## womengive <br> 

How do sons and daughters affect parents' charitable giving?


LILLY FAMILY SCHOOL OF PHILANTHROPY
Indiana University
Indianapolis

## Written \& Researched by

## Women's Philanthropy Institute

The Women's Philanthropy Institute (WPI) is part of the Indiana University Lilly Family School of Philanthropy. WPI increases understanding of women's philanthropy through rigorous research and education, interpreting and sharing these insights broadly to improve philanthropy. The Women Give series is its signature research project. Learn more at https://philanthropy.iupui.edu/ institutes/womens-philanthropy-institute/index.html

## Indiana University Lilly Family School of Philanthropy

The Indiana University Lilly Family School of Philanthropy is dedicated to improving philanthropy to improve the world by training and empowering students and professionals to be innovators and leaders who create positive and lasting change. The School offers a comprehensive approach to philanthropy through its academic, research and international programs and through The Fund Raising School, Lake Institute on Faith \& Giving and the Women's Philanthropy Institute. Learn more at www.philanthropy.iupui.edu.

Indiana University Lilly Family School of Philanthropy Project Team<br>Debra Mesch, Ph.D.<br>Professor and Director of Women's Philanthropy Institute, Eileen Lamb O'Gara Chair in Women's Philanthropy<br>Mark Ottoni-Wilhelm, Ph.D.<br>Professor of Economics and Philanthropic Studies<br>\section*{Una Osili, Ph.D.}<br>Professor of Economics and Philanthropic Studies and Director of Research

Xiao Han, M.A.
Research Associate
Andrea Pactor, M.A.
Associate Director, Women's Philanthropy Institute
Indiana University Lilly Family School of Philanthropy
301 University Boulevard, Suite 3000
Indianapolis, IN 46202-3272
wpiinfo@iupui.edu
317-278-8990
@WPlinsights \#womengive15

## HIGHLIGHTS

Women Give 2015 investigates whether the sex of a firstborn child affects parents' charitable giving. Generosity is learned by people as they relate to others in schools, community settings, religious organizations, and the workplace. It is also learned within the family. Research has shown that parents influence their children in many ways, including how to be generous. This study shifts the framework of thinking from the current focus on "parents influencing the development of their child's generosity" to also include "children affecting their parents' generosity."

This research provides the first evidence that the sex of a person's first-born child influences both the likelihood of
giving and the amount given to charitable organizations.
The sex of a person's first-born child affects giving in
two-parent family configurations, but not in single-
parent families.

## KEY FINDINGS

- The study reveals a previously unknown determinant of charitable giving: the sex of one's first-born child.
- The sex of the first-born child affects the parents' charitable giving, including the likelihood of giving, the amount given, and types of causes supported.
- Among people who have had two or more children, those with a first-born son are more likely to give and to give $14.3 \%$ larger amounts to charitable organizations than people whose first-born was a daughter.
- Among people who have had exactly one child, those with a daughter are more likely to give and to give 20.3\% larger amounts to charitable organizations than people who had a son.
- The first-born son effect seen in the majority of two-parent family configurations is mostly due to increased giving to educational institutions and youth and family services organizations.
- The daughter effect seen in the stand-out family configuration is mostly due to increased giving to educational institutions and organizations that help people with basic needs.


## BACKGROUND OF THE STUDY

Stories abound in which generous people recount how their parents inculcated in them a spirit of generosity. For example, the Rockefeller grandchildren were taught early to save, give, and to account for all the rest. ${ }^{1}$ Advice to parents who want to raise their children to be generous is abundant. ${ }^{2}$ Studies show that the giving to charitable organizations done by (adult) children is correlated with the charitable giving done by their parents. ${ }^{3}$ And we know that talking to children about giving raises the likelihood that they do, in fact, give. ${ }^{4}$ In these ways parents influence their children's charitable giving.

