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PROSOCIAL SPENDING AND WELL-BEING: CROSS-CULTURAL EVIDENCE FOR A PSYCHOLOGICAL UNIVERSAL

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Prosocial Spending and Well-Being: Cross-Cultural Evidence for a Psychological Universal
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ABSTRACT

This research provides the first support for a possible psychological universal: human beings around the world derive emotional benefits from using their financial resources to help others (prosocial spending). Analyzing survey data from 136 countries, we show that prosocial spending is consistently associated with greater happiness. To test for causality, we conduct experiments within two very different countries (Canada and Uganda) and show that spending money on others has a consistent, causal impact on happiness. In contrast to traditional economic thought—which places self-interest as the guiding principle of human motivation—our findings suggest that the reward experienced from helping others may be deeply ingrained in human nature, emerging in diverse cultural and economic contexts.

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The countless acts of financial generosity that occur around the world every day—from donating money to the Red Cross to helping a friend pay for medication—suggest that generosity is a fundamental feature of human life. Indeed, theorists have argued that the evolution of altruistic behavior was essential in producing the large-scale social cooperation that allowed early human groups to thrive (Darwin, 1871/1982; Henrich & Henrich, 2006; Tomasello, 2009; Wilson, 1975). If the capacity for generosity favored survival in our evolutionary past, it is possible that engaging in generous behavior might produce consistent, positive feelings across diverse cultural contexts—akin to the pleasurable feelings associated with other adaptive behaviors such as eating and sexual intercourse. Building on this logic, we suggest that using financial resources to help others may yield similar emotional benefits across diverse cultural and socioeconomic contexts, such that deriving happiness from *prosocial spending* is a psychological universal.

Although generosity can assume many forms, giving to others frequently involves sacrificing money or time (Liu & Aaker, 2008). We focus our investigation specifically on the impact of prosocial spending on happiness, which has been posited to lead to a "warm glow" on the part of givers (Andreoni, 1989; 1990). Providing local evidence for the rewarding property of financial generosity, research conducted with a sample of over 600 North Americans showed that devoting more money to prosocial spending (on gifts for others and charitable donations) was correlated with greater well-being, even when controlling for income. Importantly, this link is causal: North American students who were randomly assigned to spend a small windfall on others were significantly happier at the end of the day than those assigned to spend money on themselves (Dunn, Aknin, & Norton, 2008).

But does this relationship between prosocial spending and happiness extend beyond the North American samples used in this research, persisting across diverse cultural contexts? Cross-cultural research has shown that the within-country correlation between how much money individuals make and their happiness may vary according to a country's average income (e.g., Deaton, 2008; Diener & Biswas-Diener, 2002). This suggests that the link between how individuals *spend* that money and their happiness might also differ between poor and wealthy countries. In particular, it would be reasonable to expect that the emotional benefits of spending money on others observed in North America might be smaller within very poor countries, where people might be more concerned with satisfying their own basic needs.

We propose, however, that the relationship between prosocial spending and happiness is robust and occurs regardless of differences between countries in wealth or in the specific form that prosocial spending takes. Support for the universality of the prosocial spending and happiness link derives from a range of research traditions. By age one, nearly all children respond prosocially to others in distress (Zahn-Waxler, Radke-Yarrow, Wagner, & Chapman, 1992), and both human infants and chimpanzees will provide instrumental help to a stranger—even when no reward can be expected for helping—suggesting that humans and our nearest evolutionary relatives may find helping others inherently rewarding (Warneken & Tomasello, 2006). Among older adults, providing help to others predicts decreased risk of morbidity and mortality (Brown, Consedine, & Magai, 2005; Brown, Nesse, Vinokur, & Smith, 2003). In addition, altruistic behavior has been linked to a set of brain regions implicated in the experience of reward, including orbital frontal cortex and ventral striatum (Harbaugh, Mayr, & Burghart, 2007; Moll et al., 2006; Tankersley, Stowe, & Huettel, 2007), again suggesting a basic reward property for altruistic behavior. Taken together, this research provides suggestive evidence that

human beings may have a general tendency to experience emotional benefits from giving to others.

