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# Generativity and social value orientation between rural and urban societies

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# Generativity and social value orientation between rural and urban societies

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#### Abstract

Generativity, concern and commitment for the next generation, is one important factor for sustainable development of a society, since intergenerational sustainability is claimed to have been compromised over the last decades. Generativity emerges through both prosocial and proself behaviors characterized by social preference, and is now hypothesized to decrease in some modern societies called "generativity crisis." However, little is known about how ongoing modernization of competitive societies, i.e., capitalism, and social preferences affect generativity. To this end, we conduct field experiments of the social value orientation and the generative behavior checklist in the two fields of Nepalese societies: (1) urban and (2) rural areas. The analysis finds that prosociality and the rural-specific effect are the two major factors that positively affect people's generativity, while a larger proportion of prosocial people are found in rural areas than in urban areas. Overall, these results suggest that generativity shall decrease with further modernization of societies that changes the economic culture and people's orientation to be less concerned for future generation.

Key Words: social value orientation, prosocial, proself, generativity, future concern

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# Contents

No	omenclature	2
1	Introduction	3
2	Methodology	4
3	Results	7
4	Conclusion	11
5	Bibliography	13
Li	ist of Figures	15
Li	ist of Tables	20

## Nomenclature

GBC	Generative	behavior	checklis
GBC	Generative	behavior	checklis

- NPR Nepalese rupee
- SVO Social value orientation

## 1 Introduction

Generativity, concern and commitment for the next generation, is one important element for sus-2 tainable development of a society, since higher generativity of the current generation induces people 3 educate and benefit the next generation and even the next (Erikson, 1963). Generativity is expressed to 4 through the daily practices and human interactions such as charity, mentoring, nursing, volunteering, 5 aching, religious movement and political activities for the next generation (McAdams and de St. 6 ubin, 1992). Unfortunately, it is claimed that the current generation has behaved in more selfish 7 ays than ever, compromising generativity and intergenerational sustainability by incurring costs for W 8 the next generation, i.e., "generativity crisis" (Sasaki, 2004, Fisher et al., 2004, Milinski et al., 2006). 9 Thus, generativity becomes an urgent issue when societies are modernized and when they are chang-10 ing in favor of the current generations. Given this state of affairs, this paper addresses the generativity 11 in relation to modernization of societies. 12

Generativity has been studied by many researchers, and the generative behavior checklist (GBC) 13 is established to be one of the most reliable and internally consistent measures (McAdams and de St. 14 Aubin, 1992, McAdams et al., 1993, McAdams and de St. Aubin, 1995). Most studies have sought 15 to characterize the GBC as parts of innate human psychology, focusing on parenting, degree of well-16 being, life satisfaction and societal concerns (Peterson and Stewart, 1993, Morfei et al., 2004, Huta 17 and Zuroff, 2007, Newton et al., 2014). In particular, Hart et al. (2001) have empirically characterized 18 generativity and found that it has a positive association with social involvement related to parenting in 19 both white and black Americans. Similarly, Hofer et al. (2008) have confirmed that the psychological 20 mechanisms of the generativity model are consistently applicable even in a cross-country comparison. 21 In conclusion, these studies have demonstrated that the GBC can explain behaviors and preferences 22 of social involvement in relation to people's innate psychology, concerns and actual social behaviors. 23 Economists and behavioral scientists have considered that the socioeconomic environment influ-24 ences people's social preferences and actual behaviors (Henrich et al., 2005, 2010, Van Lange et al., 25 2007, Leibbrandt et al., 2013). Schotter and Sopher (2003) and Hauser et al. (2014) have shown that 26 the current generation can neither make sustainable decisions in an intergenerational setting, nor take 27

the balance of costs and benefits for future generation when facing excessive competitive economic 28 environment. Henrich et al. (2005, 2010) and Leibbrandt et al. (2013) have demonstrated that peo-29 ple's social behaviors and preferences are affected by the degree of market integration in societies and 30 workplace environment, respectively. Similarly, Ockenfels and Weimann (1999) and Brosig-Koch 31 et al. (2011) have analyzed people's cooperative and solidarity behaviors in the eastern and western 32 Germany, demonstrating that subjects from the eastern part act more selfishly than those from the 33 western parts. They conclude that social histories and socioeconomic environment play important 34 roles in shaping people's social preferences and behaviors. In summary, the psychologists have ad-35 dressed how generativity is associated with people's innate psychology and actual behaviors, while 36 the economists and behavioral scientists find how social preference and behaviors are affected by 37 economic environment. 38