However, the direction in which family relationships affect behavior flows both ways: not only from parents to children, but also from children to parents. ${ }^{5}$ Yet, concerning charitable giving, we know very little about whether or not children affect the giving of their parents. In Women Give 2015 we ask a first question in this regard: does the sex of a person's

## first-born child affect her/his charitable giving?

Why ask this question? We ask this question because recent research has provided specific examples that having had sons or daughters make a difference in how parents behave. ${ }^{6}$ For example, people with daughters are more likely to support liberal political parties in general ${ }^{7}$ and liberal reproductive policies in particular. ${ }^{8}$ CEOs with daughters spend more on corporate social responsibility and run companies rated higher for measures of diversity and employee relations as well as environmental concerns. ${ }^{9}$ Although men with children work more hours, the effect is larger for sons than it is for daughters. ${ }^{10}$ Although married couples with children are less likely to divorce, the effect is larger for sons than it is for daughters. ${ }^{11}$ Unmarried couples expecting a child are more likely to marry if the expected child is a boy, compared to a girl; following a divorce, fathers are somewhat more likely to have child custody, if there are sons. ${ }^{12}$

If sex of the first-born child affects these behaviors of parents, then it makes sense to ask whether the sex of one's children might also affect parents' charitable giving.

Women Give 2015 provides the first evidence that the sex of a person's first-born child influences both the likelihood of giving, and the amount given, to charitable organizations. We find that the influence of the first-born child's sex on the parent's giving depends on other characteristics of the family: the number of children, the partnership status of the parents, the partnership history of the parents, and whether there are any children still living at home.

## OVERVIEW OF STUDY'S METHODS

We use data from the Philanthropy Panel Study (PPS) module from the Panel Study of Income Dynamics (PSID), examining the same households over an 11-year time span (2001-2011). These data allow us to study each person's history of having children (number and sex of the children ever born), household composition (current partner,
and whether children are still living in the household), family transitions (the history of separations from partners and relationships begun with new partners), and socioeconomic information (e.g., income, education, age, race). The sample consists of individuals who were heads of households or partners of heads of households in at least one year during the time span, and who have (ever) had children. Our sample size for this study is 13,190 unique people, for whom we have data over multiple years for a total of $N=54,978$ person-year observations. We investigate giving to charitable and non-profit organizations. ${ }^{13}$

We examine the relationship between the sex of the first born child and parental charitable giving across family configurations that differ along four dimensions:
(1) people who have had exactly one child, and people who have had two or more children;
(2) people currently with partners, and people who are single;
(3) people whose partner relationship is the same since the birth of their first child (i.e., people who have remained married/cohabitating with the same partner since the birth of their first child, or who have remained single), and people who have ended/begun partner relationships since the birth of their first child;
(4) people who have children still living in their household or in college, and people whose children have moved out to form their own households.

Further methodological details are described in an appendix.

## THE LANDSCAPE OF AMERICAN FAMILIES

To describe the landscape of families in our study we first present simple averages of amounts given to charitable organizations by people with children. We then describe the complexity of family configurations that appear in our sample. The charts describing amounts given and family configurations include summary statistics only, and do not control for any demographic factors. Note that in the charts below the children we are talking about may be in their childhood years and living with their parents, or the children may be grown and living on their own.

Finding 1: People who have had children give in the range of $\$ 500$ to $\$ 750$ to charitable organizations.

Figure 1. Average giving by people who have had exactly one child, and people who have had two or more children.

Average giving by people with children


Also, among people who have had exactly one child, 53\% gave to charitable organizations (not shown in the figure). And among people who have had two or more children, $56 \%$ gave.

## Finding 2: The complex range of family configurations affects the ways in which the sex of the first-born child influences charitable giving.

The two charts, Panels A and B, below describe the different family configurations in our sample, and their relative percentages.

