

Appendix

Individual interviews

An individual interview is conducted for each subject after his or her generation chooses between options *A* and *B*. In this interview, we investigate the patterns of the shift in individual opinions to support *A*, *B* or to be ambivalent (to have no ideas), which is coded as *N*, as “individual initial opinion” and “individual final opinion” before and after the deliberation, respectively. Each subject is asked to recall and answer whether she supported *A*, *B* or *N* and the associated reasons before and after deliberation. The interviewers ask following questions: (1) “Your personal opinion might have been different from the generation decision. At the moment of the generation decision, what did you really want to support as your personal opinion?” for his or her “individual final opinion” along with the corresponding reasons. (2) “Before the deliberation started, what did you really support as your personal opinion?” for his or her “individual initial opinion” along with the corresponding reasons.

The additional estimated models:

To check the robustness for the main result in table 4, we run additional models of probit regression building upon the base model. Generation choice *B* is specified as a dependent dummy variable that takes unity when the generation chooses *B*, otherwise zero. Alternatively, we have also run the two types of regressions: (i) panel regression and (ii) regression with generation fixed effects. With respect to the panel regression, we consider that multiple observations per sequence are provided as if they are decided by sequence *i*. The independent variables are the treatment dummies (IFG and IA), number of prosocial members in a generation (i.e., characterized by SVO), the percentage of *B* in history, gender (number of males in a generation), average age, average education, previous

generation's decision and number of members in a generation with an initial opinion A (see table A1 for the definition of each variable). Tables A2 to A4 presents the marginal effects of the independent variables. We have used interaction terms between The percentage of B in history with IFG and IA dummy. The estimation results remain qualitatively the same as those in base models. IA dummy, education and IA dummy interaction with the percentage of B in history, all these variables are statistically significant (see table A2 for the details). These results imply that with a one-year increase in average education, the generation choice B increases by 1.6% point holding all other factors fixed and it is statistically significant at 10% level. Next, the interaction term of the IA treatment dummy and the percentage of B in history is statistically significant at 5% level with a negative sign as shown in model 5. The result suggests that generations behave differently under the baseline ISDG and IA treatments with an increase in percentage of B in history. The gap of generation choice B in baseline ISDG and IA treatment decreases with an increase in percentage of B in history. Instead of the percentage of B in history, we also use the value of X as the alternative independent variable. It is confirmed that the same qualitative results are obtained, irrespective of the model specifications with additional independent variables. The results in models 6, 7 and 10 show that the number of members in a generation with an initial opinion A is significant at 1% level with a negative sign. The results are very intuitive and imply that with a one-member increase in a generation with initial opinion A , the generation choice B decreases by 19% point holding all other factors fixed. Overall, the results qualitatively remain the same as those in base models 1, 2, 3 and 4, irrespective of the various model specifications we have tried for robustness check.

Table A1: Descriptions of dependent and independent variables included in regressions

Variables	Descriptions
Generation choice B	A dummy variable that takes 1 if a generation chooses B , otherwise 0.
Number of prosocial members	The number of prosocial members in each generation.
Number of members with an initial opinion A	The number of members in each generation with an initial opinion A .
Previous generation's decision	A dummy variable that takes 1 if the previous generation chooses B , otherwise 0.
Average age	A variable that represents the average age of three members in a generation.
Average education	A variable that represents the average year of schooling of three members in a generation.
Gender	A variable that represents the number of males in a generation.
The percentage of B in history	A variable that represents the percentage of previous generations that choose B in a sequence.
Generation order dummies	The generation order dummy variable for “Generation 1” takes 1 if a generation belongs to the 1st generation, otherwise 0. Likewise, the generation order dummy variables for Generations 2, 3, 4 and 5 are created, respectively.

