connection to community, ability to identify and understand problems in the community, confidence in ability to work with local government, and ability to lead a successful community-based movement.[67]

Can giving, along with volunteering, also promote group behavior? Even though giving often occurs by someone simply sending a donation to an organization, groups like giving circles are formed because the members want to make decisions about their contributions as a group rather than as individuals.[68] This question has also been studied in the context of the workplace, where the question is whether generous behavior – "giving" in the sense of helping one's coworkers, rather than donating money to charity – has a positive effect on positive team dynamics and a willingness to cooperate on work projects.[69] Outside of the giving-circles literature, however, participation in associational life is seen as a determinant of giving, rather than an outcome of individual philanthropy.

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[66] Most previous studies that use data from the CPS Civic Engagement Supplement simply present the values of the various indicators, usually for a particular geographical area that is identifiable in the CPS public-use data. One exception is a 2019 study by Weiss et al., where the authors develop an individual-level index of social capital using our group membership and two of our social connectedness variables. See Weiss, I., Paxton, P., Velasco, K., & Ressler, R. W. (2019). "Revisiting declines in social capital: Evidence from a new measure." *Social Indicators Research*, *142*, 1015-1029.

[67] Corporation for National and Community Service (2008). "Still Serving: Measuring the Eight-Year Impact of AmeriCorps on Alumni". Office of Research and Policy Development: Washington, D.C.

[68] For a comprehensive overview of giving circles, see Eikenberry, A. M. (2009). *Giving circles: Philanthropy, voluntary association, and democracy*. Indiana University Press.

[69] See, for example, the studies mentioned in Grant, A. (2013). "In the company of givers and takers." *Harvard Business Review*, *91*(4), 90-97.

Our model of group membership uses the same format as our earlier models: membership in one or more community groups or associations is a function of several micro-level and macro-level variables, as well as lagged values of giving and volunteering. We would generally expect the micro-level and macro-level variables in our model to have the same influence on group membership as they do on volunteering, since formal volunteering, by definition, is done through or for some sort of organization. However, the possibility remains that a respondent's group membership decision precedes the decision to give or volunteer in the previous year. To account for past group membership, we add a lagged variable to the model that indicates whether the respondent belonged to one or more groups in the previous year. What results is a model of change in group membership: controlling for prior group membership (and all other factors), are people more likely to join a group if they gave money and/or contributed time in the previous year?

Table 10 shows the estimated marginal effects of all the variables in the model with lagged values of giving, volunteering and group membership. Despite the reduced sample size – we are limited to analyzing data from 2010, using the subsample of CPS households in the sample for the 2009 Civic Engagement Supplement, and 2011, using households from the 2010 Civic Engagement Supplement sample – we find that volunteering and giving do seem to encourage people to join groups, on average, controlling for prior group membership and all other factors. Being in a group in the previous year, by itself, increases the likelihood of being in a group the following year by 33.0 percentage points. Meanwhile, volunteering in the previous year also has a significant and positive influence (24.4 percentage points) on group membership, as does giving (9.9 percentage points).

The rest of the results of the model yield several surprising findings, given our expectations. First, none of the macro-level variables – even the urban/suburban/rural location of the household – has a significant influence on group membership, except for one of the regional variables: group membership in the South declined significantly, by 6.9 percentage points, controlling for all micro-level factors. These results were not simply an artifact of our decision to limit the sample by controlling for prior group membership: when the model is estimated on the full 2010-2011-2013 sample, we see the same results. Another unexpected, but less surprising, finding is that older adults are significantly more likely to be group members than young adults, but adults in the 25-34 age group are the least likely to be involved with groups. Of the other micro-level variables, income, educational attainment, marital status and parenthood are all associated with group membership in the expected way, but gender, race and ethnicity are not.

Table 10: Outcomes of (lagged) volunteering and giving
Marginal Effects (dy/dx), Pooled Data (Years Vary), with State-Level Covariates - Civic Outcome Variables:

VARIABLE	CATEGORY	GROUP INVOLVEMENT (WITH LAG)	SOCIAL CONNECTEDNESS (WITH LAG)	EAT DINNER WITH ANY OTHER MEMBERS OF YOUR HOUSEHOLD	TALK WITH ANY OF YOUR NEIGHBORS	YOU AND YOUR NEIGHBORS DO FAVORS FOR EACH OTHER	TRUST IN NEIGHBORS	VOTING
Lagged Variables	Volunteering (Unpaid work through or for an organization)	24.4%	0.03	0.00	0.00	0.01	0.03	12.0%
	Giving (Gift to charity valued at $25 or more)	9.9%	-0.02	0.00	0.00	0.00	0.04	10.1%
	Dependent Variable (Group membership and social connectedness equations only)	33.0%	0.12	0.04	0.19	0.27		
Gender	Male							
	Female	0.3%	0.00	0.00	0.01	0.00	-0.01	1.2%
Race	White							
	Black	3.4%	-0.07	0.00	0.01	-0.01	-0.13	8.0%
	American Indian, Alaskan Native	-2.1%	-0.12	0.00	-0.02	0.00	-0.03	0.7%
	Asian	0.4%	-0.14	0.00	-0.01	-0.05	-0.05	-29.0%
	Native Hawaiian / Pacific Islander	-14.7%	0.27	0.00	0.14	0.06	-0.13	-4.7%
	More than one race category	-0.4%	-0.14	0.00	0.00	-0.02	-0.04	-0.7%
Ethnicity (Latino Origin)	Latino	-3.6%	0.06	0.00	0.02	0.02	-0.05	-14.5%
	Non-Latino							
Educational Attainment	Educ: Less than HS Diploma							
	Educ: HS Grad	2.8%	0.03	0.00	0.00	0.01	0.04	13.5%
	Educ: Some college	9.9%	-0.01	0.01	-0.01	0.00	0.04	23.5%
	Educ: College grad +	17.1%	-0.04	0.01	-0.02	-0.01	0.07	31.6%
Own Children under 18	No own children under 18							
	Own children under 18	11.4%	0.03	0.01	0.04	0.02	0.00	-2.0%
Marital Status	Single - Never married							
	Married - spouse present	3.9%	0.06	0.00	0.10	0.06	0.04	3.6%
	Other marital status	1.9%	0.07	0.00	0.00	0.00	0.01	-4.3%
Labor Force Participation	Employed, full-time							
	Employed, part-time	3.5%	0.04	0.00	0.02	0.01	0.01	1.1%
	Unemployed	2.3%	0.14	0.00	0.02	0.03	-0.02	-1.5%
	Not in labor force	1.6%	0.05	-0.01	0.01	0.01	0.00	-2.0%
Family Income	Less than $35,000							
	Between $35-$50,000	3.6%	0.02	0.00	0.01	0.00	0.03	3.8%
	Between $50-$75,000	4.0%	-0.05	0.00	0.02	0.00	0.03	7.3%
	$75,000 and over	4.2%	-0.04	0.00	0.03	-0.01	0.05	10.1%
	Urban (principal city)	-1.6%	-0.04	0.00	0.00	-0.01	-0.06	-1.9%
	Suburban (balance)	-1.9%	-0.03	0.00	0.00	-0.01	-0.02	-2.0%
	Rural (nonmetropolitan)							
	Not identified							

Table 10: Outcomes of (lagged) volunteering and giving
Marginal Effects (dy/dx), Pooled Data (Years Vary), with State-Level Covariates - Civic Outcome Variables:

