

Supplemental Materials



Children-cue condition

Control condition

Annex 1. Pictures of experimental and control condition used in Study 1.



If new green measures are not taken, in the coming years, humanity will be at risk of irreversibly altering the global environment.

Control condition



If new green measures are not taken, in the coming years, humanity will be at risk of irreversibly altering the global environment **for the future generations.**

Future-generations condition



If new green measures are not taken, in the coming years, humanity will be at risk of irreversibly altering the global environment **for your children.**

Own-child cue condition

Annex 2. Messages of experimental and control conditions used in Study 2.

Annex 3. Scenarios used in Study 3.

(Delayed-consequences condition)

WATER SHORTAGES IN ARIZONA

You live in Tucson, Arizona, where water conservation has always been an issue due to the desert climate. Recent population growth has made demands on the water supply even higher. The U.S. Department of Agriculture (USDA) reports that there will be several decades of below-average precipitation in Arizona and that current rates of water consumption could lead to serious water shortages. Extensive periods of drought and overuse of water put area rivers at risk of running dry. In the past, the Santa Cruz River in downtown Tucson went dry and is now a wasteland through the city. The city council is worried about the San Pedro River, which is one of the only free-flowing waterways left in Arizona. The San Pedro River supports an ecosystem of green grasses and cottonwood trees, which is an oasis for many migratory birds and other animals within the otherwise barren desert. The council is calling on individual Tucson residents like you to conserve water at home so that more water can be diverted to the San Pedro to protect this sensitive ecosystem.

The water issue in Tucson has become that threatening that authorities have claimed that if no measures are taken, **there might not be fresh water in the future**. USDA has prepared an official report indicating that there is a 85% likelihood that the fresh water supplies will run out **within the next 25 years**.

There are several things you can do to reduce your water use and help to stop this trend and **save this ecosystem before it's too late**. These include using only desert plants in your landscaping, watering your plants early in the morning or late at night to reduce evaporation, not washing your car, and buying a low-flush toilet.

(Children-cue condition)

WATER SHORTAGES IN ARIZONA

You live in Tucson, Arizona, where water conservation has always been an issue due to the desert climate. Recent population growth has made demands on the water supply even higher. The U.S. Department of Agriculture (USDA) reports that there will be several decades of below-average precipitation in Arizona and that current rates of water consumption could lead to serious water shortages. Extensive periods of drought and overuse of water put area rivers at risk of running dry. In the past, the Santa Cruz River in downtown Tucson went dry and is now a wasteland through the city. The city council is worried about the San Pedro River, which is one of the only free-flowing waterways left in Arizona. The San Pedro River supports an ecosystem of green grasses and cottonwood trees, which is an oasis for many migratory birds and other animals within the otherwise barren desert. The council is calling on individual Tucson residents like you to conserve water at home so that more water can be diverted to the San Pedro to protect this sensitive ecosystem.

The water issue in Tucson has become that threatening that authorities have claimed that if no measures are taken **there might not be fresh water in the future and future generations (including your children)**

might have not fresh water. USDA has prepared an official report indicating that there is a 85% likelihood that the fresh water supplies will ran out **within the next 25 years, so there will be severe consequences for future generations including your children.**

There are several things you can do to reduce your water use and help to stop this trend and **save this ecosystem for your children before it's too late.** These include using only desert plants in your landscaping, watering your plants early in the morning or late at night to reduce evaporation, not washing your car, and buying a low-flush toilet.

(Close-consequences condition)

WATER SHORTAGES IN ARIZONA

You live in Tucson, Arizona, where water conservation has always been an issue due to the desert climate. Recent population growth has made demands on the water supply even higher. The U.S. Department of Agriculture (USDA) reports that there will be several decades of below-average precipitation in Arizona and that current rates of water consumption could lead to serious water shortages. Extensive periods of drought and overuse of water put area rivers at risk of running dry. In the past, the Santa Cruz River in downtown Tucson went dry and is now a wasteland through the city. The city council is worried about the San Pedro River, which is one of the only free-flowing waterways left in Arizona. The San Pedro River supports an ecosystem of green grasses and cottonwood trees, which is an oasis for many migratory birds and other animals within the otherwise barren desert. The council is calling on individual Tucson residents like you to conserve water at home so that more water can be diverted to the San Pedro to protect this sensitive ecosystem.