Figure 2: Complexity of family configurations.
Panel A: People who have had exactly one child (20\%)


Panel B: People who have had two or more children (80\%)


Among people who have had children, 20\% have had exactly one child (Panel A) and 80\% have had two or more children (Panel B). Among those who have had exactly one child, Panel A describes the complexity of family configurations. For example, for people who have had exactly one child, $25.6 \%$ are in two-parent family configurations in which the two parents have been together since the birth of their child (same-partnership families), and their child is still living at home.

However, among people who have had exactly one child (Panel A), there are three other twoparent family configurations

- people who have transitioned partners since the birth of their child (transition-partnership families), and their child is still living at home - 9.6\%;
- people who have been together since the birth of their child (same-partnership families), and their child has moved out - 12.9\%; and
- people who have transitioned partners since the birth of their child, and their child has moved out - 9.8\%.

In addition, there are four parallel single-parent family configurations that account for 42.2\% $(6.2+7.1+11.2+17.7)$ of all people who have had exactly one child. Panel B displays the corresponding family configurations for people who have had two or more children.

As we will see subsequently, our findings are different for people in two-parent configurations ( $59 \%$ of people who have ever had children) compared to people in single-parent family configurations.

Furthermore, among the people in two-parent configurations, our findings are different for those indicated by the red-outline bar in Panel A: people who have had exactly one child, are
in same-partnership families, and their child is still living at home. Because the result for these people stands out from the result for all other two-parent family configurations, and to ease discussion, we will refer to these people as being in the "stand-out" family configuration. ${ }^{14}$

## Finding 3:

(a) Among people who have had two or more children, those with a first-born son are more likely to give to charitable organizations and to give larger amounts.
(b) Among people who have had exactly one child, those with a daughter are more likely to give and to give larger amounts.

Figure 3: Difference in charitable giving according to the sex of the first-born child. ${ }^{\dagger}$
Panel A: People who have had two or more children-first-born son effect.
People whose first-born is a son, compared to people whose first-born is a daughter.


[^0]Panel B: People who have had exactly one child-daughter effect.
People whose child is a daughter, compared to people whose child is a son.


In this analysis we are investigating all families who have, or have had, children. We look at both the likelihood of giving and amount given to charitable organizations. We control for numerous family characteristics that affect giving such as income, wealth, and education (see the methodology appendix).

We find that among people who have had two or more children, those whose first-born child was a son are 1.9 percentage points more likely to give and give 14.3 percent larger amounts to charitable organizations compared to people whose first-born was a daughter. Among people who have had exactly one child, in contrast, those who have had a daughter are 2.6 percentage points more likely to give and give 20.3 percent larger amounts than people who have had a son.

To better understand the "first-born son effect" among people who have had two or more children, and the "daughter effect" among people who have had exactly one child, we investigate charitable giving and the sex of the first-born child according to the four dimensions of family configurations laid out in Finding 2.

## Finding 4:

(a) The first-born son effect is seen among the majority of two-parent family configurations, except for the stand-out family configuration.
(b) The stand-out family configuration (two-parent, samepartnership families, who have had exactly one child, and that child is still living at home) drives the daughter effect seen in Finding 3 .
(c) The sex of the first-born child does not affect the charitable giving of people in single-parent family configurations.

Figure 4: Difference in charitable giving according to the sex of the first-born child.
Panel A: Majority of people in two-parent family configurations-first-born son effect.
People whose first-born is a son, compared to people whose first-born is a daughter.


Panel B: People in the stand-out family configuration-daughter effect. People whose child is a daughter, compared to people whose child is a son.


Among the seven types of two-parent family configurations shown in purple in Figure 2 [pps. 8-9] ( $91 \%$ of all two-parent families; all except the stand out configuration which is the purple bar outlined in red in Figure 2), on average those with first-born sons are 2.9 percentage points more likely to give and give 16.9 percent larger amounts to charitable organizations compared to people whose first-born child was a daughter. In contrast, among people in the stand-out family configuration ( $9 \%$ of all two-parent families who ever had children), those whose (one) child is a daughter are 4.3 percentage points more likely to give and give 32 percent larger amounts than those whose (one) child is a son.