Cultures gradually propagate through various ways such as success-bias transmission in societies 39 and even affect human preferences and behaviors (Henrich et al., 2005, Dawkins, 2006, Richard-40 son and Boyd, 2008, Wilson et al., 2009). Likewise, generativity is hypothesized to be affected by 41 cultures, as it is manifested through both prosocial and proself behaviors originating from people's 42 social preferences (Kotre, 1984, McAdams, 1985). Since societies are becoming more competitive 43 and modernized in the globalized market economy under capitalism, it is expected that such changes 44 in societies as part of cultures affect not only preferences but also generativity. However, no previous 45 researches address how generativity is evolving with economic development of societies and a change 46 in preferences. In this research, we consider ongoing modernization of competitive societies as part of 47 culture and address how generativity changes with such modernization and social preferences. To this 48 end, we conduct field experiments of the social value orientation (SVO) and the generative behavior 49 checklist (GBC) in the two fields of Nepalese societies: (1) urban and (2) rural areas. 50

## 51 2 Methodology

<sup>52</sup> We implemented field experiments and surveys in the rural and urban areas, and employed differ-<sup>53</sup> ent approaches of random sampling, because they possess distinct economic and socio-demographic

characteristics. Kathmandu and Pokhara are chosen as urban areas that are the first and second largest 54 urban societies in Nepal (figure 1). In the urban areas, we administered field experiments and surveys 55 with 268 subjects. These cities are highly populated where most people engage in business, service 56 and government sectors. To maintain random sampling of subjects, a occupation-based randomization 57 procedure was taken. First, we identify a proportion of each occupational category in total population 58 of the urban areas by referring to governmental and international non-governmental reports such as 59 Central Bureau of Statistics (2011) and UNDP (2014). After that, we randomly select a number of 60 organizations or companies for each category. Based on their compliance, we select individuals from 61 these organizations in the way that subjects do not know one another in the same session. Our field 62 experiments and surveys have been carried out in the city and community halls of the urban areas. 63

64

#### [Figure 1 about here.]

In the rural areas, we conducted field experiments and surveys with 260 subjects. Chitwan and 65 Prabat are chosen as rural areas (figure 1). These districts consist of many small villages and are 66 known as the least populated areas where most people engage in agriculture and forestry for their 67 livelihood. In rural areas, we conducted a household-level randomization procedure. First, we desig-68 nate the number of samples for the selected villages based on the total number of households provided 69 by each village development committee office. After that, we select the household number and ran-70 domly invite the household heads by sending them invitation letters. Our monetary incentives and the 71 conditions in invitation letters enabled to collect an enough number of subjects. The field experiments 72 and surveys were conducted in the schools of the rural areas. 73

The SVO of the "slider method" has been conducted to identify subjects' social preferences as prosocial or proself in urban and rural areas (Murphy et al., 2011). Figure 2 shows six items of the slider measure that gives numbers to represent outcomes for oneself and the other in a pair of two persons where the other is unknown to the subject. Subjects are asked to make a choice among the nine options for each item. Each subject chooses her allocation by marking a line at the point that defines her most preferred distribution between oneself and the other. The mean allocation for oneself  $\overline{A}_s$  and the mean allocation for the other  $\overline{A}_o$  are computed from all six items (see figure 2). Then, 50 is <sup>81</sup> subtracted from  $\overline{A}_s$ , and  $\overline{A}_o$  to shift the base of the resulting angle to the center of the circle (50, 50). <sup>82</sup> The index of a subject's SVO is given by SVO =  $\arctan \frac{(\overline{A}_o)-50}{(\overline{A}_s)-50}$ . Depending on the values generated <sup>83</sup> from the test, social preferences are categorized as follows: 1. altruist: SVO > 57.15°, 2. prosocial: <sup>84</sup> 22.45° < SVO < 57.15°, 3. individualist: -12.04° < SVO < 22.45° and 4. competitive types: <sup>85</sup> SVO < -12.04°.