The water issue in Tucson has become that threatening that authorities have claimed that if no measures are taken, **there might not be fresh water in the next year.** USDA has prepared an official report indicating that there is a 85% likelihood that the fresh water supplies will ran out **within the next 12 months.**

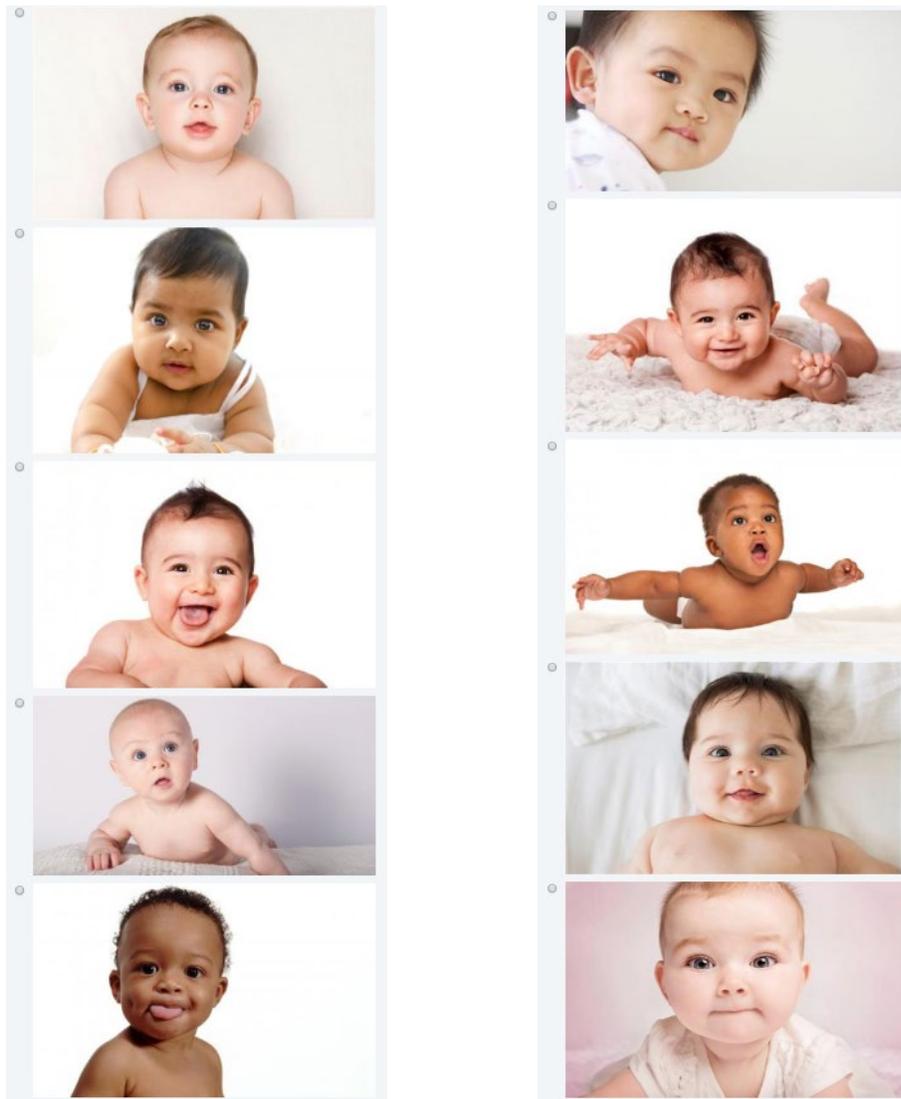
There are several things you can do to reduce your water use and help to stop this trend and **save this ecosystem before it's too late.** These include using only desert plants in your landscaping, watering your plants early in the morning or late at night to reduce evaporation, not washing your car, and buying a low-flush toilet

Annex 4: Stimuli material and manipulation instructions used in Study 4 (Type of care manipulation: Parental care)

Instructions:

This task is about relationship roles. Specifically, we are interested in how different types of social situations influence priorities and preferences. You will be asked to imagine being in a certain relationship. Then you will answer some questions about your preferences.