VARIABLE	CATEGORY	GROUP INVOLVEMENT (WITH LAG)	SOCIAL CONNECTEDNESS (WITH LAG)	EAT DINNER WITH ANY OTHER MEMBERS OF YOUR HOUSEHOLD	TALK WITH ANY OF YOUR NEIGHBORS	YOU AND YOUR NEIGHBORS DO FAVORS FOR EACH OTHER	TRUST IN NEIGHBORS	VOTING
Region of the USA	East			0.00	0.00	0.00		
	Midwest	-1.9%	-0.13	0.00	-0.01	-0.03	-0.02	2.1%
	South	-6.9%	-0.02	0.00	0.00	0.00	-0.05	4.8%
	West	-2.5%	-0.10	0.01	0.00	-0.02	-0.03	3.1%
Age Groups	Ages 16 to 24	-11.1%	0.02	-0.02	0.07	0.03	-0.12	-36.1%
	Age 25 to 34	-17.3%	0.07	0.00	0.00	0.01	-0.15	-32.7%
	Age 35 to 44	-12.8%	0.04	-0.01	-0.02	0.00	-0.13	-26.3%
	Age 45 to 54	-10.6%	-0.01	-0.01	-0.02	-0.01	-0.11	-18.5%
	Age 55 to 64	-7.6%	0.00	0.00	-0.01	-0.01	-0.09	-9.8%
	Age 65 to 74	0.2%	0.00	0.00	0.00	-0.01	-0.05	-1.9%
	Age 75 and Over							
CPS Survey Year	Year = 2010							
	Year = 2011	4.4%	-0.01	0.01	0.00	-0.01	Ref. Cat.	
	Year = 2012							18.8%
	Year = 2013						-0.01	
	Year = 2014							-1.9%
	Year = 2015							
State-Level Variables	Population Density	-1.3%	-0.26	0.01	0.02	-0.04	0.00	-13.8%
	Homeownership Rate	1.1%	-0.02	0.01	0.00	0.00	0.01	2.3%
	Multi-Unit Housing Rate	0.2%	0.05	0.00	0.00	0.01	-0.01	1.6%
	Commuting Time	0.1%	0.00	0.00	0.01	0.00	-0.02	-1.8%
	Percent High School Graduates	-1.0%	0.05	-0.01	0.00	0.01	0.00	-0.1%
	Percent College Graduates	3.1%	-0.05	0.00	0.00	-0.01	0.02	-0.5%
	Poverty Rate	-0.9%	0.05	-0.01	0.00	0.02	0.02	0.7%
	Large Nonprofits per 1000 Residents	-1.4%	-0.22	0.00	-0.01	-0.04	-0.02	1.7%
	Small Nonprofits per 1000 Residents	0.2%	0.09	0.00	0.00	0.01	-0.01	2.7%
	Median Income	-8.1%	0.21	-0.02	0.00	0.06	0.04	3.8%
	Unemployment Rate	-1.7%	0.01	0.00	0.00	0.00	0.00	1.6%
	Congregations per Capita	0.2%	0.00	0.00	0.00	0.00	0.01	-3.3%
	Blau Index of Racial Heterogeneity	2.2%	-0.03	0.00	0.00	-0.01	-0.01	-0.6%
	Gini Index of Income Inequality	-2.1%	0.02	0.00	0.00	0.01	0.00	2.3%
	Putnam Social Capital Index	-0.6%	0.01	0.00	0.01	0.01	0.00	0.7%
Constant	Constant							

DO VOLUNTEERING AND GIVING INFLUENCE SOCIAL CONNECTEDNESS?

Like group membership, there is a chance that volunteering and giving actually influence the degree to which people interact with others in their family or neighborhood. The research on generosity suggests how this might happen: a recent literature review discusses studies that show that generous behavior – though not necessarily giving and volunteering – can have a measurable impact on social connectedness by making people more willing to spend time with others, in addition to making them happier and healthier. Those who are more generous may enjoy or place more value on interpersonal relationships because generosity makes people more likely to respond with grace to "social noise" (unexpected outcomes of social interaction).[70]

The literature on volunteering suggests that volunteering can enhance social connectedness, at least in some forms, while studies about giving yield more qualified findings. One recent study, based on survey data from the Netherlands, finds that formal volunteering can help increase social resources, as measured by an index of five questions about one's social network, from earlier levels, whereas simply belonging to a group without volunteering does not have a significant effect on this change.[71] Another study that uses American survey data[72] shows that volunteers tend to become more socially connected with their neighbors, although they find that closer connections with neighbors does not encourage volunteering. However, a study on giving finds that giving only promotes social connectedness when the donor develops, or strengthens, a personal connection with the recipient of the donation.[73]

The results of our analysis tend to support the empirical evidence from these previous studies. Table 10 contains the marginal effects from models where our composite social connectedness scale and its three components are the dependent variables, and the main independent variables are lagged giving, lagged volunteering, and lagged social connectedness. When the composite social connectedness scale measure is the dependent variable, and the lagged scale measure is added to the model, neither volunteering nor giving has a significant influence on social connectedness. In fact, almost none of the micro-level or macro-level variables are statistically significant; one of the very few significant influences on current social connectedness is lagged social connectedness. Because this composite measure has demonstrated flaws, we also look at the three indicators of social connectedness that form the composite measure. Only the favors-for-neighbors variable is significantly influenced by volunteering; giving does not have a significant influence on any of the three indicators of social connectedness. This suggests that many monetary donations do not result in the donor developing a personal relationship with the recipient, despite the attempts of fundraising campaigns to encourage such relationships.

The micro-level and macro-level variables tend to have different effects on social connectedness, depending on how it is measured. Women are more likely than men to talk with their neighbors, but not to do favors for neighbors or to have dinner with household members. The youngest adults are less likely to eat dinner with others, but more likely to talk with their neighbors or do favors for them, compared to all other age groups. The state-level measures of socioeconomic status tend to have the same influence on doing favors for neighbors as they do for volunteering, but have more mixed influences on having dinner with others, and no effect at all on talking with neighbors. Finally, although the index values tend to be lower for several racial and ethnic groups, controlling for other factors, but Latinos tend to talk with their neighbors and do favors for their neighbors more often than non-Latinos, on average, all else being equal.

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[70] Allen, S. (2018). *The science of generosity*. White paper prepared for the John Templeton Foundation by the Greater Good Science Center at UC Berkeley.

[71] Van Ingen, E., & Kalmijn, M. (2010). "Does voluntary association participation boost social resources?" *Social Science Quarterly*, *91*(2), 493-510. The five questions used to construct the social resources index are: There is always someone I can talk to about my day-to-day problems; There are plenty of people I can lean on when I have problems; There are many people I can trust completely; There are enough people I feel close to; and I can call on my friends whenever I need them.

[72] Wilson and Son, 2018, *op. cit*. Wilson and Son estimate a cross-lagged structural equation model, because they have measures of both relationships with neighbors and volunteering for two time periods, so they interpret their results as evidence of the causal relationship between "neighboring" and volunteering.

[73] Aknin, L. B., Dunn, E. W., Sandstrom, G. M., & Norton, M. I. (2013). "Does social connection turn good deeds into good feelings? On the value of putting the 'social' in prosocial spending." *International Journal of Happiness and Development*, *1*(2), 155-171.

DO VOLUNTEERING AND GIVING INFLUENCE TRUST IN NEIGHBORS?

The relationship between generosity and trust in others has been specifically examined in several studies. Many studies say that people do not seem to trust others more when they give money and/or time, even though they find that trust influences giving and volunteering. One influential study that uses state-level data finds that both trust in others (measured with the commonly used, but controversial, "most people can be trusted" versus "you can't be too careful" question wording) and group membership are strong predictors of volunteering and giving at the state level, but neither form of civic engagement seems to be associated with differences in trust.[74] At the individual level, trust in neighbors and contact with neighbors are both correlated with volunt eering, but volunteering does not seem to influence either contact with neighbors or trust with neighbors.[75]

While little evidence suggests that giving would affect the degree of trust one has in other people, one study from the Netherlands (Bekkers 2012)[76] considers possible explanations for how, or whether, volunteering can influence trust and vice versa. Bekkers finds no evidence to support his hypotheses about group socialization (trust can change based on who people encounter while volunteering) or contextual diversity (the extent to which trust can change depends on the diversity of the organization(s) where people volunteer). Instead, he argues that his results support a hypothesis of stability: trust doesn't change much over time, so nothing much can affect it, including volunteering, and that people leave volunteering if they are not sufficiently trusting. Even if trust in neighbors is more subject to change – particularly when people get new neighbors – if trust in others is generally more of a "trait" variable that doesn't change much over time for most people, our analysis might not reveal much evidence that giving and volunteering can make people more or less trusting.

[74] Uslaner and Brown, 2005, *op. cit.*
[75] Wilson and Son, 2018, *op. cit.*
[76] Bekkers, R. (2012). "Trust and volunteering: Selection or causation? Evidence from a 4 year panel study." *Political Behavior, 34*, 225-247.

Unfortunately, our model suffers from our inability to add a lagged version of the trust in neighbors variable. Because the question was only included in the 2011 and 2013 versions of the CPS Civic Engagement Supplement, no respondents were able to answer the question in more than one year. As a result, although Table 10 – which contains all the marginal effects of the variables in our model – shows that both volunteering and giving have a small, but significant influence on trust in neighbors, we cannot rule out the possibility that trust in neighbors influences the lagged values of both giving and volunteering.