Among single-parent family configurations shown in gold in Figure 2, there are no statistically significant differences in the charitable giving of people with first-born sons compared to people with first-born daughters.

What explains the first-born son effect on charitable giving in the majority of two-parent families? We examined several mechanisms suggested by the literature, and found that they could not explain the first-born son effect on giving. ${ }^{15}$ However, in line with this literature that suggests men are more engaged in their families when they have sons, we conjecture that this engagement also explains the first-born son effect on giving. Note that this explanation is in line with the absence of a first-born son effect in single-parent family configurations, because the large majority of single parents in our data are women, not men. ${ }^{16}$

If our conjecture is correct-that men's stronger family engagement when they have sons explains the first-born son effect on giving-then what explains the stand-out family's daughter effect?

## Finding 5:

(a) Mothers report stronger responsiveness to their firstborn daughters than they do to their first-born sons.
(b) The daughter-son difference in responsiveness to first-borns is twice as strong in the stand-out family configuration.
(c) Mothers' responsiveness to their daughters in the stand-out family configuration can explain the daughtereffect on giving.

Figure 5: Stronger responsiveness between primary caregivers and their first-born child, if that child is a daughter in the majority of two-parent families (left bar) and in the stand-out family configuration (right bar). ${ }^{17}$

Responsiveness between mothers and their daughters
Stronger responsiveness to first-born daughters, compared to first-born sons.


In our analysis, "responsiveness" was measured by the frequency (e.g., every day, several times per week, . . ., not in the past month) a mother reports telling her child she loves her/ him, spending time with her/him doing one of the child's favorite activities, talking with her child about her/his day, etc. (see the Appendix for further details). We found that mothers report being more responsive to their first-born daughters than to their first-born sons, but as Figure 5 shows, the daughter-son difference in responsiveness was twice as strong for people in the Stand-out family configuration (.278) than in the majority of two-parent family configurations.

Importantly, mothers' responsiveness to their daughters in the stand-out family configuration can explain the daughter-effect on giving. To put this finding into context, note that there is evidence that as their children age, parents emphasize prosocial behavior more with daughters than sons. ${ }^{18}$ There also is evidence that, although both daughters and sons perceive their mothers as encouraging prosocial behavior and empathy (more than they perceive their fathers doing so), daughters perceive their mothers as encouraging prosocial behavior and empathy somewhat more so than do sons. ${ }^{19}$ It is therefore reasonable to expect that mothers who feel more responsive to their daughters are more inclined to emphasize to their daughters the importance of prosocial behavior, including charitable giving. It could be that the mothers in the stand-out family configuration who are more generous to charitable organizations are the ones who report being more responsive with their only-child daughters, or that mothers' responsiveness to their daughters in the stand-out families co-develops with generosity toward charitable organizations. This latter possibility brings to mind giving circles among women who combine resources and make decisions together about which charitable organizations to support; in this interpretation the first giving circle daughters in the stand-out families experience may be with their own mothers. ${ }^{20}$

It may be that the daughter effect seen in the stand-out family configuration was not found in the other two-parent family configurations, in part, because of different parenting demands mothers experience in these other configurations, such as responsibility for second and third-born children and parenting when partnerships are in transition.

The daughter effect on giving also is not seen in the family configuration that matches the stand-out configuration on three out of four dimensions (two-parent family, exactly one child, same partner relationship since that child was born) but differs on the fourth dimension in that the daughter has moved out. That result provides additional support to our claim that the daughter effect in the stand-out family configuration can be explained by mothers' responsiveness to their daughters, because this kind of responsiveness by mothers likely is stronger when the two are living in the same house.

Regardless of whether the daughter effect in the stand-out family configuration is coincident with, or arises from, mothers' responsiveness to their daughters, we would expect to see the effect on giving that is more likely to be empathically-motivated, such as giving to organizations that help people with basic needs (compared to, say, giving to arts and culture organizations).