In order to establish the existence of such a psychological universal, Norenzayan and Heine (2005) argue that researchers should (i) survey individuals across a diverse array of the world's countries, which generally necessitates the use of brief questionnaire-based correlational measures, and (ii) conduct experimental studies within two cultures that differ as much as possible on key dimensions. In our two studies, we apply this "gold standard" strategy of converging evidence to test the hypothesis that prosocial spending is linked to subjective well-being across cultures. Although the countries we studied differ on numerous dimensions, we were particularly interested in the key dimension of national-level income; this variable has been shown to play a critical moderating role in shaping the relationship between individuals' income and their happiness within countries, as discussed above, and we expected that prosocial spending would differ in both form and frequency within poor versus wealthy countries. Thus, we first conduct correlational analyses, examining the relationship between prosocial spending and well-being within 136 countries that span a wide gamut of income levels. We then narrow our focus to two of these countries—Canada and Uganda—that differ greatly in terms of income, using experimental methodology to test the causal effect of prosocial spending on well-being.

Study 1: Correlational Study

Method

Sample

To examine the correlation between prosocial spending and subjective well-being within a large number of countries, we use data collected from 136 countries between 2006-2008 as part

of the Gallup World Poll (GWP; total $N = 234{,}917$, $M_{age} = 38$, $SD = 17$; 49% male). This sample represents over 95% of the world's adult population (aged 15 and older) and provides an exceptionally large and diverse snapshot of people on Earth. The data are collected using randomly selected, nationally representative samples with a mean size of 1321 individuals per country ($SD = 730$, range = 141-4437). These samples include residents from cities, towns, and rural areas, thus representing the population of an entire country. In wealthier regions, participants are selected through random-digit dialing for a 30-minute interview. In poorer regions, participants are selected with random geographic sampling for a 1-hour face-to-face interview. All survey materials are presented in the local language; materials are cross-translated (e.g., from English to German then German to English) to ensure accuracy.

Measures

Prosocial Spending. The GWP asks respondents whether they have donated money to charity in the past month. We use dichotomous responses (Yes/No) to this question as our index of prosocial spending.

Subjective Well-Being (SWB). Two questions in the GWP measure participants' subjective assessment of their life overall: First, in most countries and waves of the GWP, participants are asked to evaluate their lives using the Cantril ladder (Cantril, 1965). Ratings on this scale require respondents to imagine a ladder with eleven steps (0: *worst possible life* to 10: *best possible life*) and report which step best represents the way they feel. Second, in 2007 and 2008, participants in approximately half of the countries completed a single-item measure of life satisfaction, which asked participants to rate how satisfied they are with their life as a whole on an eleven point scale (0: *dissatisfied* to 10: *satisfied*). Consistent with recent research (Helliwell, Barrington-Leigh, Harris, & Huang, 2010), we use each individual's response(s) to one or both

of these questions, taking the average when both responses are provided, as our measure of SWB.

Income and demographics. The GWP records respondents' household income. We use the natural logarithm of household income in our estimates, which are conducted separately for each nation and therefore do not rely on international exchange rate or purchasing power calculations. Where we report and compare incomes at the international level, we use the average GDP per capita in 2005 measured at Purchasing Power Parity from the World Bank. As an additional measure of income and material consumption, respondents are asked if there has been a time in the last year when they have had trouble securing food for their family. Participants also provide demographic information, including gender, age, marital status, and education level.

Results and Discussion

Analytic strategy. We examine the relationship between SWB and prosocial spending while controlling for household income and whether respondents had lacked enough money to buy food in the past twelve months. We also control for demographic variables (age, gender, marital status, and education level). To test whether prosocial spending is consistently linked to higher well-being within countries around the world, we estimate a regression equation separately for each country, pooled over years 2006-2008. [1] The equation estimated separately for each country is of the form:

$$SWB_i = c_0 + a \log(Income_i) + b\ Donated_i + c\ Food_i + X'_i d + g\ dNoSWL_i + \Sigma yr\ h_{yr} dWave_{yr;i} + \varepsilon_i$$

for individual *i*. The coefficient *b* represents the relationship between individual life evaluation (SWB_i) and donating to charity ($Donated_i$), while controlling for household income ($Income_i$), reported food inadequacy ($Food_i$), an indicator for each wave (year) of the Gallup World Poll,

the remaining demographic variables (X_i), and an indicator ($dNoSWL_i$) to account for whether one or two measures of life evaluation were available for the individual.