Table A2: The coefficients and marginal effects of the independent variables in probit regressions for generation choice *B*

Variable	Model 5	
	Coefficients	Marginal effects
IFG dummy	0.487 (0.404)	0.063 (0.101)
IA dummy	1.870*** (0.493)	0.223** (0.089)
# of prosocial members	0.245 (0.173)	0.075 (0.051)
The percentage of <i>B</i> in history	0.475 (0.438)	-0.002 (0.089)
Average age	-0.004 (0.015)	-0.001 (0.005)
Average education	0.052* (0.030)	0.016* (0.009)
Gender	0.169 (0.163)	0.051 (0.050)
The percentage of <i>B</i> in history × IFG dummy	-0.461 (0.715)	
The percentage of <i>B</i> in history × IA dummy	-1.520** (0.644)	
Observations	154	154

*** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$

Standard errors are clustered by sequence level and reported in parentheses. The Wald χ^2 statistics is given 37.87 for model 5.

Table A3: Marginal effects of the independent variables in probit regressions for generation choice *B*

Generation choice <i>B</i>	Marginal effects		
	Model 6	Model 7	Model 8
IFG dummy	0.060 (0.059)	0.071 (0.052)	0.074 (0.101)
IA dummy	0.170*** (0.065)	0.170** (0.072)	0.222** (0.115)
Gender	0.041 (0.035)	0.028 (0.028)	0.046 (0.035)
# of prosocial members		-0.012 (0.026)	0.077* (0.046)
The percentage of B in history		-0.003 (0.042)	0.057 (0.105)
Average age		0.002 (0.002)	-0.001 (0.004)
Average education		0.013*** (0.005)	0.013 (0.010)
# of members with an initial opinion A	-0.194*** (0.015)	-0.187*** (0.018)	
Previous generations decision	-0.038 (0.079)		
Generation 1 (base group = generation 6)			0.167 (0.111)
Generation 2			0.110 (0.106)
Generation 3			0.031 (0.112)
Generation 4			0.039 (0.118)
Generation 5			0.080 (0.117)
Observations	128	154	154

The Wald χ^2 statistics are 47.69, 90.71 and 32.34 in models 6, 7 and 8, respectively. Standard errors are clustered by sequence level and reported in parentheses.

* $p < 0.1$; ** $p < 0.05$; *** $p < 0.01$.

Table A4: Marginal effects of the independent variables in panel probit regressions for generation choice B

Generation choice B	Marginal effects			
	Model 9	Model 10	Model 11	Model 12
IFG dummy	0.067 (0.090)	0.055 (0.059)	0.086 (0.096)	0.077 (0.010)
IA dummy	0.240*** (0.090)	0.168** (0.069)	0.240** (0.101)	0.230** (0.102)
Gender		0.041 (0.033)	0.038 (0.048)	0.038 (0.047)
# of prosocial members			0.089** (0.043)	0.083* (0.044)
The percentage of B in history			-0.023 (0.107)	0.016 (0.116)
Average age			-0.002 (0.005)	-0.002 (0.005)
Average education			0.015 (0.014)	0.013 (0.015)
# of members with an initial opinion A		-0.194*** (0.017)		
Previous generations decision		-0.038 (0.060)		
Generation 1 (base group = generation 6)				0.159 (0.124)
Generation 2				0.110 (0.117)
Generation 3				0.038 (0.115)
Generation 4				0.041 (0.113)
Generation 5				0.086 (0.113)
Observations	154	128	154	154

The Wald χ^2 statistics are 6.01, 45.72, 10.81 and 12.93 in models 9, 10, 11 and 12 respectively. Standard errors are adjusted for 26 clusters in sequence level and reported in parentheses.

* $p < 0.1$; ** $p < 0.05$; *** $p < 0.01$.