Likewise, if the son effect in the other two-parent family configurations is due to men's stronger engagement, we would expect to see the effect specifically on giving to organizations that men prefer and that their sons may be involved in like sports leagues, scouting, and boys' clubs; in our data this type of giving is measured along with other youth and family services (such as girls' clubs, Big Brothers or Sisters, foster care, and family counseling).

In both cases-the daughter effect and the first-born son effect-we would expect to see effects on child-related giving, such as giving to educational institutions.

Our next finding investigates the types of charitable organizations that receive the larger amounts due to the daughter and first-born son effects.

## Finding 6:

(a) The first-born son effect seen in the majority of twoparent family configurations is mostly due to increased giving to educational institutions and youth and family services organizations.
(b) The daughter effect seen in the stand-out family configuration is mostly due to increased giving to educational institutions and organizations that help people with basic needs.

Figure 6: Difference in charitable giving to specific types of organizations according to the sex of the first-born child.

Panel A: Majority of people in two-parent family configurations-firstborn son effect on giving to educational institutions and youth and family services organizations.
People whose first-born is a son, compared to people whose first-born is a daughter.


Panel B: People in the stand-out family configuration-daughter effect on giving to educational institutions and basic needs organizations. People whose child is a daughter, compared to people whose child is a son.


Among the majority of two-parent family configurations, on average those with first-born sons give 11.7 percent larger amounts to educational institutions and 7.4 percent larger amounts to youth and family services organizations (Panel A), compared to people whose first-born child was a daughter.

Among people in the stand-out family configuration, those whose (one) child is a daughter give 30 percent larger amounts to educational institutions and 31 percent larger amounts to organizations that help people with basic needs (Panel B), compared to people whose (one) child is a son.

These results are in line with our arguments above about the first-born son effect being due to men's stronger engagement and men's preferences for giving to organization like sports leagues; about the daughter effect being due to mothers' responsiveness to their daughter and women's preferences for giving to basic needs organizations, and about both the first-born son effect and daughter effect influencing child-related giving, such as giving to educational institutions.

## SIGNIFICANCE OF THE STUDY

Women Give 2015 has discovered a previously unknown determinant of charitable giving: the sex of one's first-born child. In reflecting more broadly about how one learns to be generous, this study shifts the framework of our thinking from the current focus on "parents influencing the development of their children's generosity" to also include "children affecting their parent's generosity."

Future research should continue to investigate charitable giving in the context of relationships within the family. Future research must also recognize that the complexity of family configurations must be taken into consideration to understand the ways in which the family influences charitable giving.

The more we understand how one learns to be generous, the better able we are to craft education and interventions to encourage more generosity. In line with previous research about prosocial behaviors, Findings 5 and 6 of this study show that the parent-son/parentdaughter relationships affect charitable giving differently. Parents who wish to inculcate in their children values of generosity and caring for others may wish to be more intentional in encouraging prosocial and empathic behavior in children of both sexes.

Parents should consider a relationship-oriented approach to charitable giving. Instead of thinking about giving as something they teach their children how to do in a "me-to-them" fashion, parents should re-imagine giving as an integral part of the relationships they are building with their children.

Recognizing from this study that children affect their parent's generosity, nonprofits may wish to adopt more family-oriented approaches in reaching out to people, moving beyond reaching out to them as individuals to understanding that their giving arises within contexts of relationships they have with their children. Nonprofits may wish to develop strategies to engage the whole family as appropriate. Creating a life-long interest in the mission will encourage donor loyalty from one generation to the next.