We would like you to imagine being the parent of an infant. If you have never been a parent, try to imagine what it would be like based on your experiences. Put yourself in the role of a parent, and take that perspective when answering the questions in this task. To help you with this perspective-taking task, look at the images below. Think about the baby that you think is the cutest, looks most like you, and select it. **Imagine that this is your baby and answer the questions that follow.**

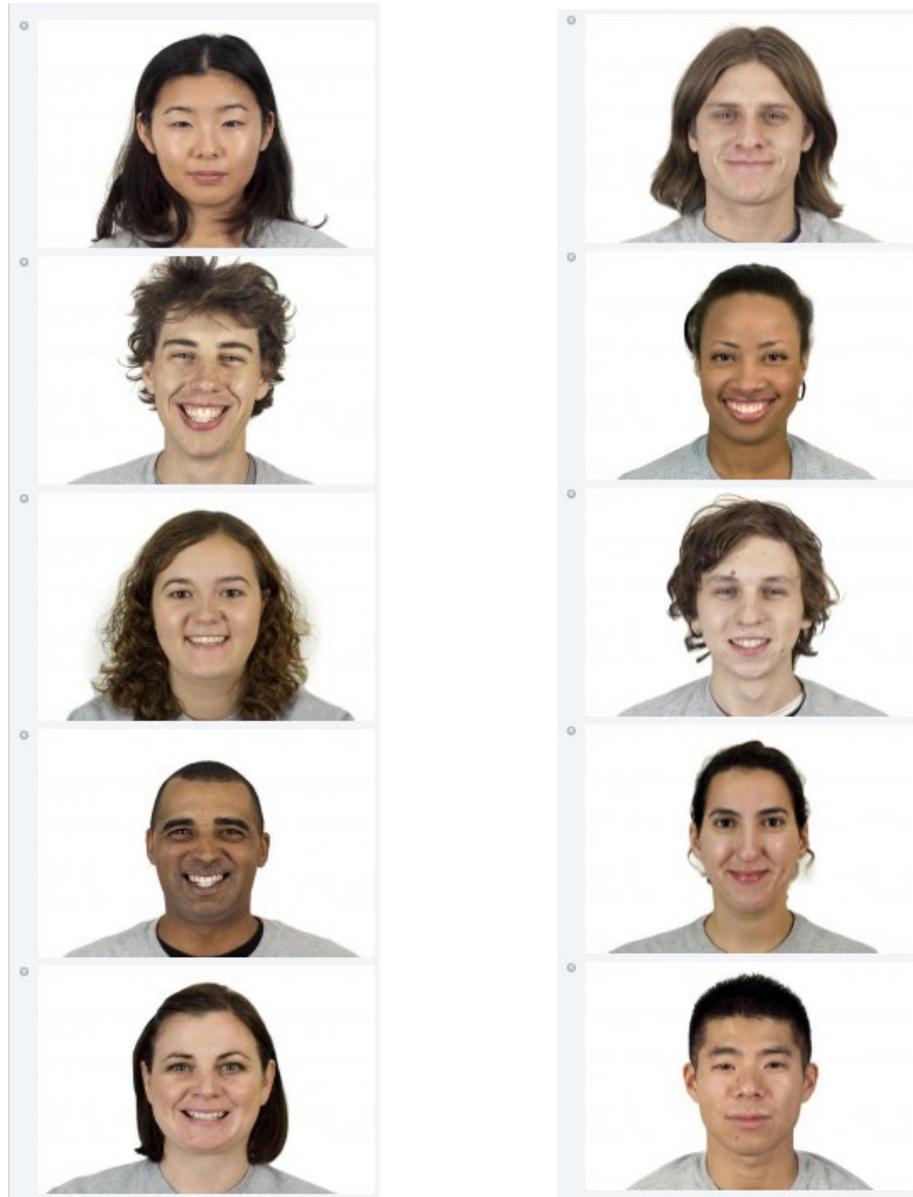


Annex 4 (continued): Stimuli material and manipulation instructions used in Study 4 (Type of care manipulation: Friendship care)

Instructions:

This task is about relationship roles. Specifically, we are interested in how different types of social situations influence priorities and preferences. You will be asked to imagine being in a certain relationship. Then you will answer some questions about your preferences.