86

#### [Figure 2 about here.]

The SVO framework assumes that people have different motivations and goals for evaluating 87 resource allocations between oneself and others. Also, the SVOs or social preferences are established 88 to be stable for a long time (see, e.g., Van Lange et al., 2007, Brosig-Koch et al., 2011). Responses that 89 are yielded from six primary items gives complete categories of social preferences. A major reason 90 for using six primary slider measures by Murphy et al. (2011) is due to its simplicity and easy to 91 implement in the fields of Nepal. It is very intuitive for participants to understand even with a limited 92 level of education. As is done in psychology research, we further simplify the four categories of 93 social preferences into two categories of prosocial and proself types; "altruist" and "prosocial" types 94 are categorized as prosocial subjects, while "individualistic" and "competitive" types are categorized 95 as "proself" subjects (see Murphy et al., 2011). 96

The GBC developed by McAdams and de St. Aubin (1992) checks the frequencies of generative 97 behaviors each individual has taken in the past. Specifically, the GBC asks how many times a person 98 has performed for 50 different behaviors, among which the only 40 behaviors are suggestive of "gen-99 erativity."<sup>1</sup> The examples are "taught somebody a skill," "read a story to a child," "served as a role 100 model for a young person" and "made something for somebody and then gave it to them." Subjects 101 need to write "0" if they have not performed a specific generative behavior, "1" if they have performed 102 the behavior once and "2" if they have performed the behavior more than once for the last one year. 103 Scores on the 40 generative behaviors were summed for each subject to compute a total generativity 104 score. 105

<sup>106</sup> We have implemented the questionnaire surveys and the SVO game with monetary payments.

<sup>&</sup>lt;sup>1</sup>The remaining 10 behaviors in the GBC questionnaire that are not counted for generativity are "fillers."

This is because we needed to attract people to the experimental sites and motivate subjects to seriously 107 participate in the surveys and games, considering opportunity costs of time. In each session, we have 108 collected 20 to 40 subjects in a site, gave experimental instructions to subjects, and the experimenter 109 (the first author) orally made presentations to confirm subjects' understanding. We also used six 110 research assistants and helped subjects. After eliciting subjects' SVOs, we conducted questionnaire 11 surveys to collect individual socio-demographic information. At the end, we randomly matched one 112 subject with another to make pairs and calculated the total payoff for each subject to make payment 113 on the basis of their earnings in the SVO game. One session took 40 to 60 minutes, and the average 114 payment was NPR 200 (approximately USD 2.10) with a show-up fee of NPR 100 (USD 1.05). 115

This study finally analyzes the association of generativity with people's social preferences and 116 the locations of two different areas. A dummy variable for controlling the urban and rural areas in 117 the analysis is intended to represent different degree of modernization (equivalently, the degree of 118 capitalism) in societies. To characterize which social preference and society lead to higher levels of 119 generativity, nonparametric statistical and regression analyses are employed. The Mann-Whitney test 120 is used to identify the distributional difference of generativity across the two areas and their social 12 preferences. The regression model estimates the marginal impact on generativity when a key predic-122 tor, such as SVOs and an area dummy, increases, holding other factors fixed. The set of independent 123 variables includes SVOs, area dummy, household income, age, education, gender and employment.<sup>2</sup> 124 Table 1 summarizes the definition of the variables in the analysis. 125

## **126 3 Results**

Tables 1 and 2 summarize the statistics of subjects' socio-demographic information and generativity, respectively. Table 1 shows that 38 % of the subjects are male in the rural, while 58 % of the subjects are male in the urban. With respect to education, more than 50 % of subjects in the urban have an undergraduate degree in universities (16 years of schooling as the median in table 1). On the