As illustrated in Figure 1, the relationship between prosocial spending and SWB is positive in 122 out of 136 countries included in the Gallup World Poll, with this relationship reaching traditional levels of significance ($p < .05$) in some 66% of these 122 countries. In the case of global estimates, the prosocial spending estimate, B = .28, $p < .001$, exceeds half the coefficient of log income, B = .41, $p < .001$. Thus, in this model, donating to charity has a similar relationship to SWB as a doubling of household income. Importantly, although rates of prosocial spending are higher in wealthier countries, $r(136) = 0.54$, $p < .001$, the size of the relationship between prosocial spending and SWB that emerges within countries is unrelated to the countries' mean income, $r(136) = .06$, $p = .48$, and unrelated to the countries' mean incidence of reported donation $r(136) = -.10$, $p = .23$, suggesting that generous financial behavior is linked to well-being in poor and rich countries alike. Note that the relationship between prosocial spending and SWB holds equally (B = .28, $p < .001$) if we estimate a simpler equation which lacks controls for demographic variables, household income, and access to food (see Table 1).[2]

These results are consistent with our hypothesis that the link between prosocial spending and SWB is both positive and consistent across countries that vary on a wide number of variables, including our key dimension of income. The consistency of the positive relationship between well-being and prosocial spending is particularly notable given that prosocial spending was assessed with a one-item dichotomous measure, suggesting that the observed relationship might be even more ubiquitous if this construct was assessed with more in-depth measures tailored to each country. The primary strength of this study lies in its exceptionally broad lens, which provides a clear snapshot of the relationship between prosocial spending and well-being in

a large majority of the world's countries, although the correlational nature of this study precludes causal conclusions.

Because this study is correlational, it is possible that respondents' answers to the donation question may be influenced by factors such as their financial security. Including an extra control for material income (i.e., food inadequacy) to reduce the income effect on donation, however, does not significantly change the donation coefficient. Similarly, adding or removing demographic variables from the equation leaves the donation coefficient effectively unchanged. Finally, our analyses above demonstrate that while donation rates are higher within wealthier countries, the well-being benefits of donating are only weakly and inversely related to the reported frequency of donations. Thus, residents of richer countries donate more frequently, but the hedonic returns to donating are fairly uniform, which suggests that the findings presented in Study 1 depict a pervasive relationship between financial generosity and subjective well-being.

That said, correlational analyses are inevitably subject to alternative explanations, such that establishing the causal impact of prosocial spending on happiness necessitates the use of experimental methodology. Therefore, we next use experimental methodology, narrowing our focus to two countries—Canada and Uganda— that differ dramatically in terms of per capita income (with Canada falling in the top 15% and Uganda falling in the bottom 15% of countries surveyed in Study 1) as well as prosocial spending frequency (66% of respondents reported donating in Canada vs. 13% in Uganda). In addition, moving beyond the narrow measure of prosocial spending used in Study 1—charitable giving—we broaden our operationalization of this construct in Study 2, assessing the different forms that prosocial spending takes in different cultural contexts.

Study 2: Experimental Study

To test the causal impact of prosocial spending on well-being, we randomly assigned participants in Canada and Uganda to write about a time they had spent money on themselves (*personal spending*) or others (*prosocial spending*); this reminiscence-based methodology has been used successfully in previous research to study the long-term emotional consequences of real world spending experiences (Van Boven & Gilovich, 2003; Carter & Gilovich, 2010). We assessed participants' SWB following this task, and coded their responses for the specific form that their personal and prosocial purchases had taken.

Methods

Participants

A total of 627 students participated: 140 students from the University of British Columbia in Vancouver, Canada (M_{age} = 19.95, SD = 3.91, 54% females), 105 students from Mbarara University in Mbarara, Uganda (M_{age} = 21.71, SD = 2.55, 24% females), and 382 students from Makerere University in Kampala, Uganda (M_{age} = 22.99, SD = 4.14, 72% females).