The other results in Table 10 generally support many of the findings in a widely cited study by *Bowling Alone* author Robert Putnam.[77] Although Putnam's multilevel model does not include giving or volunteering, almost all the micro-level variables that are included in both models are statistically significant with the same sign, including work hours, which is not statistically significant in either model. Parenthood and marital status are missing from Putnam's model, while homeownership, tenure spent living in the community, commuting time, citizenship status, and Spanish-speaking status are missing from ours. Many of Putnam's macro-level variables are measured at the Census tract level, rather than the state level, but of the three macro-level variables that are significant in our model, two (commuting time and percent college graduates) are also significant in Putnam's, while the third (congregations per capita) is missing from Putnam's model. Poverty rate and population density are both negative and statistically significant in Putnam's model, but positive and not statistically significant in our model. Finally, the signature result from Putnam's study – that residents of more racially diverse Census tracts are less trusting of their neighbors, controlling for all other factors – is not supported by our results. The Blau index of racial heterogeneity, which takes on larger values for states with more racially diverse populations, is not significant in our model of trust in neighbors.

VOLUNTEERING, GIVING AND VOTING

In 2008 and 2010, the CPS Civic Engagement Supplement was combined with the CPS Voting Supplement, which the Census Bureau has used for over forty years to produce data on voting and registration in national elections. The CPS Voting Supplement, which is conducted by the U.S. Census Bureau every other November, in even-numbered years, is the data source for many studies of voting in America.

Voting is widely considered to be a form of civic engagement, although prior research suggests that many people feel that voting is qualitatively different from giving and volunteering. Figure 3 below contains findings from a 2005 survey on citizenship norms that define citizenship in terms of responsibilities ("citizen duty") and opportunities ("engaged citizenship").[78] While certain responsibilities of citizenship, such as obeying the law, clearly fall into the "duty" category, many people feel that voting has elements of both dimensions: along with being seen as a duty, voting also gives people an opportunity to express their political opinions. Although giving to charity is not included in the list of activities, volunteering is one of the chief activities that define engaged citizenship, along with other non-electoral political activities, such as contacting public officials, that are included on the CPS Civic Engagement Supplement.

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[77] Putnam, R. D. (2007). "E pluribus unum: Diversity and community in the twenty- first century the 2006 Johan Skytte Prize Lecture." Scandinavian political studies, *30*(2), 137-174.

[78] Published in Dalton, R. J. (2008). "Citizenship norms and the expansion of political participation." *Political Studies*, *56*(1), 76-98. Highlights for certain activities are added to the original table.

Figure 3: Norms of Democratic Citizenship

	CITIZEN DUTY	ENAGAGED CITIZEN
Report a Crime	0.84	0.12
Always Obey the Law	0.77	0.09
Serve in the Military	0.64	0.15
Serve on a Jury	0.63	0.32
Vote in Elections	0.56	0.43
Form Own Opinions	0.29	0.47
Support Worse Off	0.16	0.65
Be Active in Politics	0.15	0.80
Active in Voluntary Groups	0.10	0.84
Eigenvalue	2.56	2.37
Percent Variance	28.5	25.8

Notes: Table entries are results from a principal components analysis with varimax rotation.

Source: https://journals.sagepub.com/doi/epub/10.1111/j.1467-9248.2007.00718.x , page 81

We can use our model specification to estimate the influence of giving and volunteering on voting in the national elections of 2010, 2012 and 2014. Because the CPS conducts its Voting Supplement in mid-November, and administers its Volunteer Supplement in September, we are assured that most people vote after the year-long time period covered by the CPS questions about giving and volunteering. That supports the assumption that the decision to vote (or not to vote) does not influence volunteering and giving that took place before the election. This assumption may be criticized on the grounds that many factors influence both the decision to vote and the decision to give and/or volunteer. However, our model controls for many – probably most – of these factors, at the individual and state level, which reduces the chances of discovering a correlation that is spurious.

The results of our study show that volunteering and giving both have significant impacts on the decision to vote, controlling for all other micro-level and macro-level factors. The effect of volunteering and giving on voting is not quite as large as the effect of these activities on group participation, but they are strong nonetheless. The results of the micro-level variables closely match those found in multivariate studies of voting that use CPS data.[79] However, the macro-level variables yield some interesting results: controlling for all other factors, voting is much less prevalent in more densely populated states, and where the unemployment rate is high, turnout is lower still. Voting rates are lower in states with larger concentrations of congregations, and are higher in states with higher levels of income inequality, again controlling for all other factors.

[79] Wolfinger, N. H. & Wolfinger, R. E. (2008). "Family structure and voter turnout." *Social Forces*, *86*(4), 1513-1528.

CONCLUSION

The analysis featured in this report extends the results published on the first report by using the same data source and modeling structure. The models used here contain the same set of micro-level and macro-level variables as did the models in the first report; the features we added allow us to study the relationships between different indicators of generosity, starting with the relationship between volunteering and giving. The key to our analysis is that the CPS sample design allows us to add lagged measures of giving and volunteering to each model, and to allow for correlations among the unmeasured elements in the disturbance terms.

This modeling choice allows us to treat generosity – or, the measures of generosity that we focus on here, giving and volunteering – as a function of both personal history and present circumstances. It also allows us to model change in volunteering and giving behavior, which is an important question, given the amount of "churn" in the national donor pool and volunteer workforce. The annual changes in the national volunteer and giving rates, which are typically small, mask a larger amount of retention and "acquisition" (performing the activity after not doing it in the previous year). Individual organizations notice both retention and acquisition, especially among donors,[80] but studies of volunteer retention[81] often focus on retention without acknowledging acquisition.

The results we present here reflect our best attempts to unravel the causal relationships that are found in the richest data on civic engagement and philanthropy. Even though the causal arrows here are "as tangled as well-tossed spaghetti," in Robert Putnam's phrase,[82] we are able to use our model to incorporate multiple civic engagement measures, and to draw some inferences about how these different forms of civic engagement are related to individual philanthropy (giving and volunteering). Our results suggest that participation in organized groups or community associations – the "group involvement" variable in our model – have much more influence on giving and volunteering than social connectedness (interpersonal relationships with household members or neighbors) and trust in neighbors. Group involvement has a significant and fairly large influence on both giving and volunteering, whereas social connectedness has only a limited direct influence on volunteering, and neither social connectedness nor trust in neighbors has a direct influence on giving.

[80] Association of Fundraising Professionals (2023). "Early 2023 Fundraising Results Reinforce Diverse Strategy Urgency." August 9. Available at https://afpglobal.org/early-2023-fundraising-results-reinforce-diverse-strategy-urgency.
[81] Eisner, D., Grimm Jr, R. T., Maynard, S., & Washburn, S. (2009). "The new volunteer workforce." *Stanford Social Innovation Review*, *7*(1), 32-37. Available at https://www.unitedwaygmwc.org/UnitedWay/Volunteer-Resources/3TheNewVolunteerWorkforce-Article2009.pdf.
[82] Putnam, *Bowling Alone,* 2000, op. cit., p. 137. Quoted in Nannestad, P. (2008). "What have we learned about generalized trust, if anything?" *Annual Review of Political Science*, *11*, 413-436.

Our results suggest that giving and volunteering can have a limited influence on civil society, primarily by encouraging people to participate in associational life. Giving and volunteering both have significant influences on group involvement, while volunteering is associated with a slight increase in the frequency of doing favors for neighbors, but neither volunteering nor giving have much influence over other types of social connectedness. Also, while both giving and volunteering have a significant influence on the likelihood of voting, the effect of both activities on trust in neighbors is uncertain, because we are unable to control for prior values of this variable.

Altogether, the lesson in this analysis is that group involvement is the main way in which social connections encourage generosity, and by which generosity can strengthen civil society. This is very similar to the story originally told by Robert Putnam in *Bowling Alone,* even though the Internet age has prompted dramatic changes in the importance of community organizations and informal groups in people's lives – and the pandemic has caused even more profound changes to the way people engage with groups. The risk with group associations, though, is the same as it always has been: informally organized groups tend to promote homophily,[83] because people tend to join groups that already contain a lot of people like them – or, in other words, "birds of a feather" tend to "flock together" in associational life. If we can avoid this tendency, the exercise of generosity might spread, leading to the creation of "bridging social capital" that encourages people to cross social boundaries to work together to solve community problems.

[83] McPherson, M., Smith-Lovin, L., & Cook, J. M. (2001). "Birds of a feather: Homophily in social networks." *Annual Review of Sociology*, *27* (1), 415-444.