<sup>&</sup>lt;sup>2</sup>Individual social preferences are established to remain the same for a long time (Van Lange et al., 2007, Brosig-Koch et al., 2011), while the GBC is a behavior checklist for the actions that subjects have taken over the last one year. Therefore, taking SVOs as an independent variable in the regression of generativity does not cause any endogeneity problem or reverse causality.

other hand, subjects in the rural possess 10 years of schooling as the median. Regarding occupation, 13 90% and 6% of subjects in the rural and the urban engage in agriculture, respectively. It implies that 132 the urban areas in our field do not depend on agriculture anymore, but rural areas are still agriculture-133 based societies. Reflecting this difference of dependency on agriculture, household income is higher 134 in the urban than in the rural (table 1). Overall, the summary statistics of socio-demographic infor-135 mation in table 1 are in line with our initial expectations that urban societies are more advanced and 136 modernized (or urbanized) in many aspects. On the other hand, in the rural areas, people mainly 137 engage in agriculture and forestry. 138

139

#### [Table 1 about here.]

Table 1 also shows subjects' SVOs to be prosocial or proself between the rural and the urban. 140 A significant difference can be seen in the "SVO" variable, exhibiting that 76% of subjects in the 14 rural are prosocial, while only 39% of subjects are prosocial in the urban. Specifically, 197 people 142 out of 260 rural subjects are prosocial in the rural, while 105 people out of 263 urban subjects are 143 prosocial in the urban (table 2). This implies that prosociality among people is different between the 144 rural and urban areas, and prosocial (proself) people are dominant in the rural (urban) areas. This 145 SVO result appears to suggest that people tend to be more proself as societies are more modernized 146 and developed. 14

Table 2 presents the summary statistics of subjects' generativity. An interesting feature can be 148 found in the central tendency of the median (and average) between rural and urban areas. The median 149 (average) of generativity in the rural is 42.00 (42.05), while that in the urban is 38.00 (37.91). It 150 implies that the central tendencies (both the median and average) of generativity in the rural are higher 151 than those in the urban. However, this tendency does not hold when we further categorize subjects by 152 SVOs in each area of the rural and urban. For instance, the median generativity of prosocial subjects 153 in the rural is 43.00 (the average of 43.05) which is higher than that in the urban (the median of 41.00154 and the average of 40.23 for prosocial subjects in the urban). The median (average) generativity for 155 proself people in the rural is 34.00(37.41), while that for proself subjects in the urban is 37.00(36.41). 156 Put simply, prosocials in the rural, prosocials in the urban, proselves in the urban and proselves in the 157

rural are the descending orders of groups with respect to the central tendencies of generativity. These tendencies can be confirmed from visual observations. Figures 3(a) and 3(b) are the associated box plots, demonstrating that the medians of generativity scores are different between urban and rural areas as well as across people's social preferences (prosocial and proself) in these two areas. Overall, table 2, figures 3(a) and 3(b) suggest that prosociality and the urban vs. the rural areas are the keys to characterize generativity.

164

#### [Table 2 about here.]

165

#### [Figure 3 about here.]

To check whether the distributions of generativity differ from one another by areas and SVOs, 166 we run a Mann-Whitney tests. The null hypothesis is that the generativity distributions are the same 167 across two areas and SVOs (See figures 4(a) to 4(c) for the frequency distributions of generativity). 168 We have confirmed that all of the following pairs reject the null hypothesis: 1) the urban vs. the rural, 169 2) the prosocial vs. the proself, 3) the prosocial in the rural vs. the proself in the rural, 4) the prosocial 170 in the urban vs. the proself in the urban, 5) the proself in the urban vs. the prosocial in the rural 171 and 6) the prosocial in the urban vs. the prosocial in the rural. These results of Mann-Whitney tests 172 statistically confirm that generativity may be affected by prosociality and areas between the rural and 173 urban areas. Given the statistical significances of the generativity across areas and SVOs, we further 174 characterize generativity by running regression model, taking the generativity as a dependent variable 175 and the area dummy between the rural and the urban, SVOs and other socio-demographic information 176 as independent variables. 177