We would like you to imagine moving to a place and making friends. If you have never moved before, try to imagine what it would be like based on your experiences. Put yourself in the role of someone who is making a new friend, and take this perspective when answering the questions in this study. To help you with this perspective-taking task, look at the images below. Think about the person that looks most like he/she could be a new friend for you, and select it. **Imagine that you are thinking about becoming friends with this person and answer the questions that follow.**



Annex 4. Verbatim wording Dependent measures used in Study 1, Study 2 and Study 3:

Study 1:

Parental care motive:

My relatives (e.g. children, parents, and siblings) need something

My relatives (e.g. children, parents, and siblings) need my attention and care.

It is important to help my child.

It is important to take care of my child.

Environmental behavioral intentions:

I will put dead batteries in the garbage.

I intend to bring unused medicine back to the pharmacy.

I intend to collect and recycle used paper.

I intend to bring empty bottles to a recycling bin.

I intend to prefer to take a shower rather than to take a bath.

In the winter, I intend to keep the heater on so that I do not have to wear a sweater.

I intend to wait to have a full load before doing my laundry.

In the winter, I intend to leave the windows open for long periods of time to let in fresh air.

I intend to buy beverages in cans.

If I am offered a plastic bag in a store I will always take it.

For shopping, I intend to prefer paper bags to plastic ones.

I intend to buy milk in returnable bottles.

I intend to talk with friends about problems related to the environment.

I intend to become a member of an environmental organization.

In the future, I intend to point out to someone his or her anti-environmental behavior.

I intend to contribute financially to environmental organizations.

When possible in nearby areas (around 30 km, [18.75 miles]), I intend to use public transportation or ride bike.

Willingness to register as a volunteer:

The previous pictures were taken by the Sustainable World Foundation. Since 2009 the Sustainable World Foundation has been a non-profit sustainability platform that is concerned about different green issues around the world. As Sustainable World Foundation is running many green projects at the same time, they usually need online-volunteers from all over the world to help them to share information and raise awareness. Would you like to register as a volunteer? If you do, is possible that, eventually, Sustainable World Foundation will contact you asking for your help.

Donation:

You will receive \$1.20 for completing this survey, however, we want to give you the opportunity to collaborate with Sustainable World Foundation. As you may know, the Sustainable World Foundation is a worldwide non-Governmental Organization which main objective is the protection and defense of the environment. In order to help them, would you like to donate part of your payment for completing this survey to the foundation? Please indicate in the following space the amount of money you would like to donate (please enter any amount from 0 - 1.20)

Study 2:

Parental care motive:

The same items as in Study 1

Environmental behavioral intentions:

The same items as in Study 1

Willingness to register as a volunteer:

The same items as in Study 1

Donation:

The same items as in Study 1 (participant payment changed to \$2.20, so they could donate up to that amount)

Study 3

Parental care motive:

The same items as in Study 1

Environmental behavioral intentions:

Would you be willing to conserve water?

Would you be willing to buy a low-flush toilet?

Would you be willing to use only desert plants in your landscaping?

Would you be willing to wash your car only every second week?

Would you be willing to water your plants early in the morning or late at night to reduce evaporation?

Would you be willing to take showers rather than baths?

Would you be willing to wait until to have a full load before doing the laundry?

Would you be willing to wash your dirty clothes without prewashing?

Temporal discounting:

Do you want to receive \$64 tomorrow OR \$65 in 33 days?

Do you want to receive \$69 tomorrow OR \$71 in 33 days?

Do you want to receive \$86 tomorrow OR \$92 in 33 days?

Do you want to receive \$45 tomorrow OR \$49 in 33 days?

Do you want to receive \$42 tomorrow OR \$47 in 33 days?

Do you want to receive \$49 tomorrow OR \$57 in 33 days?

Do you want to receive \$72 tomorrow OR \$86 in 33 days?

Do you want to receive \$41 tomorrow OR \$51 in 33 days?

Do you want to receive \$58 tomorrow OR \$76 in 33 days?

Do you want to receive \$37 tomorrow OR \$54 in 33 days?

Do you want to receive \$53 tomorrow OR \$87 in 33 days?