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APPENDIX TABLES

Table A-1: Results from volunteering equation with group membership added
Formal Volunteering (Unpaid Work Through or for an Organization), 2010, 2011, 2012 and 2014 (pooled) - with state-level macro-level variables

VARIABLE	CATEGORY	COEFFICIENT	STANDARD ERROR	Z-SCORE	P-VALUE	EFFECT (DY/DX)
	Group Membership Last Year	0.476	0.017	27.46	0.000	14.6%
	Volunteered Last Year	1.202	0.018	67.07	0.000	36.8%
	Gave Last Year	0.262	0.020	13.13	0.000	8.0%
Gender	Male	Reference Category				
	Female	0.127	0.017	7.30	0.000	3.9%
Race	White	Reference Category				
	Black	-0.001	0.034	-0.03	0.974	0.0%
	American Indian, Alaskan Native	-0.176	0.104	-1.69	0.091	-5.4%
	Asian	-0.245	0.047	-5.25	0.000	-7.5%
	Native Hawaiian / Pacific Islander	-0.157	0.212	-0.74	0.459	-4.9%
	More than one race category	0.092	0.082	1.13	0.258	2.9%
Ethnicity (Latino Origin)	Latino	-0.136	0.033	-4.10	0.000	-4.2%
	Non-Latino	Reference Category				
Educational Attainment	Less than HS Diploma	Reference Category				
	HS Grad	0.204	0.036	5.66	0.000	5.0%
	Some college	0.363	0.037	9.90	0.000	9.2%
	College grad +	0.526	0.038	13.98	0.000	14.1%
Own Children under 18	No own children under 18	Reference Category				
	Own children under 18	0.132	0.024	5.50	0.000	4.1%
Marital Status	Single - Never married	Reference Category				
	Married - spouse present	0.114	0.029	3.93	0.000	3.5%
	Other marital status	0.029	0.032	0.92	0.360	0.9%
Labor Force Participation	Employed, full-time	Reference Category				
	Employed, part-time	0.185	0.028	6.64	0.000	5.5%
	Unemployed	0.227	0.047	4.80	0.000	6.7%
	Not in labor force	0.065	0.023	2.78	0.005	1.9%
Family Income	Less than $35,000	Reference Category				
	Between $35-$50,000	0.037	0.028	1.36	0.174	1.1%
	Between $50-$75,000	0.047	0.026	1.81	0.070	1.4%
	$75,000 and over	0.110	0.025	4.33	0.000	3.3%
Urban-Suburban-Rural Household	Urban (principal city)	-0.076	0.025	-3.01	0.003	-2.4%
	Suburban (balance)	-0.056	0.021	-2.71	0.007	-1.7%
	Rural (nonmetropolitan)	Reference Category				
	Not identified	Reference Category				

Table A-1: Results from volunteering equation with group membership added
Formal Volunteering (Unpaid Work Through or for an Organization), 2010, 2011, 2012 and 2014 (pooled) - with state-level macro-level variables

VARIABLE	CATEGORY	COEFFICIENT	STANDARD ERROR	Z-SCORE	P-VALUE	EFFECT (DY/DX)
Region of the USA	East	Reference Category				
	Midwest	-0.013	0.046	-0.27	0.785	-0.4%
	South	-0.139	0.044	-3.14	**0.002**	-4.3%
	West	-0.002	0.058	-0.03	0.975	-0.1%
Age Groups	Ages 16 to 24	0.147	0.055	2.66	**0.008**	4.2%
	Age 25 to 34	0.071	0.043	1.64	0.101	2.0%
	Age 35 to 44	0.151	0.041	3.67	**0.000**	4.4%
	Age 45 to 54	0.116	0.037	3.13	**0.002**	3.3%
	Age 55 to 64	0.108	0.034	3.19	**0.001**	3.1%
	Age 65 to 74	0.087	0.034	2.55	**0.011**	2.5%
	Age 75 and Over	Reference Category				
CPS Survey Year	Year = 2010	Reference Category				
	Year = 2011	0.129	0.031	4.16	**0.000**	3.8%
	Year = 2012	0.098	0.037	2.65	**0.008**	2.9%
	Year = 2013	Data Not Available				
	Year = 2014	0.073	0.052	1.40	0.160	2.1%
	Year = 2015	Data Not Available				
State-Level Variables	Population Density	0.013	0.081	0.16	0.877	0.4%
	Homeownership Rate	0.013	0.027	0.47	0.636	0.4%
	Multi-Unit Housing Rate	0.009	0.020	0.48	0.630	0.3%
	Commuting Time	-0.048	0.021	-2.29	**0.022**	-1.5%
	Percent High School Graduates	-0.064	0.026	-2.45	**0.014**	-2.0%
	Percent College Graduates	0.066	0.029	2.27	**0.023**	2.0%
	Poverty Rate	-0.032	0.038	-0.85	0.397	-1.0%
	Large Nonprofits per 1000 Residents	-0.057	0.061	-0.93	0.350	-1.7%
	Small Nonprofits per 1000 Residents	0.007	0.030	0.22	0.827	0.2%
	Median Income	-0.089	0.085	-1.05	0.293	-2.7%
	Unemployment Rate	-0.005	0.023	-0.24	0.814	-0.2%
	Congregations per Capita	0.036	0.016	2.21	**0.027**	1.1%
	Blau Index of Racial Heterogeneity	0.030	0.023	1.34	0.181	0.9%
	Gini Index of Income Inequality	-0.053	0.026	-2.06	**0.039**	-1.6%
	Putnam Social Capital Index	0.020	0.026	0.78	0.434	0.6%
Constant	Constant	-2.046	0.077	-26.52	**0.000**	

Table A-2: Results from giving equation with group membership added
Giving to Charity, 2010, 2011, 2012 and 2014 (pooled) - with state-level macro-level variables

VARIABLE	CATEGORY	COEFFICIENT	STANDARD ERROR	Z-SCORE	P-VALUE	EFFECT (DY/DX)
	Group Membership Last Year	0.262	0.017	15.38	0.000	10.1%
	Volunteered Last Year	0.309	0.019	16.11	0.000	11.9%
	Gave Last Year	0.825	0.017	49.64	0.000	31.7%
Gender	Male	Reference Category				
	Female	0.135	0.016	8.41	0.000	5.2%
Race	White	Reference Category				
	Black	-0.060	0.029	-2.08	0.038	-2.3%
	American Indian, Alaskan Native	-0.334	0.102	-3.27	0.001	-12.7%
	Asian	-0.182	0.039	-4.64	0.000	-7.0%
	Native Hawaiian / Pacific Islander	-0.143	0.173	-0.82	0.410	-5.4%
	More than one race category	-0.112	0.077	-1.46	0.144	-4.3%
Ethnicity (Latino Origin)	Latino	-0.150	0.028	-5.40	0.000	-5.8%
	Non-Latino	Reference Category				
Educational Attainment	Less than HS Diploma	Reference Category				
	HS Grad	0.157	0.028	5.61	0.000	6.3%
	Some college	0.315	0.029	10.84	0.000	12.5%
	College grad +	0.483	0.031	15.66	0.000	19.1%
Own Children under 18	No own children under 18	Reference Category				
	Own children under 18	-0.002	0.023	-0.11	0.916	-0.1%
Marital Status	Single - Never married	Reference Category				
	Married - spouse present	0.285	0.025	11.23	0.000	11.0%
	Other marital status	0.075	0.028	2.66	0.008	3.0%
Labor Force Participation	Employed, full-time	Reference Category				
	Employed, part-time	0.019	0.027	0.69	0.488	0.7%
	Unemployed	-0.129	0.042	-3.08	0.002	-4.8%
	Not in labor force	-0.210	0.021	-9.79	0.000	-8.0%
Family Income	Less than $35,000	Reference Category				
	Between $35-$50,000	0.191	0.025	7.78	0.000	7.6%
	Between $50-$75,000	0.257	0.023	11.23	0.000	10.2%
	$75,000 and over	0.374	0.023	16.08	0.000	14.6%
Urban-Suburban-Rural Household	Urban (principal city)	-0.031	0.023	-1.33	0.182	-1.2%
	Suburban (balance)	0.062	0.019	3.24	0.001	2.4%
	Rural (nonmetropolitan)	Reference Category				
	Not identified	Reference Category				

Table A-2: Results from giving equation with group membership added
Giving to Charity, 2010, 2011, 2012 and 2014 (pooled) - with state-level macro-level variables