178

#### [Figure 4 about here.]

179

## [Table 3 about here.]

Table 3 reports the estimated coefficients and their respective standard errors with statistical significance in the regression of generativity. Model 1 in table 3 contains SVOs and the area dummy of the rural as independent variables. The result reveals that both variables exhibit statistical significance of 5% and 1%, respectively, and positively affect the generativity. To further confirm the robustness of our result, we add socio-demographic variables such as gender, education, age, employment, number of household members, income level in model 2 of table 3. We find that the SVOs and the area dummy remains statistically significant with the same sign and magnitude, and education is statistically significant to positively influence generativity at 5% level. However, the magnitude of education is rather small compared with that of the SVOs and area dummy. There are no significant associations of gender, employment, income and age in model 2.

In model 3 with adding age squared, both age and its squared variables are significant with positive 190 and negative signs at 10% level, respectively. This result implies that generativity reaches its peak 19 in midlife and starts to decline with old age. This is consistent with McAdams et al. (1993), Newton 192 et al. (2014) and Schoklitsch and Baumann (2012) demonstrating that this single-peaked nature in 193 generativity is due to health or physical weakness. Considering the consistent results across models 194 1, 2 and 3, it appears that SVOs and the area dummy are strong predictors for generativity. More 195 specifically, in model 3, the generativity increases by 4.77 with a change in SVOs from being in the 196 proself to being in the prosocial, and the generativity increases by 3.13 if the individual resides in 197 the rural as compared with residing in the urban. Education is statistically significant in model 3, 198 however, the magnitude remains small. 199

In summary, our results find that there are more prosocial people in the rural areas, and prosocial 200 and rural people possess higher generativity. This suggests that as societies become more modernized 201 and competitive in a capitalistic way, people tend to be less concerned about future generations. It 202 appears that there are two channels to affect generativity. One channel is a direct effect of modern-203 ization on generativity which comes from the difference between the rural and the urban areas. The 204 second channel is an indirect effect of modernization on generativity, that is, modernization of soci-205 eties induces people to be more proself, and generativity decreases through such a change in social 206 preference. Since the magnitudes of the impacts from both SVOs and area dummy are dominant, 20 generativity crisis in urban areas may be well explained by these two factors. 208

A key question is "what does the area dummy truly capture in this regression?" Urban areas significantly differ from rural areas in many aspects such as environment, customs technologies, physical space and architectures that influence social interactions among people. On a daily basis, urban people come across numerous strangers and colleagues. However, there are no human interactions with strangers and no intimacy with colleagues in many cases. To make matters worse, there may be even suspicion with strangers or competition with colleagues. It is a basic city life in Kathmandu. On the contrary, there are close interactions with strangers and intimacy with neighbors in rural areas. For instance, people even greet strangers in rural areas when they come across.

In rural societies, both cultural learning and vocational training also come from families, relatives 217 and neighbors because they live in agriculture-based life and the transfer of skills and knowledge is 218 made through close interactions in local human network. In such a situation, young people mimic 219 and learn standard behaviors, belief and strategies of survival from local communities, in particular 220 from older people in previous generations. Such transmission can also be considered conformist 22 biases that they accumulate from their previous generations and neighbors (See, e.g., Henrich and 222 McElreath, 2003, Sasaki, 2004). We conjecture that such human network of intergenerational linkage 223 and interactions in rural areas corresponds to a rural-specific effect on generativity in the regression. 224 Rural life in Nepal induces people to interact with neighbors and others on a daily basis, while urban 225 life does not. With these realities, it is our belief that the difference of how people interact with others 226 affects social preferences and behaviors, leading to a change in generativity with modernization. 22

## **228 4 Conclusion**

This paper has analyzed how generativity changes with social preference and the degree of capi-229 talism in the society. To this end, we implemented a social value orientation (SVO) experiment and 230 surveys of generative checklist questionnaires in two fields of Nepal: (i) urban and (ii) rural areas. 23 The results reveal that there are mainly two channels to positively affect individual generativity, i.e, 232 prosociality and rural-specific effect. Since a higher proportion of prosocial people are found in rural 233 areas than in urban areas, we conclude that when societies get more modernized and developed in a 234 capitalistic way, generativity shall be further compromised through changes in social preference and 235 economic environments. 236