Table A5: Some detailed examples of reasons and advices provided by the current generation to the subsequent ones

No.	Reason	Advice
1	We might gain a little but another group will be a sufferer. This is the way of sharing limited resources equally. It will create a better image between groups.	Choose <i>B</i> and it is social justice. Larger benefits if every group makes a decision of resources this way, live and let others live.
2	It is the best way to ensure equal distribution of resources.	Make equitable distribution of resources for a just society.
3	We make this decision so that the next group will also get the same environment	Choosing <i>A</i> will only benefit you, whereas selecting <i>B</i> will help you and other groups. We should not become selfish and short-sighted, if we do future groups might copy us, therefore, we choose <i>B</i> .
4	Everyone has equal needs, so we should not be selfish and think about others too	Selfishness is one of the causes of many problems present in modern society. Thus, we should not be selfish and choose <i>B</i> , which is equally profitable to all groups.
5	We choose <i>B</i> because it allows other groups to get the same amount which is beneficial to all.	We should think about the benefit of all rather than self-gain. Nobody is happy when there is injustice and justice gives happiness to everybody, we feel that we should avoid any disadvantage to the next groups.
6	We are social beings, so we should think about society and thus choose an option that provides equal benefits to all.	It's important to think about social rules, norms, and people in society rather than just chasing after your success. We expect that future groups will do the same.
7	We have to think about others if we want to live in a society for a long time.	We advise the following groups to choose <i>B</i> because it will create a harmonious environment in society.
8	<i>B</i> gives a chance to the next group to make their choice freely. Also, there is no loss for anyone in choosing it.	We decided to choose <i>B</i> because it is fair for another group as it will not make any reduction on their initial choices and we would like to change the bad chain of choosing <i>A</i> .
9	Choosing <i>B</i> will not affect the following groups and give them the same environment as us.	We are social beings and we should think about the next group. We choose <i>B</i> because we expect that future groups will do the same.
10	Several groups earlier have kindly selected <i>B</i> by considering other groups, so we would like to choose <i>A</i> it does not harm much.	If you guys were in our place, we think you would have also done the same, so please do it accordingly.
11	We choose <i>A</i> for our benefit. We have chosen <i>A</i> because we by considering the next groups, we will lose benefits and they will lose the incentive to work hard and find an alternative solution for their survival.	Play for your benefit.
12	We have the will to earn as much as possible.	You should also think about yourself first.
13	Self-benefit is always a priority continuing the tendency of thinking about yourself first.	No advice



Figure A1: Study regions: Cities of Nepal

Figure A2: A flow chart of procedures for the experiment per session. In the intergenerational sustainability dilemma game (ISDG), each room has a two-digit ID with one letter of alphabets and a number, such as G1 or K1. The alphabet letter represents a sequence ID, while the number does the generation ID within the sequence.

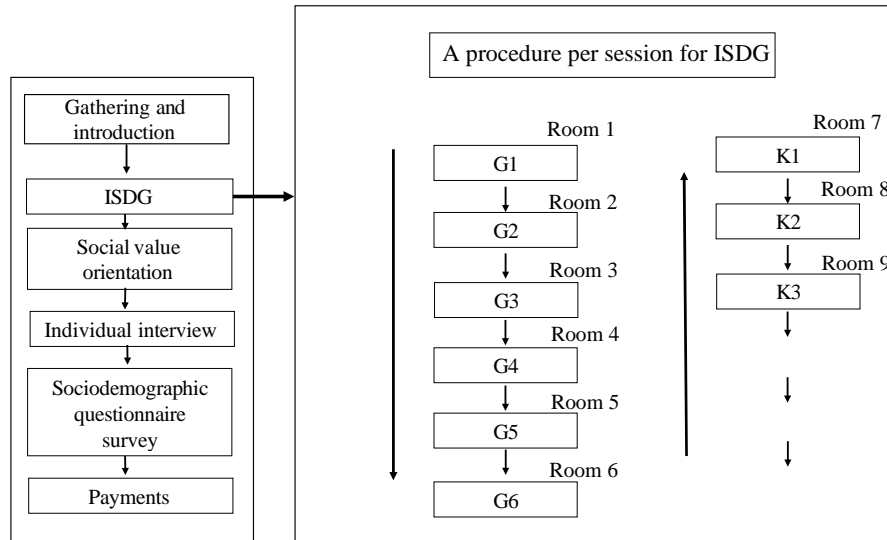


Figure A3: Instructions for the “slider method” to measure social value orientations (Murphy et al., 2011)