Procedure

Participants were approached on a university campus and randomly assigned to recall a recent purchase in which they spent either ten thousand Ugandan Shillings or twenty Canadian dollars on themselves or someone else; these monetary amounts represented approximately equal buying power in Uganda and Canada, respectively. After describing the spending experience in detail using a procedure designed to elicit vivid reminiscence (Strack, Schwarz, & Gschneidinger, 1985), participants were asked to report their happiness on the Subjective

Happiness Scale, a four-item measure of subjective well-being that has been used with samples around the world (α = .70; Lyubomirsky & Lepper, 1999). All study materials were provided in English and edited by local collaborators to ensure that questions would be comprehensible and interpreted consistently in both Canada and Uganda.

Coding. Participants' spending descriptions were coded by undergraduate research assistants (RAs) blind to participants' assigned condition and happiness scores, as well as the goals of the study. All spending experiences were coded by four Canadian RAs, with a subset rated by a Ugandan coder to check for cross-cultural consistency in interpretation; the Ugandan coder's ratings were highly correlated with the ratings of the four Canadian coders (average $r(90) = .65$, $p < .01$). Spending descriptions were rated on three major dimensions (see Table 2): (i) the social context of the purchase (e.g., was the purchase made to strengthen an old relationship?; coded as *1= context present, 0= context absent*), (ii) to what extent the spending purchase appeared to be driven by specific spending motives (rated on a scale from 1-7; *1= need* vs. *7= want*, *1= obligation* vs. *7= volition*), and (iii) whether the purchase included certain goods (e.g., food, clothing, transportation, medical costs; coded as *1= included, 0= not included*). To achieve an appropriate level of inter-rater reliability, an initial subset of spending descriptions were coded along the dimensions listed above and discussed to resolve inconsistencies.

Results and Discussion

To investigate whether prosocial spending increased subjective well-being more than personal spending across cultures, we submitted SWB ratings to a 2 (Spending Type: personal vs. prosocial) X 2 (Country: Uganda versus Canada) ANOVA. As predicted, there was a significant main effect of spending type, whereby participants randomly assigned to recall a purchase made for someone else ($M = 5.06$, SD = 1.13) reported significantly higher SWB than

participants assigned to recall a purchase made for themselves (M = 4.83, SD = 1.13), F(1, 601) = 7.50, p = .006, d = .20. Participants also reported higher SWB in Uganda (M = 5.02, SD = 1.15) than Canada (M = 4.71, SD = 1.07), F(1, 601) = 8.31, p = .004, d = .28, but importantly, the interaction of spending type and country was not significant, F(1, 601) = 1.32, *ns*. Thus, participants in Canada and Uganda reported greater SWB when they thought about spending money on others rather than themselves.

While the effect of prosocial spending on happiness emerged consistently across participants in Canada and Uganda, we also examined whether these same effects emerged within each country independently (Figure 2). In the Canadian sample, an analysis of variance (ANOVA) was used to compare the happiness of participants randomly assigned to the two spending recall conditions. As expected, participants assigned to recall a previous purchase made for someone else were significantly happier than participants assigned to recall a previous purchase made for themselves, F(1, 138) = 5.58, p = .02. In the Ugandan sample, a similar analysis was conducted with an additional variable indicating the data collection site (Mbarara vs. Kampala). Analyses revealed that participants randomly assigned to the prosocial spending recall condition reported higher levels of happiness than participants assigned to the personal spending recall condition, F(1, 461) = 5.02, p = .025, and this finding was not qualified by a Spending Condition X Data Collection Site interaction, F(1, 461) = 2.23, p = .14. The main effect of data collection site was, however, significant indicating that participants in Kampala reported higher levels of happiness than participants in Mbarara, F(1, 461) = 15.98, p < .001.