## THE WOMEN GIVE RESEARCH SERIES

Women Give 2015 is the sixth in a series of signature research reports conducted at the Women's Philanthropy Institute that focus on gender differences in giving to charitable organizations. Previous reports have examined differences between adult male- and female-headed households, looking at gender differences in charitable giving across income levels, marital status, age/generation, and types or charitable organizations receiving the giving. Women Give 2013 assessed whether the gender differences observed in adult charitable giving begin to emerge at younger ages. Women Give 2014 investigated the nexus of religiosity, gender, and giving. These reports increase our understanding about how gender influences philanthropy. The Women Give reports are available at: https:// philanthropy.iupui.edu/institutes/womens-philanthropy-institute/research/women-give.html

## APPENDIX

## METHODOLOGY

## The data

The sample for this report is drawn from the Philanthropy Panel Study (PPS), the generosity module of the Panel Study of Income Dynamics (PSID). As part of the PSID, the PPS tracks the same families' charitable giving biennially. To collect these data the Indiana University Lilly Family School of Philanthropy partners with the University of Michigan's Institute for Social Research which directs the PSID. For the present study we use six waves of the PPS: 2001, 2003, 2005, 2007, 2009, and 2011.

## The sample

The sample for the present study consists of individuals who were heads of households or partners of heads of households in at least one wave of the sample, and who (ever) had children. The birth history of each individual was obtained by matching the PSID core files to the Childbirth and Adoption History file. We did not include in our analysis individuals with missing birth histories or key control variables. The sample size for this study is 13,190 unique people, for whom we have data over multiple years for a total of $N=54,978$ person-year observations.

PSID family-level weights were used in all summary statistics and regressions.

## MEASUREMENT OF CHARITABLE GIVING

Giving to charitable and nonprofit organizations was measured as gifts of money, assets, and property/goods to organizations whose primary purposes are:

- to help people in need of food, shelter, or other basic necessities
- to provide health care or conduct medical research (e.g., hospitals, cancer charities, telethons)
- to deliver education (e.g., schools, colleges, PTAs, libraries)
- to provide youth and family services (e.g., scouting, boys' and girls' clubs, sports leagues, Big Brothers or Sisters, foster care, family counseling)
- to promote arts and culture (e.g., museums, theatre, public broadcasting)
- to improve neighborhoods and communities (e.g., community associations, service clubs)
- to preserve the environment (e.g., conservation, animal protection, parks)
- to provide international aid (e.g., international children's funds, disaster relief, human rights)
- a combination of these purposes, like the United Way.

All giving amounts are adjusted to 2011 US dollars based on the Consumer Price Index available at Bureau of Labor Statistics.

## Main Independent variable: Sex of first born child

The birth order and sex of children were obtained from the PSID's Childbirth and Adoption History file. Only birth children are retained to determine the birth order.

## Other control variables used in all regressions

In all regressions we used statistical controls for the following characteristics:

- Age and square of age of individuals;
- Whether individual is legally married;
- Number of children (including birth children and/or adopted and foster children) in household;
- Age of youngest child in household;
- Race dummy variables;
- Whether living in the south;
- Whether living in a big metropolitan area;
- Religious preference dummy variables: Catholic, Protestant, Other, None;
- Education dummy variables: high school, college;
- Whether employed;
- Whether retired;
- Log of real household income;
- Log of real household wealth, excluding housing value;
- Year dummy variables.


## STATISTICAL METHODS

For the results about whether or not people give to charitable organizations we used marginal effects calculated from Probit models. For results about the amounts given we used least squares regressions. Standard errors in all regressions were clustered at both the individual and family levels.

## Findings 1 and 2

Findings 1 and 2 are summary statistics without controlling for other characteristics of people that also influence their giving.

## Explanation of Finding 5 Construction of the responsiveness variable

The variable we are calling "responsiveness" is the "parental warmth" scale in the Child Development Supplement (CDS) of the PSID. The original scale was devised by Child Trends for their "JOBS Child Outcomes Study." For Finding 5 it was necessary to use a smaller sample because people also had to be included in the CDS for us to be able to measure mother-child responsiveness ( $N=2,091$ ).