Our research shows the evidence that economic environments affect people's preferences and even 237 behaviors that are important for intergenerational sustainability. We conjecture that the difference of 238 daily life between rural and urban areas influences how people interact with others including families, 239 relatives, neighbors and strangers. Rural areas induce people to interact with others for success and 240 survival, and we consider such interactions as main factors for higher generativity. On the other hand, 24 in urban areas, social network and the degree of interactions may be weak, although more people 242 happen to meet or come across one another. We believe that such difference of human interactions or 243 network between urban and rural areas is a key to explain generativity. 244

Finally, we note some limitation of our study. This research does not fully address the details of 245 rural-specific effects on generativity. In reality, rural-specific effects may be decomposed of not only 246 the ways of human interactions in daily life but also other factors. In the future, we should collect 24 more detailed data of human interactions and other possible factors that may represent the differences 248 between rural and urban areas. If such rich data are successfully collected, new methodologies such as 249 social network methods can be utilized (Kim et al., 2015). We did not conduct such analysis and data 250 collection because the main purpose of this research is to establish the relation between generativity 25 and modernization of societies as a first priority. These caveats notwithstanding, it is our belief that 252 this research is considered an important step when societies are changing to be more modernized and 253 intergenerational sustainability is claimed to be a pressing issue. 254

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# **List of Figures**

1	The Map of Nepal	16
2	Social value orientation measure by the slider method	17
3	Boxplot of generativity across urban and rural areas along with people's social pref-	
	erences	18
4	Histogram of generativity across urban and rural areas along with people's social	
	preferences	19



Figure 1: The Map of Nepal

Figure 2: Social value orientation measure by the slider method

In this task you have been randomly paired with another person, whom we will refer to as the other. This other person is someone you do not know and will remain mutually anonymous. All of your choices are completely confidential. You will be making a series of decisions about allocating resources between you and this other person. For each of the following questions, please indicate the										
distribu Your de	distribution you prefer most by marking the respective position along the midline. You can only make one mark for each question. Your decisions will vield money for both yourself and the other person. In the example below, a person has chosen to distribute money									
so that	so that he/she receives 50 dollars, while the anonymous other person receives 40 dollars.									
There are no right or wrong answers, this is all about personal preferences. After you have made your decision, write the resulting distribution of money on the spaces on the right. As you can see, your choices will influence both the amount of money you receive as well as the amount of money the other receives.										
Example:										
\ \	You receive 30	$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	50							
Ot	her receives 80	70     60     50     40     30     20     10     0     Other	40							
<u> </u>										
$\overline{1}$	You receive	85 85 85 85 85 85 85 85	You							
	Other receives	85 76 68 59 50 41 33 24 15	Other							
	You receive	85 87 89 91 93 94 96 98 100	You							
2			Other							
	Other receives	15 19 24 28 33 37 41 46 50	Other							
	You receive	50 54 59 63 68 72 76 81 85	You							
3	Other receives	100     98     96     94     93     91     89     87     85	Other							
	You receive	50 54 59 63 68 72 76 81 85	You							
4	Other receives	100 89 79 68 58 47 36 26 15	Other							
	You receive		You							
	Other receives	50 56 63 69 75 81 88 94 100	Other							
6	You receive	100 98 96 94 93 91 89 87 85	You							
	Other receives	I     I	Other							



### Figure 3: Boxplot of generativity across urban and rural areas along with people's social preferences (a) Urban Vs Rural











(c) Rural: Proself vs. Prosocial



# **List of Tables**

1	Summary statistics of subjects' socio-demographic information and SVOs	21
2	Generativity across regions and prosociality	22
3	Regression analysis of generativity	23