Do you want to receive \$56 tomorrow OR \$99 in 33 days?

Do you want to receive \$35 tomorrow OR \$67 in 33 days?

Do you want to receive \$39 tomorrow OR \$81 in 33 days?

Do you want to receive \$28 tomorrow OR \$62 in 33 days?

Do you want to receive \$31 tomorrow OR \$78 in 33 days?

Do you want to receive \$35 tomorrow OR \$98 in 33 days?

Do you want to receive \$16 tomorrow OR \$55 in 33 days?

Do you want to receive \$24 tomorrow OR \$94 in 33 days?

Do you want to receive \$9 tomorrow OR \$60 in 33 days?

Willingness to register as volunteer:



Although the situation you just read was hypothetical, many U.S. states such as California, South Carolina and Utah, to name a few, face every year severe water shortages. This is why the #BringTheWaterBack initiative led by Watercare Foundation along with the U.S. Department of Agriculture is asking to citizens like you to help in the improvement of the National Water treatment and reutilization System. Such goal however, can only be reached by

gathering information about your actual daily water use.

Would you accept to spare 10 more minutes by the end of this survey to answer some questions for the #BringTheWaterBack initiative? You will not be paid extra for this, but you will be helping us to improve the National Water Treatment and Reutilization System.

Study 4:

Parental care motive (measured mediator):

The same as in Study 1, 2, and 3

Environmental behavioral intentions:

The same as in Study 1 and 2

Willingness to register as a volunteer:

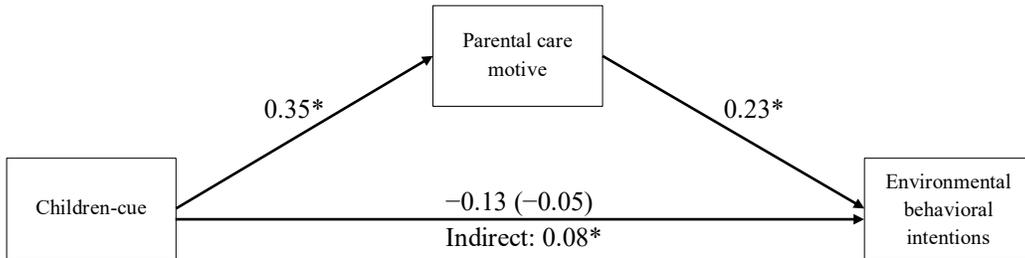
The same as in Study 1

Donation:

The same as in Study 1 (participant payment changed to \$1.20, so they could donate up to that amount)

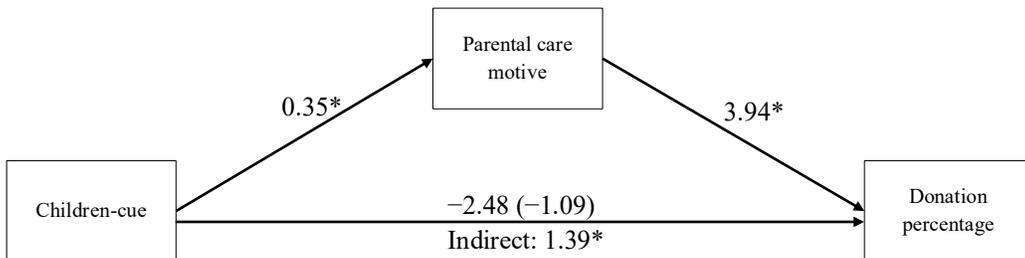
Annex 5: Results of studies 1, 2, 3 and 4 without statistical controls:

Model 1



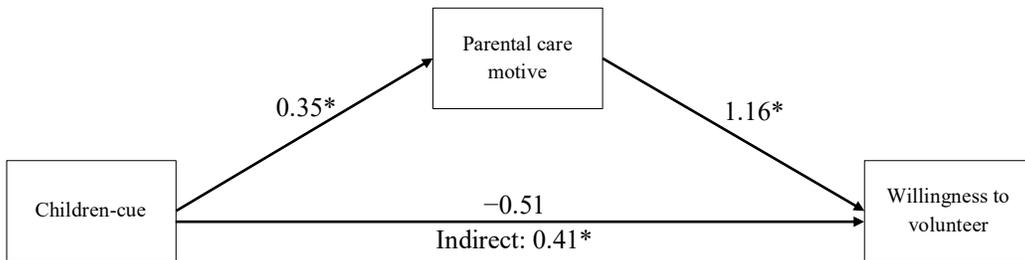
Full model: $F(2, 400) = 16.34, p < .001, R^2 = .08$.