Primary caregivers were asked seven questions about responsiveness to her/his child. These questions were:

About how often in the past month have you...
a. Told [Child NAME] that you love him/her?
b. Spent time with [Child NAME] doing one of his/her favorite activities?
c. Talked with [Child NAME] about things he/she is especially interested in?
d. Told [Child NAME] you appreciated something he/she did?
e. Talked with [Child NAME] about (his/her)relationships, like (his/her) relationships with friends?
f. Talked with [Child NAME] about current events, like things going on in the news?
g. Talked with [Child NAME] about (his/her) day?

For each question, the primary caregiver could choose one answer from among:

1. Not In The Past Month
2. 1 or 2 Times In The Past Month
3. About Once A Week
4. Several Times A Week
5. Every Day

To form the responsiveness measure we averaged the primary caregivers' responses to the seven questions, and standardized the measure so that it has a standard deviation of one.

Hence, the primary caregivers (recall, 94\% are mothers) in the stand-out family configuration reported 0.278 of a standard deviation higher responsiveness to their firstborn daughters compared to their first-born sons. The mothers in all other two-parent families reported 0.131 of a standard deviation higher responsiveness to their first-born daughters compared to their first-born sons. Both results were obtained while controlling for the same set of covariates used in Findings 3, 4, and 6.

In the text we stated that mother-daughter responsiveness can explain the daughter-effect on giving in the stand-out family configuration. What we mean is this: when we control for mother-child responsiveness in the stand-out families, the daughter-effect on giving disappeared.

In contrast, controlling for mother-child responsiveness in the majority of two-parent family configurations did not eliminate the first-born son effect.

## ENDNOTES

1 Strid, E. (2013). The Rockefeller Rules. Valuables. 6. Concentus Wealth Advisors. Retrieved from http://concentuswealth. com/wp-content/uploads/Valuables-vol6-Rockefeller-Rules.pdf.
2 See for example, Gallo, E. \& Gallo, J. (2001). Silver Spoon Kids: How Successful Parents Raise Responsible Children. New York: Contemporary Books and Weisman, C. (2006). Raising Charitable Children. St. Louis, MO: F. E. Robbins and Sons Press.
3 Wilhelm, M. O., Brown, E., Rooney, P. M. \& Steinberg, R. (2008). The Intergenerational Transmission of Generosity. Journal of Public Economics, 92(10-11), 2146-2156.

4 Ottoni-Wilhelm, M., Zhang, Y., Estell, D.B., \& Perdue, N.H. (2014). Raising Charitable Children: The Effects of Verbal Socialization and Role-modeling on Children's Giving. Mimeo, Indianapolis, IN: IUPUI; Women's Philanthropy Institute. (2013). New research on charitable giving by girls and boys (Women Give 2013). Retrieved from https://scholarworks.iupui. edu/bitstream/handle/1805/6340/women_give_2013-final9-12-2013.pdf?sequence=1\&isAllowed=y

5 See Paschall, K. W. and Mastergeorge, A. M. (2015). A review of 25 years of research in bidirectionality in parent-child relationships: An examination of methodological approaches. International Journal of Behavioral Development, 1-10.
6 Lundberg, S., and Rose, E. (2002). "The Effects of Sons and Daughters on Men's Labor Supply and Wages." Review of Economics and Statistics, 84(2): 251-68; Raley, S. \& Bianchi, S. (2006). Sons, Daughters, and Family Processes: Does Gender of Children Matter? Annual Review of Sociology, 32, 401-421.
7 Oswald, A. J., \& Powdthavee, N. (2010). Daughters and Left-Wing Voting. The Review of Economics and Statistics, 92(2), 213-27.

Washington, E. L. (2008). Female Socialization: How Daughters Affect Their Legislator Fathers' Voting on Women's Issues. American Economic Review, 98(1). 311-332.
${ }^{9}$ Cronqvist, H. and Yu, F. (2015). Shaped by Their Daughters: Executives, Female Socialization, and Corporate Social Responsibility. Draft (June 15, 2015). Retrieved from: http://ssrn.com/abstract=2618358.
${ }^{10}$ See Lundberg, S., and Rose, E. (2002).
${ }^{11}$ Morgan, S. Philip, D.N. Lye, and. Condran, G. A. (1988). Sons, Daughters, and the Risk of Marital Disruption. American Journal of Sociology, 94(1), 110-29; Dahl, G.B., \& Moretti, E. (2008). The Demand for Sons. Review of Economic Studies, 75, 1085-1120.