Although the emotional benefits of prosocial spending emerged consistently, the specific ways in which participants spent their money (as rated by coders) varied substantially between cultures (Table 2). For example, when recalling a time they spent money on themselves, almost

three times as many participants in Uganda described purchasing a personal necessity, as compared with those in Canada. When recalling a time they spent money on others, almost 20% of participants in Uganda described a purchase that was made in response to a negative event, with fully 10% purchasing medical supplies or services—whereas none of the prosocial spending descriptions provided by the Canadian participants fell into these categories. Given these important national differences in specific spending experiences, it is particularly remarkable that spending money on others produced similar emotional benefits in the two countries. Further supporting the robustness of this pattern, the main effect of spending condition on SWB remained significant when controlling in the ANOVA for the extent to which participants' purchases were motivated by need (vs. want), represented a response to a negative event, provided an experience (vs. material good), and were obligatory (vs. volitional), all Fs > 7.75, all ps < .01.

General Discussion

Taken together, the present studies provide the first evidence for a possible psychological universal: Human beings everywhere may experience emotional benefits from using their financial resources to benefit others. Within the vast majority of the world's countries, we find a consistent positive relationship between prosocial spending and well-being, whereby individuals who have recently made donations to charity report greater SWB, even controlling for individual differences in income. Focusing on two of these countries—Canada and Uganda—that differ dramatically in national-level income and donation frequency, we find that individuals report significantly greater well-being after reflecting on a time when they spent money on others rather than themselves. This effect emerged consistently across these two cultures, even though the specific prosocial spending experiences participants described differed considerably. Thus,

although prosocial spending differs in both frequency (Study 1) and form (Study 2) in poor versus wealthy countries, its emotional consequences are remarkably consistent.

Theorists in both psychology (Cialdini et al., 1987; Harris, 1977; Lyubomirsky, Sheldon & Schkade, 2005; Williamson & Clark, 1989) and economics (Andreoni, 1989; 1990; Harbaugh, 1998; Harbaugh, et al., 2007) have argued that people reap emotional rewards from helping others, prompting speculation that the warm glow of altruism is fundamental to human nature (e.g., Post, 2005; Weiss, Buchanon, Altstatt, & Lombardo, 1971). Problematically, however, this inference about human nature has been based on a narrow sample of humanity, with the vast majority of research participants drawn from what Henrich, Heine, and Norenzayan (2010a) term "WEIRD" (Western, Educated, Industrialized, Rich, Democratic) societies. Contrary to a common, tacit assumption of psychological research, Henrich et al. (2010a) show that participants drawn exclusively from WEIRD societies provide a spectacularly unrepresentative sample of humankind (see also Henrich, Heine, & Norenzayan 2010b). Drawing broad inferences about human nature thus requires that researchers sample far more widely than standard WEIRD samples; by moving beyond such samples, the present research offers a major advance in demonstrating that the emotional benefits of helping others, far from being limited to particular human cultures, may be fundamental to human nature.

From an evolutionary perspective, the emotional rewards that people experience when they help others may serve as a proximate mechanism that evolved to facilitate prosocial behavior, which may have carried short-term costs but long-term benefits for survival over human evolutionary history. The robustness of this mechanism is supported by our finding that people seem to experience emotional benefits from sharing their financial resources with others not only in countries where such resources are plentiful, but also in impoverished countries

where scarcity might seem to limit the possibilities to reap the gains from giving to others. Of course, firmly establishing the universality of a complex psychological phenomenon requires extensive research, ideally conducted by a variety of researchers using diverse methodologies. The two studies presented here provide a critical first step, suggesting that the emotional benefits of prosocial spending may represent what Norenzayan and Heine (2005) term a *functional universal*, a phenomenon that is potentially detectable in all cultures but that may vary in degree of expression according to the cultural context. In highlighting the potential universality of emotional benefits stemming from prosocial spending, the present work adds to the chorus of recent interdisciplinary research on the importance of generosity for human well-being.