Model 2



Full model: $F(2, 400) = 8.24, p < .001, R^2 = .04$.

Model 3



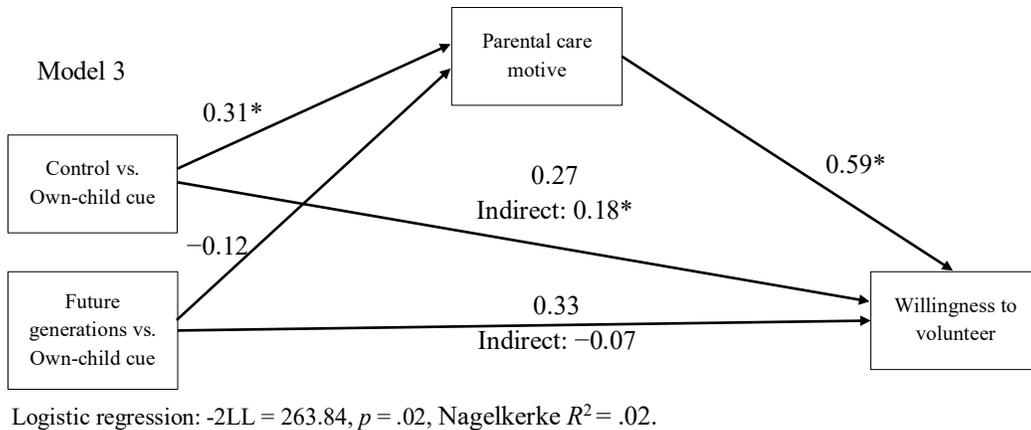
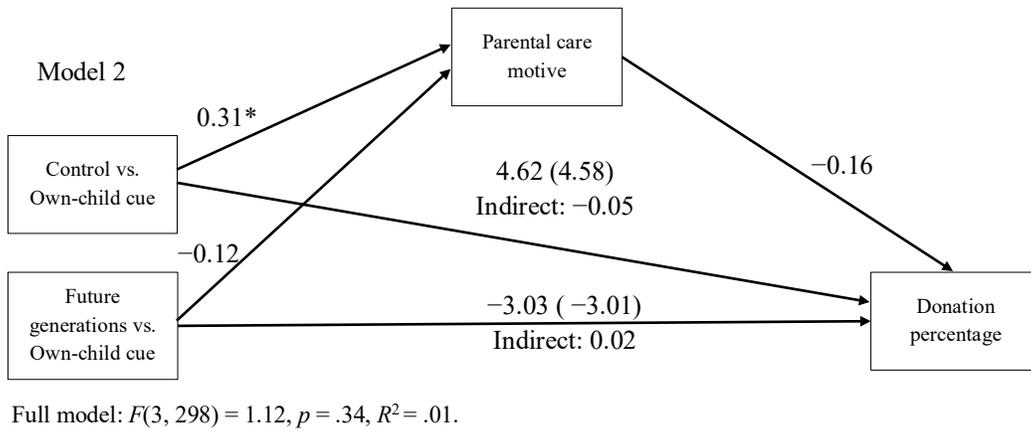
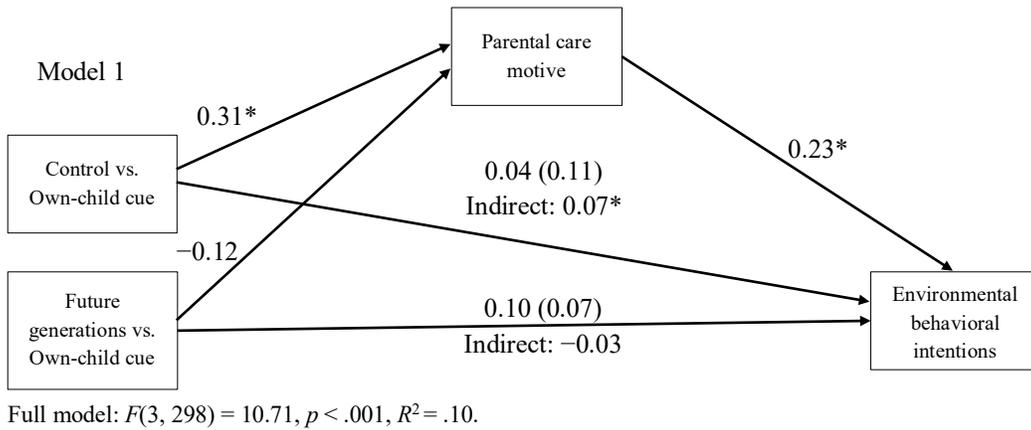
Logistic regression: $-2LL = 335.86, p < .001, Nagelkerke R^2 = .12$.