VARIABLE	CATEGORY	COEFFICIENT	STANDARD ERROR	Z-SCORE	P-VALUE	EFFECT (DY/DX)
Region of the USA	East	Reference Category				
	Midwest	-0.046	0.043	-1.08	0.280	-1.7%
	South	-0.135	0.041	-3.27	**0.001**	-5.1%
	West	-0.067	0.053	-1.26	0.209	-2.5%
Age Groups	Ages 16 to 24	-0.817	0.048	-16.89	**0.000**	-28.0%
	Age 25 to 34	-0.569	0.039	-14.64	**0.000**	-19.8%
	Age 35 to 44	-0.418	0.038	-11.05	**0.000**	-14.5%
	Age 45 to 54	-0.321	0.034	-9.48	**0.000**	-11.1%
	Age 55 to 64	-0.233	0.031	-7.45	**0.000**	-8.0%
	Age 65 to 74	-0.037	0.032	-1.17	**0.242**	-1.2%
	Age 75 and Over	Reference Category				
CPS Survey Year	Year = 2010	Reference Category				
	Year = 2011	0.073	0.029	2.53	**0.011**	2.8%
	Year = 2012	0.070	0.034	2.06	**0.039**	2.7%
	Year = 2013	Data Not Available				
	Year = 2014	0.044	0.047	0.92	0.356	1.7%
	Year = 2015	Data Not Available				
State-Level Variables	Population Density	-0.231	0.075	-3.07	**0.002**	-8.9%
	Homeownership Rate	0.017	0.026	0.68	0.496	0.7%
	Multi-Unit Housing Rate	0.025	0.018	1.38	0.167	1.0%
	Commuting Time	-0.071	0.020	-3.60	**0.000**	-2.7%
	Percent High School Graduates	-0.053	0.025	-2.15	**0.032**	-2.0%
	Percent College Graduates	0.123	0.028	4.43	**0.000**	4.7%
	Poverty Rate	0.075	0.035	2.17	**0.030**	2.9%
	Large Nonprofits per 1000 Residents	-0.082	0.058	-1.41	0.159	-3.2%
	Small Nonprofits per 1000 Residents	0.034	0.030	1.12	0.261	1.3%
	Median Income	0.201	0.079	2.54	**0.011**	7.7%
	Unemployment Rate	0.017	0.021	0.80	**0.425**	0.7%
	Congregations per Capita	0.058	0.015	3.84	**0.000**	2.2%
	Blau Index of Racial Heterogeneity	-0.003	0.021	-0.16	0.876	-0.1%
	Gini Index of Income Inequality	-0.086	0.024	-3.56	**0.000**	-3.3%
	Putnam Social Capital Index	-0.069	0.024	-2.83	**0.005**	-2.6%
Constant	Constant	-0.853	0.070	-12.15	**0.000**	

Table A-3: Results from volunteering equation with social connectedness added
Formal Volunteering (Unpaid Work Through or for an Organization), 2010, 2011, 2012 and 2014 (pooled) - with state-level macro-level variables

VARIABLE	CATEGORY	COEFFICIENT	STANDARD ERROR	Z-SCORE	P-VALUE	EFFECT (DY/DX)
	Social Connectedness Last Year	0.053	0.008	7.03	0.000	1.7%
	Volunteered Last Year	1.283	0.019	67.02	0.000	40.3%
	Gave Last Year	0.287	0.022	13.16	0.000	9.0%
Gender	Male	Reference Category				
	Female	0.129	0.019	6.84	0.000	4.0%
Race	White	Reference Category				
	Black	-0.006	0.038	-0.16	0.876	-0.2%
	American Indian, Alaskan Native	-0.208	0.113	-1.85	0.065	-6.6%
	Asian	-0.303	0.048	-6.25	0.000	-9.5%
	Native Hawaiian / Pacific Islander	-0.136	0.225	-0.60	0.546	-4.3%
	More than one race category	0.166	0.086	1.92	0.054	5.3%
Ethnicity (Latino Origin)	Latino	-0.158	0.035	-4.54	0.000	-5.0%
	Non-Latino	Reference Category				
Educational Attainment	Less than HS Diploma	Reference Category				
	HS Grad	0.242	0.040	6.09	0.000	5.9%
	Some college	0.415	0.040	10.29	0.000	10.6%
	College grad +	0.586	0.041	14.13	0.000	15.9%
Own Children under 18	No own children under 18	Reference Category				
	Own children under 18	0.170	0.025	6.79	0.000	5.3%
Marital Status	Single - Never married	Reference Category				
	Married - spouse present	0.143	0.035	4.13	0.000	4.5%
	Other marital status	-0.006	0.041	-0.14	0.890	-0.2%
Labor Force Participation	Employed, full-time	Reference Category				
	Employed, part-time	0.169	0.030	5.67	0.000	5.2%
	Unemployed	0.241	0.050	4.77	0.000	7.3%
	Not in labor force	0.077	0.025	3.05	0.002	2.4%
Family Income	Less than $35,000	Reference Category				
	Between $35-$50,000	0.049	0.031	1.56	0.118	1.5%
	Between $50-$75,000	0.062	0.029	2.18	0.029	1.9%
	$75,000 and over	0.135	0.028	4.83	0.000	4.2%
Urban-Suburban-Rural Household	Urban (principal city)	-0.090	0.028	-3.24	0.001	-2.9%
	Suburban (balance)	-0.055	0.022	-2.47	0.013	-1.7%
	Rural (nonmetropolitan)	Reference Category				
	Not identified	Reference Category				

Table A-3: Results from volunteering equation with social connectedness added

Formal Volunteering (Unpaid Work Through or for an Organization), 2010, 2011, 2012 and 2014 (pooled) - with state-level macro-level variables

VARIABLE	CATEGORY	COEFFICIENT	STANDARD ERROR	Z-SCORE	P-VALUE	EFFECT (DY/DX)
Region of the USA	East	Reference Category				
	Midwest	-0.035	0.050	-0.70	0.486	-1.1%
	South	-0.153	0.048	-3.16	**0.002**	-4.8%
	West	-0.010	0.063	-0.16	0.875	-0.3%
Age Groups	Ages 16 to 24	0.140	0.061	2.28	**0.023**	4.2%
	Age 25 to 34	0.031	0.049	0.64	0.522	0.9%
	Age 35 to 44	0.112	0.047	2.40	**0.016**	3.4%
	Age 45 to 54	0.094	0.043	2.19	**0.028**	2.8%
	Age 55 to 64	0.100	0.040	2.53	**0.011**	3.0%
	Age 65 to 74	0.055	0.041	1.35	0.176	1.6%
	Age 75 and Over	Reference Category				
CPS Survey Year	Year = 2010	Reference Category				
	Year = 2011	0.150	0.034	4.42	**0.000**	4.5%
	Year = 2012	0.124	0.040	3.10	**0.002**	3.7%
	Year = 2013	Data Not Available				
	Year = 2014	0.104	0.057	1.83	0.067	3.1%
	Year = 2015	Data Not Available				
State-Level Variables	Population Density	0.029	0.088	0.33	0.742	0.9%
	Homeownership Rate	0.007	0.030	0.23	0.819	0.2%
	Multi-Unit Housing Rate	0.005	0.021	0.23	0.815	0.2%
	Commuting Time	-0.059	0.023	-2.62	**0.009**	-1.9%
	Percent High School Graduates	-0.082	0.029	-2.88	**0.004**	-2.6%
	Percent College Graduates	0.087	0.031	2.78	**0.005**	2.7%
	Poverty Rate	-0.032	0.041	-0.77	0.441	-1.0%
	Large Nonprofits per 1000 Residents	-0.081	0.066	-1.22	0.222	-2.5%
	Small Nonprofits per 1000 Residents	0.017	0.033	0.50	0.616	0.5%
	Median Income	-0.104	0.092	-1.13	0.259	-3.3%
	Unemployment Rate	-0.002	0.025	-0.08	0.934	-0.1%
	Congregations per Capita	0.050	0.018	2.83	**0.005**	1.6%
	Blau Index of Racial Heterogeneity	0.031	0.024	1.29	0.197	1.0%
	Gini Index of Income Inequality	-0.071	0.028	-2.55	**0.011**	-2.2%
	Putnam Social Capital Index	0.030	0.028	1.06	0.287	0.9%
Constant	Constant	-1.946	0.087	-22.49	**0.000**	

Table A-4: Results from giving equation with social connectedness added
Giving to Charity, 2010, 2011, 2012 and 2014 (pooled) - with state-level macro-level variables