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Footnotes

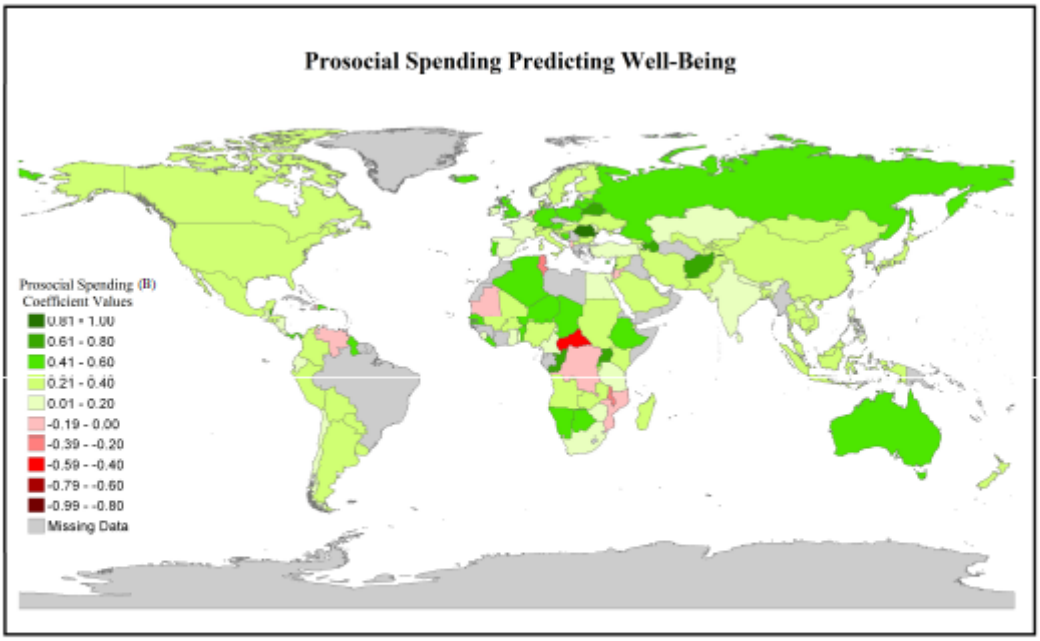
[1] Consistent with other recent research analyzing SWB data in the Gallup World Poll (Deaton, 2008; Diener, Ng, Harter, & Arora, 2010), we chose to utilize ordinary least squares regression analyses. This analytic strategy has been validated against a number of other methods for analyzing the determinants of happiness (Ferrer-i-Carbonell & Frijters, 2004).

[2] An alternative set of estimates was computed to account for the possibility that the observed incidence of donating money is itself partly a reflection of the real (imperfectly measured) household income. These estimates, along with our primary country-by-country results and some descriptive statistics of the survey variables, can be found at http://wellbeing.econ.ubc.ca/cpbl/publications/prosocial-spending-Aknin-et-al-supplement.pdf. Importantly, however, using these coefficients does not alter the relationship between prosocial spending and subjective well-being; the relationship between prosocial spending and subjective well-being remains positive in all of the 122 out of 136 countries, with this relationship still significant ($p < .05$) in 66% of these 122 countries. Averaging over all 136 countries, the prosocial spending coefficient ($b = .24$, $p < .001$) is approximately half the coefficient of log income ($a = 0.48$, $p < .001$).

Figure Legend

Figure 1. World map display of prosocial spending coefficients.

Figure 2. Happiness means for the personal and prosocial spending conditions in Canada and Uganda. Error bars represent standard error of the mean estimates.


Prosocial Spending Predicting Well-Being
Prosocial Spending (Bi)
Coefficient Values
0.81 - 1.00
0.61 - 0.80
0.41 - 0.60
0.21 - 0.40
0.01 - 0.20
-0.19 - 0.00
-0.39 - -0.20
-0.59 - -0.40
-0.79 - -0.60
-0.99 - -0.80
Missing Data