Note: Bootstrapping fixed to 5000 re-samples, bias-corrected; * = CIs does not include zero.

Manipulation: 0 = control condition, 1 = children-cue condition

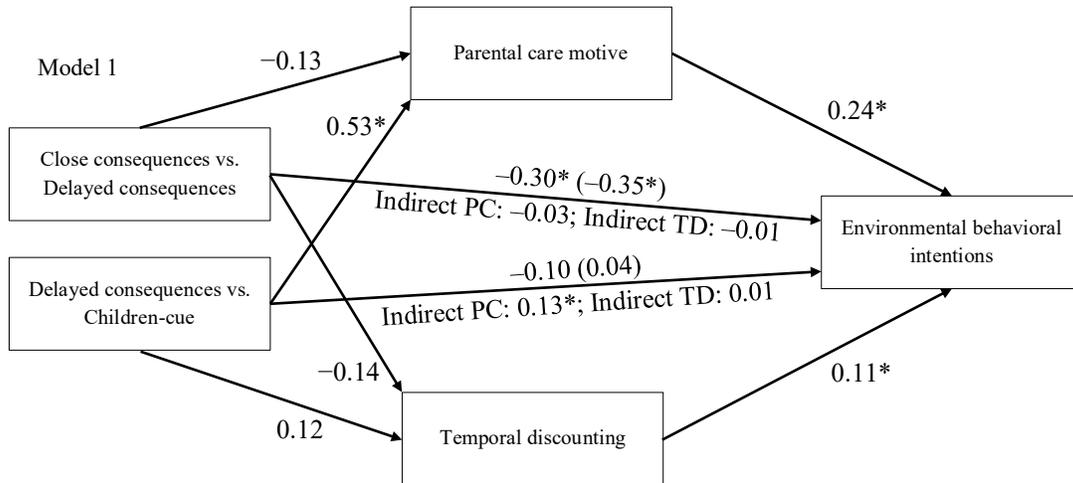
Total effects in Model 1 and Model 2 are presented between parenthesis, next to the direct ones.

Figure S1. Effects of the children-cue manipulation on environmental behavioral intentions and environmental altruistic intentions in Study 1 without statistical controls