12 See Dahl \& Moretti.
${ }^{13}$ We investigated giving to religious congregations separately because its determinants are known to be different from the determinants of giving to charitable organizations (Brown, E., Einolf, C.J., and Ottoni-Wilhelm, M. (2015). Giving in the United States: Generous philanthropy in a classic liberal regime. In P. Wiepking and F. Handy (Eds.), The Palgrave handbook of global philanthropy (pp 44.63). New York: Palgrave Macmillan. We found that giving to religious congregations was not affected by the sex of first-born children.

14 As just discussed, the people in the stand-out configuration are the $25.6 \%$ of all the people who have had exactly one child. Also, they are 9\% of all people in two-parent families who have had children (the eight blue bars in Panels A and B), and $5.2 \%$ of all people who have ever had children (all 16 bars in Panels A and B).
${ }^{15}$ For example, because there is evidence that men with first-born sons work more hours (Lundberg \& Rose, 2002), we checked whether that might explain the first-born son effect on charitable giving-but this is not the case. See Han, Xiao. 2015. "The effect of first-born sons and daughters on charitable giving." Mimeo, Indianapolis, IN: Department of Economics, IUPUI. for detailed discussion of these checks.
${ }^{16}$ Of all singles in our data with children ever born (i.e., including people whose children have all moved out), 76\% are women. If we restrict attention to single-parent families with children still in the household, $91 \%$ are headed by women.
${ }^{17}$ Because the overwhelming majority of children's primary care-givers in our data are mothers (94\%) we use "mother" instead of "primary care-giver" to ease discussion. Six percent of primary care givers in our data are grandmothers, fathers, aunts, uncles, etc.
18 Power, T. G. and Shanks, J. A. (1989). Parents as socializers: Maternal and paternal views. Journal of Youth and Adolescence, 18(2), 203-220.
${ }^{19}$ McDevitt, T.M., Lennon, R., and Kopriva, R.J. (1991). Adolescents' perceptions of mothers' and fathers' prosocial reactions and empathic responses. Youth \& Society, 22(3), 387-409. For a comprehensive review of the literature on children's prosocial behavior, see Eisenberg, N., Morris, A.S., McDaniel, B., \& Spinrad, T.L. (2009). Moral cognitions and prosocial responding in adolescence. In R.M. Lerner \& L. Steinberg (Eds.) (3rd ed.). Individual basis of adolescent development: Vol. 1. Handbook of adolescent psychology (pp. 229-265). Hoboken, NJ: John Wiley \& Sons.
${ }^{20}$ Nationally, the majority of participants in giving circles are women (81\%; see Bearman, J.E. (2007). More giving together. The growth and impact of giving circles and shared giving. Washington, DC: Forum of Regional Associations of Grantmakers. https://www.givingforum.org/sites/default/files/resources/More\ Giving\ Together\ -\ The\%2 Growth\%20 and \%20Impact\%20of\%20Giving\%20Circles\%20and\%20Shared\%20Giving.PDF

## womengive 15

Џ<br>IUPUI<br>WOMEN'S PHILANTHROPY INSTITUTE<br>LILLY FAMILY SCHOOL OF PHILANTHROPY<br>Indiana University<br>Indianapolis

301 University Boulevard, Suite 3000, Indianapolis, IN 46202-3272
wpiinfo@iupui.edu 317-278-8990
https://philanthropy.iupui.edu/institutes/womens-philanthropy-institute/index.html
@WPlinsights \#womengive15


[^0]:    † Statistical significance for all results: * p < . 05; ** p < . 01