VARIABLE	CATEGORY	COEFFICIENT	STANDARD ERROR	Z-SCORE	P-VALUE	EFFECT (DY/DX)
	Social Connectedness Last Year	0.048	0.007	6.70	0.000	1.8%
	Volunteered Last Year	0.369	0.020	18.14	0.000	14.1%
	Gave Last Year	0.813	0.019	43.88	0.000	31.1%
Gender	Male	Reference Category				
	Female	0.129	0.018	7.24	0.000	4.9%
Race	White	Reference Category				
	Black	-0.046	0.033	-1.39	0.164	-1.8%
	American Indian, Alaskan Native	-0.336	0.112	-3.00	0.003	-12.8%
	Asian	-0.202	0.041	-4.89	0.000	-7.7%
	Native Hawaiian / Pacific Islander	-0.069	0.178	-0.39	0.699	-2.6%
	More than one race category	-0.095	0.085	-1.12	0.262	-3.6%
Ethnicity (Latino Origin)	Latino	-0.148	0.030	-4.95	0.000	-5.6%
	Non-Latino	Reference Category				
Educational Attainment	Less than HS Diploma	Reference Category				
	HS Grad	0.166	0.032	5.26	0.000	6.6%
	Some college	0.325	0.033	9.91	0.000	12.9%
	College grad +	0.515	0.035	14.88	0.000	20.3%
Own Children under 18	No own children under 18	Reference Category				
	Own children under 18	0.019	0.024	0.79	0.430	0.7%
Marital Status	Single - Never married	Reference Category				
	Married - spouse present	0.297	0.030	9.87	0.000	11.4%
	Other marital status	0.030	0.036	0.84	0.402	1.2%
Labor Force Participation	Employed, full-time	Reference Category				
	Employed, part-time	0.027	0.029	0.93	0.355	1.0%
	Unemployed	-0.122	0.045	-2.71	0.007	-4.6%
	Not in labor force	-0.193	0.023	-8.24	0.000	-7.4%
Family Income	Less than $35,000	Reference Category				
	Between $35-$50,000	0.216	0.028	7.75	0.000	8.6%
	Between $50-$75,000	0.268	0.025	10.58	0.000	10.6%
	$75,000 and over	0.401	0.025	15.77	0.000	15.7%
Urban-Suburban-Rural Household	Urban (principal city)	-0.031	0.026	-1.17	0.241	-1.2%
	Suburban (balance)	0.059	0.021	2.77	0.006	2.2%
	Rural (nonmetropolitan)	Reference Category				
	Not identified	Reference Category				

Table A-4: Results from giving equation with social connectedness added
Giving to Charity, 2010, 2011, 2012 and 2014 (pooled) - with state-level macro-level variables

VARIABLE	CATEGORY	COEFFICIENT	STANDARD ERROR	Z-SCORE	P-VALUE	EFFECT (DY/DX)
Region of the USA	East	Reference Category				
	Midwest	-0.073	0.047	-1.55	0.122	-2.7%
	South	-0.142	0.046	-3.11	**0.002**	-5.4%
	West	-0.044	0.059	-0.75	0.454	-1.7%
Age Groups	Ages 16 to 24	-0.775	0.054	-14.29	**0.000**	-26.8%
	Age 25 to 34	-0.523	0.044	-11.75	**0.000**	-18.3%
	Age 35 to 44	-0.388	0.043	-8.93	**0.000**	-13.5%
	Age 45 to 54	-0.260	0.039	-6.59	**0.000**	-9.0%
	Age 55 to 64	-0.177	0.037	-4.78	**0.000**	-6.1%
	Age 65 to 74	0.015	0.039	0.39	0.695	0.5%
	Age 75 and Over	Reference Category				
CPS Survey Year	Year = 2010	Reference Category				
	Year = 2011	0.102	0.032	3.18	**0.001**	3.9%
	Year = 2012	0.103	0.038	2.75	**0.006**	4.0%
	Year = 2013	Data Not Available				
	Year = 2014	0.063	0.053	1.19	0.233	2.4%
	Year = 2015	Data Not Available				
State-Level Variables	Population Density	-0.181	0.084	-2.16	**0.030**	-6.9%
	Homeownership Rate	0.021	0.029	0.75	0.452	0.8%
	Multi-Unit Housing Rate	0.016	0.020	0.77	0.444	0.6%
	Commuting Time	-0.071	0.022	-3.28	**0.001**	-2.7%
	Percent High School Graduates	-0.061	0.027	-2.22	**0.026**	-2.3%
	Percent College Graduates	0.111	0.031	3.65	**0.000**	4.3%
	Poverty Rate	0.083	0.038	2.15	**0.031**	3.2%
	Large Nonprofits per 1000 Residents	-0.088	0.065	-1.36	0.174	-3.4%
	Small Nonprofits per 1000 Residents	0.052	0.034	1.55	0.122	2.0%
	Median Income	0.201	0.088	2.29	**0.022**	7.7%
	Unemployment Rate	0.003	0.024	0.11	0.914	0.1%
	Congregations per Capita	0.058	0.017	3.45	**0.001**	2.2%
	Blau Index of Racial Heterogeneity	0.002	0.023	0.07	0.944	0.1%
	Gini Index of Income Inequality	-0.083	0.027	-3.09	**0.002**	-3.2%
	Putnam Social Capital Index	-0.061	0.027	-2.27	**0.023**	-2.3%
Constant	Constant	-0.865	0.080	-10.82	**0.000**	

Table A-5: Results from volunteering equation with trust in neighbors added
Formal Volunteering (Unpaid Work Through or for an Organization), 2012 and 2014 (pooled) - with state-level macro-level variables

VARIABLE	CATEGORY	COEFFICIENT	STANDARD ERROR	Z-SCORE	P-VALUE	EFFECT (DY/DX)
	Trust in Neighbors Last Year	0.199	0.059	3.39	0.001	6.3%
	Volunteered Last Year	1.374	0.030	45.22	0.000	43.3%
	Gave Last Year	0.255	0.036	7.19	0.000	8.0%
Gender	Male	Reference Category				
	Female	0.105	0.030	3.51	0.000	3.3%
Race	White	Reference Category				
	Black	0.055	0.056	0.98	0.329	1.7%
	American Indian, Alaskan Native	-0.167	0.151	-1.10	0.270	-5.3%
	Asian	-0.386	0.083	-4.62	0.000	-12.1%
	Native Hawaiian / Pacific Islander	-0.062	0.293	-0.21	0.832	-2.0%
	More than one race category	0.071	0.164	0.43	0.666	2.3%
Ethnicity (Latino Origin)	Latino	-0.069	0.058	-1.20	0.230	-2.2%
	Non-Latino	Reference Category				
Educational Attainment	Less than HS Diploma	Reference Category				
	HS Grad	0.220	0.065	3.41	0.001	5.3%
	Some college	0.431	0.066	6.57	0.000	11.0%
	College grad +	0.586	0.067	8.76	0.000	15.9%
Own Children under 18	No own children under 18	Reference Category				
	Own children under 18	0.195	0.042	4.61	0.000	6.1%
Marital Status	Single - Never married	Reference Category				
	Married - spouse present	0.129	0.048	2.69	0.007	4.1%
	Other marital status	-0.013	0.051	-0.26	0.793	-0.4%
Labor Force Participation	Employed, full-time	Reference Category				
	Employed, part-time	0.178	0.049	3.65	0.000	5.5%
	Unemployed	0.056	0.095	0.59	0.555	1.7%
	Not in labor force	0.055	0.041	1.34	0.180	1.7%
Family Income	Less than $35,000	Reference Category				
	Between $35-$50,000	0.023	0.047	0.48	0.628	0.7%
	Between $50-$75,000	0.022	0.045	0.49	0.622	0.7%
	$75,000 and over	0.125	0.045	2.79	0.005	3.9%
Urban-Suburban-Rural Household	Urban (principal city)	-0.020	0.044	-0.46	0.646	-0.6%
	Suburban (balance)	-0.038	0.036	-1.04	0.296	-1.2%
	Rural (nonmetropolitan)	Reference Category				
	Not identified	Reference Category				

Table A-5: Results from volunteering equation with trust in neighbors added
Formal Volunteering (Unpaid Work Through or for an Organization), 2012 and 2014 (pooled) - with state-level macro-level variables