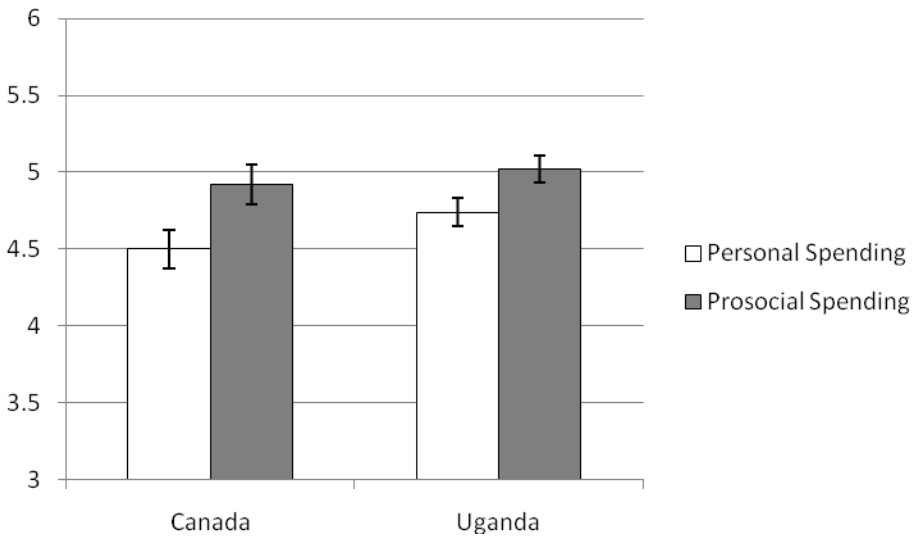

6
5.5
5
4.5
4
3.5
3
Canada
Uganda
Personal Spending
Prosocial Spending

Table 1

Global estimates predicting life evaluation when all 136 countries are pooled. The basic equation includes only income and the Donate money variable. The second and third equations control for food inadequacy and remaining demographic controls, respectively. Each estimate includes a full set of country controls (fixed effects) and a full set of wave (year) controls (fixed effects). The estimated standard errors are clustered at the country level. Note that the inclusion of additional controls in the second and third equations leads to little change in the Donate variable coefficient highlighting the robustness of the prosocial spending effect.

	Basic Equation	Food inadequacy control	Fully controlled model
Donated money	.28 (.018)	.26 (.018)	.28 (.020)
log(household income)	.54 (.022)	.46 (.019)	.41 (.019)
One/both measures SWB	-.22 (.051)	-.24 (.049)	-.25 (.064)
Not enough money (food)		-.74 (.025)	-.71 (.026)
male			-.12 (.018)
age/100			-3.6 (.35)
$(age/100)^2$			3.2 (.37)
Married			.05 (.024)
Separated, divorced, or widowed			-.17 (.029)
Secondary education			.22 (.024)
Tertiary education			.44 (.033)
R^2 (adj)	.304	.325	.327

N	231,403	231,403	192,579

Table 2

Coder reliabilities and frequency ratings by recall condition and home country.

Coding Dimension (alpha)	Type of Spending Recalled	
	Prosocial	*Personal*
Purchase Context		
Purchase made to strengthen an old relationship (.83)		
Uganda	65.0% [a]	16.0% [b]
Canada	64.2% [a]	12.9% [b]
Purchase made to build a new relationship (.63)		
Uganda	4.0% [a]	1.5% [a]
Canada	3.0% [a]	1.1% [a]
Purchase made in relation to negative event (.93)		
Uganda	17.9% [a]	1.2% [b]
Canada	0.0% [b]	0.4% [b]
Purchase Motivation		
Need vs. Want (.84) *1=need,7=want*		
Uganda	4.77 [a]	4.63 [a]
Canada	6.19 [b]	5.17 [a]
Obligation vs. Volition (.73) *1=obligation,7=volition*		
Uganda	5.71 [b]	5.32 [c]
Canada	6.36 [a]	5.88 [a,b]
Purchase Content		
Personal necessities (.72)		
Uganda	8.8% [a]	27.1% [b]
Canada	7.1% [a]	10.2% [a]
Food (.94)		
Uganda	36.6% [a]	52.2% [b]
Canada	47.0% [a,b]	46.2% [a,b]
Transportation (.97)		
Uganda	17.0% [a]	18.1% [a]
Canada	1.5% [b]	1.5% [b]
Medical items or related costs (.92)		
Uganda	9.9% [a]	1.3% [b]
Canada	0.0% [b]	0.4% [b]
Clothing (.90)		
Uganda	17.9% [a]	28.8% [b]
Canada	19.0% [a,b]	21.2% [a,b]
Experience (.77)		
Uganda	21.6% [a]	21.9% [a]
Canada	15.7% [a]	14.8% [a]

Note: Superscript text denotes significant mean differences. Means with the same superscript are not significantly different from one another at the $p = .05$ level.