Table 1: Summary statistics of subjects' socio-demographic information and SVOs

Variables	Rural (260 subjects)				Urban (268 subjects)					
variables	Mean	$SD^1$	Median	Min	Max	Mean	SD	Median	Min	Max
Age <sup>2</sup>	2.27	1.09	2.00	0.00	5.00	1.62	1.25	1.00	0.00	5.00
Gender <sup>3</sup>	0.38	0.49	0.00	0.00	1.00	0.58	0.49	1.00	0.00	1.00
Education <sup>4</sup>	9.58	3.40	10	1.00	16.00	13.07	3.57	16.00	1.00	16.00
Employment / Agriculture <sup>5</sup>	0.90	0.27	1.00	0.00	1.00	0.63	0.48	1.00	0.00	1.00
Income <sup>6</sup>	4.20	2.10	5.00	1.00	6.00	4.80	2.02	6.00	1.00	6.00
SVO <sup>7</sup>	0.76	0.43	1.00	0.00	1.00	0.39	0.49	0.00	0.00	1.00

<sup>1</sup> The "SD" stands for standard deviation.

<sup>2</sup> The variable of age is defined as categorical variable of 0; 1; 2; 3; 4; 5 where 0 is under 20 and 5 is above 60 and rest is with <sup>3</sup> The variable of gender is dummy variable that takes 1 when the subject is male, otherwise 0.
<sup>4</sup> The variable of education is defined as years of schooling.

<sup>5</sup> The variable of employment/agriculture is defined as 1 if engage in agriculture or have an employment.

<sup>6</sup> The variable of income is defined as categorical of 1; 2; 3; 4; 5; 6 with an interval of \$250, where 6 represents as earning more than \$1800 per year.

<sup>7</sup> The "SVO" represents a dummy variable taking 1 when a subject is prosocial, otherwise 0, based on SVO games.

Table 2. Generativity across regions and prosociality						
	N	Mean	Median	$SD^1$	Min	Max
Urban	268	37.91	38.00	13.34	2.00	72.00
Prosocial	105	40.23	41.00	13.35	6.00	72.00
Proself	163	36.41	37.00	13.17	2.00	67.00
Rural	260	42.05	42.00	12.63	5.00	72.00
Prosocial	197	43.53	43.00	12.32	8.00	72.00
Proself	63	37.41	34.00	12.57	5.00	65.00
Prosocial	302	42.39	42.00	12.76	8.00	72.00
Proself	226	36.69	37.00	12.99	2.00	67.00
Overall	528	39.95	40.00	13.15	2.00	72.00

Table 2: Generativity across regions and prosociality

<sup>1</sup> The "SD" stands for standard deviation.

	Model 1	Model 2	Model 3
Constant	36.026***	33.378***	31.730***
	(0.937)	(3.061)	(3.207)
$SVOs^1$ (Prosocial = 1 & Proself = 0)	4.810***	4.889***	4.773***
	(1.226)	(1.227)	(1.232)
Area dummy <sup>2</sup> (Rural = 1 & Urban = 0)	2.383**	3.294**	3.129 * *
	(1.208)	(1.415)	(1.410)
Gender		-1.845	-1.445
		(1.164)	(1.182)
Education		$0.419^{**}$	0.391 **
		(0.171)	(0.171)
Employment		0.414	-0.380
		(1.641)	(1.662)
No of household members		-0.387	-0.282
		(0.598)	(0.592)
Income		-0.343	-0.270
		(0.272)	(0.274)
Age		-0.039	2.718*
		(0.556)	(1.586)
Age squared			-0.630*
			(0.328)
Observations	528	528	528
$R^2$	0.053	0.071	0.077

Table 3: Regression analysis of generativity

<sup>1</sup> The SVO represents a dummy variable of individual social value orientations that takes 1 when the individual is prosocial. Otherwise zero.
<sup>2</sup> The area dummy takes 1 when the subject resides in the rural area, otherwise, 0. The variables other than the SVO and area dummy follow the descriptions in table 1.

Numbers in parentheses are robust standard errors \*\*\*significant at the 1 percent level, \*\*significant at the 5 percent level and \*significant at the 10 percent level.