VARIABLE	CATEGORY	COEFFICIENT	STANDARD ERROR	Z-SCORE	P-VALUE	EFFECT (DY/DX)
Region of the USA	East	Reference Category				
	Midwest	-0.023	0.079	-0.29	0.771	-0.7%
	South	-0.135	0.077	-1.76	0.078	-4.3%
	West	0.006	0.099	0.06	0.949	0.2%
Age Groups	Ages 16 to 24	0.051	0.107	0.48	0.630	1.6%
	Age 25 to 34	-0.108	0.073	-1.48	0.138	-3.4%
	Age 35 to 44	0.008	0.070	0.11	0.909	0.3%
	Age 45 to 54	0.055	0.062	0.88	0.378	1.8%
	Age 55 to 64	0.003	0.056	0.06	0.956	0.1%
	Age 65 to 74	-0.037	0.055	-0.67	0.502	-1.2%
	Age 75 and Over	Reference Category				
CPS Survey Year	Year = 2010	Data Not Available				
	Year = 2011	Data Not Available				
	Year = 2012	Reference Category				
	Year = 2013	Data Not Available				
	Year = 2014	-0.031	0.049	-0.63	0.530	-1.0%
	Year = 2015	Data Not Available				
State-Level Variables	Population Density	0.158	0.139	1.14	0.256	5.0%
	Homeownership Rate	-0.005	0.048	-0.10	0.918	-0.2%
	Multi-Unit Housing Rate	0.009	0.034	0.25	0.799	0.3%
	Commuting Time	-0.038	0.037	-1.01	0.312	-1.2%
	Percent High School Graduates	-0.024	0.046	-0.52	0.600	-0.8%
	Percent College Graduates	0.123	0.049	2.53	**0.011**	3.9%
	Poverty Rate	-0.064	0.066	-0.97	0.333	-2.0%
	Large Nonprofits per 1000 Residents	-0.089	0.108	-0.82	0.412	-2.8%
	Small Nonprofits per 1000 Residents	-0.059	0.060	-1.00	0.318	-1.9%
	Median Income	-0.234	0.139	-1.68	0.093	-7.4%
	Unemployment Rate	0.028	0.047	0.59	0.556	0.9%
	Congregations per Capita	0.126	0.029	4.42	**0.000**	4.0%
	Blau Index of Racial Heterogeneity	0.071	0.039	1.82	0.068	2.2%
	Gini Index of Income Inequality	-0.043	0.043	-0.99	0.320	-1.3%
	Putnam Social Capital Index	0.079	0.044	1.80	0.072	2.5%
Constant	Constant	-1.780	0.140	-12.72	**0.000**	

Table A-6: Results from giving equation with trust in neighbors added
Giving to Charity, 2012 and 2014 (pooled) - with state-level macro-level variables

VARIABLE	CATEGORY	COEFFICIENT	STANDARD ERROR	Z-SCORE	P-VALUE	EFFECT (DY/DX)
	Trust in Neighbors Last Year	0.202	0.054	3.76	0.000	7.6%
	Volunteered Last Year	0.410	0.032	12.83	0.000	15.4%
	Gave Last Year	0.856	0.029	29.01	0.000	32.2%
Gender	Male	Reference Category				
	Female	0.116	0.028	4.13	0.000	4.4%
Race	White	Reference Category				
	Black	0.030	0.050	0.59	0.555	1.1%
	American Indian, Alaskan Native	-0.601	0.178	-3.37	0.001	-22.6%
	Asian	-0.168	0.070	-2.39	0.017	-6.3%
	Native Hawaiian / Pacific Islander	0.025	0.277	0.09	0.929	0.9%
	More than one race category	-0.106	0.138	-0.77	0.439	-4.0%
Ethnicity (Latino Origin)	Latino	-0.125	0.050	-2.51	0.012	-4.7%
	Non-Latino	Reference Category				
Educational Attainment	Less than HS Diploma	Reference Category				
	HS Grad	0.185	0.051	3.67	0.000	7.4%
	Some college	0.347	0.052	6.66	0.000	13.7%
	College grad +	0.477	0.055	8.69	0.000	18.7%
Own Children under 18	No own children under 18	Reference Category				
	Own children under 18	0.008	0.041	0.20	0.844	0.3%
Marital Status	Single - Never married	Reference Category				
	Married - spouse present	0.312	0.043	7.32	0.000	11.8%
	Other marital status	0.048	0.045	1.06	0.290	1.9%
Labor Force Participation	Employed, full-time	Reference Category				
	Employed, part-time	0.000	0.048	-0.01	0.995	0.0%
	Unemployed	-0.212	0.080	-2.67	0.008	-7.7%
	Not in labor force	-0.233	0.038	-6.13	0.000	-8.7%
Family Income	Less than $35,000	Reference Category				
	Between $35-$50,000	0.161	0.043	3.75	0.000	6.3%
	Between $50-$75,000	0.232	0.041	5.72	0.000	9.1%
	$75,000 and over	0.361	0.042	8.62	0.000	13.9%
Urban-Suburban-Rural Household	Urban (principal city)	0.070	0.040	1.74	0.082	2.7%
	Suburban (balance)	0.187	0.034	5.51	0.000	7.1%
	Rural (nonmetropolitan)	Reference Category				
	Not identified	Reference Category				

Table A-6: Results from giving equation with trust in neighbors added
Giving to Charity, 2012 and 2014 (pooled) - with state-level macro-level variables

VARIABLE	CATEGORY	COEFFICIENT	STANDARD ERROR	Z-SCORE	P-VALUE	EFFECT (DY/DX)
Region of the USA	East	Reference Category				
	Midwest	0.034	0.074	0.46	0.647	1.3%
	South	-0.089	0.072	-1.23	0.220	-3.3%
	West	-0.012	0.092	-0.13	0.900	-0.4%
Age Groups	Ages 16 to 24	-0.835	0.093	-9.00	0.000	-26.2%
	Age 25 to 34	-0.737	0.066	-11.10	0.000	-24.2%
	Age 35 to 44	-0.503	0.066	-7.67	0.000	-16.3%
	Age 45 to 54	-0.426	0.058	-7.36	0.000	-13.8%
	Age 55 to 64	-0.311	0.053	-5.84	0.000	-9.9%
	Age 65 to 74	-0.105	0.052	-2.02	0.043	-3.2%
	Age 75 and Over	Reference Category				
CPS Survey Year	Year = 2010	Data Not Available				
	Year = 2011	Data Not Available				
	Year = 2012	Reference Category				
	Year = 2013	Data Not Available				
	Year = 2014	-0.064	0.046	-1.39	0.165	-2.4%
	Year = 2015	Data Not Available				
State-Level Variables	Population Density	-0.218	0.131	-1.66	0.096	-8.2%
	Homeownership Rate	-0.010	0.047	-0.22	0.828	-0.4%
	Multi-Unit Housing Rate	0.035	0.033	1.09	0.275	1.3%
	Commuting Time	-0.086	0.035	-2.43	0.015	-3.2%
	Percent High School Graduates	-0.109	0.044	-2.45	0.014	-4.1%
	Percent College Graduates	0.102	0.048	2.12	0.034	3.8%
	Poverty Rate	0.005	0.062	0.08	0.935	0.2%
	Large Nonprofits per 1000 Residents	-0.030	0.104	-0.29	0.775	-1.1%
	Small Nonprofits per 1000 Residents	0.056	0.058	0.96	0.335	2.1%
	Median Income	0.205	0.133	1.54	0.123	7.7%
	Unemployment Rate	0.040	0.045	0.90	0.369	1.5%
	Congregations per Capita	0.091	0.027	3.36	0.001	3.4%
	Blau Index of Racial Heterogeneity	-0.042	0.038	-1.10	0.272	-1.6%
	Gini Index of Income Inequality	-0.028	0.040	-0.69	0.490	-1.0%
	Putnam Social Capital Index	-0.079	0.043	-1.86	0.063	-3.0%
Constant	Constant	-0.807	0.129	-6.27	0.000	

MODEL STATISTICS:

Tables A-1 and A-2:

N = 44,017
Log likelihood = -1.090 x 10^8
Wald χ^2 (102) = 17282.17
Prob > χ^2 < 0.0001

Correlation between disturbances in the equations:

Rho(p) = 0.406 (std. error: 0.011)

Wald test of Prob (ρ = 0): χ^2 (1) = 1155.64

Prob > χ^2 < 0.0001

Table A-2: Results from giving equation with group membership added
Giving to Charity (yes/1%, 2010-2015 (pooled) - with state-level macro-level variables

VARIABLE	CATEGORY	COEFFICIENT	STANDARD ERROR	Z-SCORE	P-VALUE	EFFECT (m/dy)
	Group Membership Last Year	0.262	0.017	15.38	0.000	10.1%
	Volunteered Last Year	0.309	0.019	16.11	0.000	11.9%
	Gave Last Year	0.823	0.017	49.64	0.000	31.7%
Gender	Male			Reference Category		
	Female	0.135	0.016	8.41	0.000	5.2%
Race	White			Reference Category		
	Black	-0.060	0.029	-2.08	0.038	-2.3%
	American Indian, Alaskan Native	-0.334	0.102	-3.27	0.001	-12.7%
	Asian	-0.182	0.039	-4.64	0.000	-7.0%
	Native Hawaiian / Pacific Islander	-0.143	0.173	-0.82	0.410	-5.4%
	More than one race category	-0.112	0.077	-1.46	0.144	-4.3%
Ethnicity (Latino Origin)	Latino	-0.161	0.028	-5.69	0.000	-5.8%
	Non-Latino			Reference Category		
Educational Attainment	Less than HS Diploma			Reference Category		
	HS Grad	0.157	0.028	5.61	0.000	6.3%
	Some college	0.315	0.029	10.84	0.000	12.5%
	College grad +	0.483	0.031	15.66	0.000	19.1%
Own Children under 18	No own children under 18			Reference Category		
	Own children under 18	-0.002	0.023	-0.11	0.916	-0.1%
Marital Status	Single - Never married			Reference Category		
	Married - spouse present	0.285	0.025	11.23	0.000	11.0%
	Other marital status	0.075	0.028	2.66	0.008	3.0%
Labor Force Participation	Employed, full-time			Reference Category		
	Employed, part-time	0.019	0.027	0.69	0.488	0.7%
	Unemployed	-0.129	0.042	-3.08	0.002	-4.8%
	Not in labor force	-0.210	0.021	-9.79	0.000	-8.0%
Family Income	Less than $35,000			Reference Category		
	Between $35-$50,000	0.191	0.025	7.78	0.000	7.6%
	Between $50-$75,000	0.257	0.023	11.23	0.000	10.2%
	$75,000 and over	0.374	0.023	16.08	0.000	14.6%
Urban Suburban Rural Household	Urban (principal city)	-0.031	0.023	-1.33	0.182	-1.2%
	Suburban (balance)	0.062	0.019	3.24	0.001	2.4%
	Rural (nonmetropolitan)			Reference Category		
	Not identified			Reference Category		

Tables A-3 and A-4:

N = 36,001
Log likelihood = -90582070
Wald χ^2 (102) = 13971.35
Prob > χ^2 < 0.0001

Correlation between disturbances in the equations:

Rho(p) = 0.427 (std. error: 0.011)

Wald test of Prob (ρ = 0): χ^2 (1) = 1086.71

Prob > χ^2 < 0.0001

Table A-5: Results from volunteering equation with trust in neighbors added
Formal Volunteering (Unpaid Work Through or for an Organization; prsupnot), 2010-2015 (pooled) - with state-level macro-level variables

VARIABLE	CATEGORY	COEFFICIENT	STANDARD ERROR	Z-SCORE	P-VALUE	EFFECT (m/dy)
	Group Membership Last Year	0.199	0.059	3.39	0.001	6.3%
	Volunteered Last Year	1.374	0.030	45.22	0.000	43.3%
	Gave Last Year	0.255	0.036	7.09	0.000	8.0%
Gender	Male			Reference Category		
	Female	0.105	0.030	3.51	0.000	3.3%
Race	White			Reference Category		
	Black	0.055	0.056	0.98	0.329	1.7%
	American Indian, Alaskan Native	-0.167	0.101	-1.00	0.270	-5.3%
	Asian	-0.386	0.083	-4.62	0.000	-12.1%
	Native Hawaiian / Pacific Islander	-0.062	0.293	-0.21	0.832	-2.0%
	More than one race category	0.071	0.164	0.43	0.666	2.3%
Ethnicity (Latino Origin)	Latino	-0.069	0.058	-1.20	0.230	-2.2%
	Non-Latino			Reference Category		
Educational Attainment	Less than HS Diploma			Reference Category		
	HS Grad	0.220	0.065	3.41	0.001	5.3%
	Some college	0.431	0.066	6.57	0.000	11.0%
	College grad +	0.586	0.067	8.76	0.000	15.9%
Own Children under 18	No own children under 18			Reference Category		
	Own children under 18	0.195	0.042	4.61	0.000	6.1%
Marital Status	Single - Never married			Reference Category		
	Married - spouse present	0.129	0.048	2.69	0.007	4.1%
	Other marital status	-0.013	0.051	-0.26	0.793	-0.4%
Labor Force Participation	Employed, full-time			Reference Category		
	Employed, part-time	0.118	0.049	2.65	0.000	5.5%
	Unemployed	0.056	0.095	0.59	0.555	1.7%
	Not in labor force	0.055	0.041	1.34	0.180	1.7%
Family Income	Less than $35,000			Reference Category		
	Between $35-$50,000	0.023	0.047	0.48	0.628	0.7%
	Between $50-$75,000	0.022	0.045	0.49	0.622	0.7%
	$75,000 and over	0.125	0.045	2.79	0.005	3.9%
Urban Suburban Rural Household	Urban (principal city)	-0.020	0.044	-0.46	0.646	-0.6%
	Suburban (balance)	-0.038	0.036	-1.04	0.296	-1.2%
	Rural (nonmetropolitan)			Reference Category		
	Not identified			Reference Category		

Tables A-5 and A-6:

N = 14,354
Log likelihood = -35963679
Wald χ^2 (98) = 5710.39
Prob > χ^2 < 0.0001

Correlation between disturbances in the equations:

Rho(p) = 0.420 (std. error: 0.018)

Wald test of Prob (ρ = 0): χ^2 (1) = 408.58

Prob > χ^2 < 0.0001

Table A-6: Results from giving equation with trust in neighbors added
Giving to Charity (yes/1%, 2010-2015 (pooled) - with state-level macro-level variables

VARIABLE	CATEGORY	COEFFICIENT	STANDARD ERROR	Z-SCORE	P-VALUE	EFFECT (m/dy)
	Group Membership Last Year	0.202	0.054	3.76	0.000	7.6%
	Volunteered Last Year	0.451	0.032	13.83	0.000	15.4%
	Gave Last Year	0.856	0.029	29.01	0.000	32.2%
Gender	Male			Reference Category		
	Female	0.116	0.028	4.13	0.000	4.4%
Race	White			Reference Category		
	Black	0.030	0.050	0.59	0.555	1.1%
	American Indian, Alaskan Native	-0.601	0.178	-3.37	0.001	-22.6%
	Asian	-0.168	0.070	-2.39	0.017	-6.3%
	Native Hawaiian / Pacific Islander	0.025	0.277	0.09	0.929	0.9%
	More than one race category	-0.106	0.138	-0.77	0.439	-4.0%
Ethnicity (Latino Origin)	Latino	-0.125	0.050	-2.51	0.012	-4.7%
	Non-Latino			Reference Category		
Educational Attainment	Less than HS Diploma			Reference Category		
	HS Grad	0.185	0.051	3.67	0.000	7.4%
	Some college	0.347	0.052	6.66	0.000	13.7%
	College grad +	0.477	0.055	8.69	0.000	18.7%
Own Children under 18	No own children under 18			Reference Category		
	Own children under 18	0.008	0.041	0.20	0.844	0.3%
Marital Status	Single - Never married			Reference Category		
	Married - spouse present	0.212	0.043	7.32	0.000	11.8%
	Other marital status	0.048	0.045	1.06	0.290	1.9%
Labor Force Participation	Employed, full-time			Reference Category		
	Employed, part-time	0.000	0.048	-0.01	0.995	0.0%
	Unemployed	-0.232	0.080	-2.67	0.008	-7.7%
	Not in labor force	-0.233	0.035	-6.13	0.000	-8.7%
Family Income	Less than $35,000			Reference Category		
	Between $35-$50,000	0.161	0.043	3.76	0.000	6.3%
	Between $50-$75,000	0.232	0.041	5.72	0.000	9.1%
	$75,000 and over	0.361	0.042	8.62	0.000	13.9%
Urban Suburban Rural Household	Urban (principal city)	0.070	0.040	1.74	0.082	2.7%
	Suburban (balance)	0.187	0.034	5.51	0.000	7.1%
	Rural (nonmetropolitan)			Reference Category		
	Not identified			Reference Category		

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