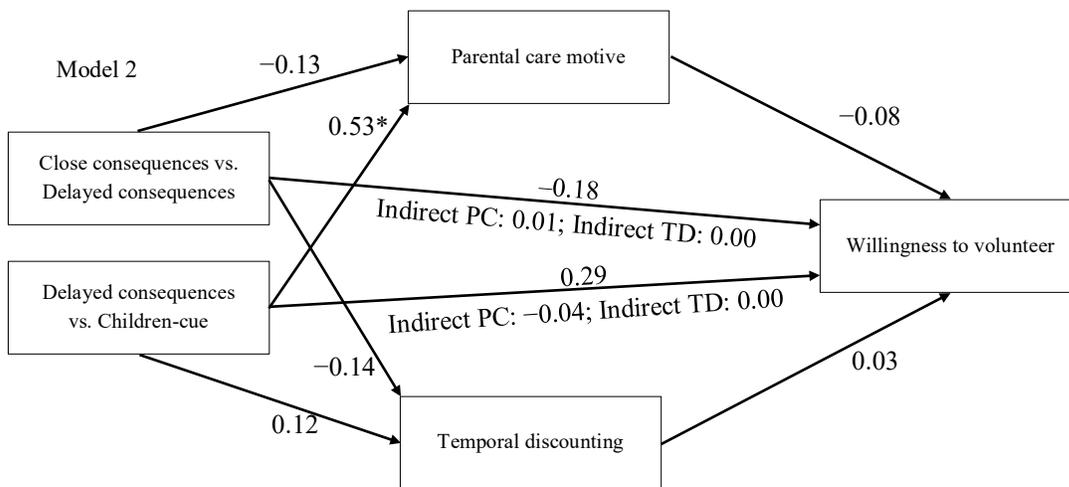


Note: Bootstrapping fixed to 5000 re-samples, bias-corrected; * = CIs does not include zero. Future generations condition was coded as being the ordinaly higher group, followed by the own-child cue condition, and the control condition. Total effects in Model 1 and Model 2 are presented between parenthesis, next to the direct ones.

Figure S2. Effects of the own-child cue manipulation on environmental behavioral intentions and environmental altruistic intentions in Study 2 without statistical controls.



Full model: $F(4, 298) = 14.11, p < .001, R^2 = .16$.



Logistic regression: $-2LL = 371.98, p = .79, Nagelkerke R^2 = .01$.

Note: Bootstrapping fixed to 5000 re-samples, bias-corrected; * = CIs does not include zero. The children-cue condition was coded as being the ordinaly higher group, followed by the delayed-consequences condition, and the close-consequences condition. Relative total effects in Model 1 are presented between parenthesis, next to the relative direct ones.

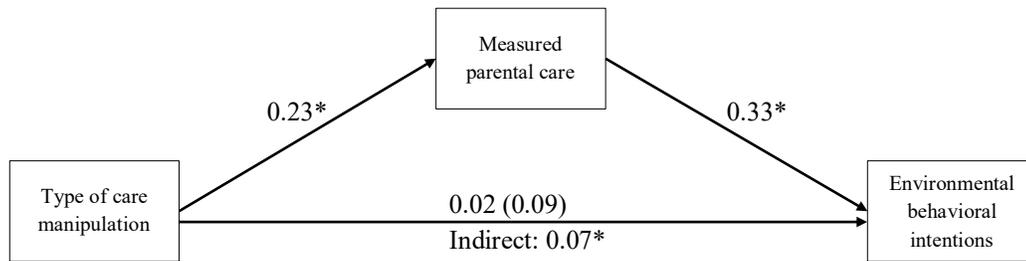
Figure S3. Effects of the children-cue manipulation on environmental behavioral intentions and environmental altruistic intentions in Study 3 without statistical controls

Table S1. Moderated moderation modes of offspring cue manipulation (X), type of care manipulation (W), and manipulation order (Y) on environmental behavioral intentions and environmental altruistic intentions in Study 4 without statistical controls

Predictors	Environmental Behavioral Intentions			Donations			Volunteering		
	Estimate	SE	CI	Estimate	SE	CI	Estimate	SE	CI
Children-cue	0.03	.07	-0.11, 0.17	-1.48	2.64	-6.66, 3.71	0.08	.34	-0.59, 0.75
Type of care	0.08	.07	-0.06, 0.22	-0.64	2.65	-5.86, 4.58	-0.24	.33	-0.89, 0.42
Manipulation order	-0.14	.07	-0.28, 0.000	0.70	2.63	-4.48, 5.88	-0.46	.34	-1.13, 0.20
Children-cue x Type of care	0.001	.14	-0.28, 0.28	4.87	5.31	-5.58, 15.31	1.17	.67	-0.14, 2.49
Children-cue x Manipulation order	0.07	.14	-0.21, 0.36	7.48	5.27	-2.89, 17.86	-0.09	.68	-1.42, 1.24
Type of care x Manipulation order	0.01	.14	-0.27, 0.30	0.13	5.30	-10.31, 10.57	-2.08*	.67	-3.39, -0.78
Children-cue x Type of care x Manipulation order	0.41	.29	-0.15, .99	11.73	10.61	-9.16, 32.62	1.22	1.34	-1.41, 3.85
	$R^2 = .02, F(7, 302) = 1.07, p = .38$			$R^2 = .01, F(7, 302) = 0.65, p = .72$			$-2LL = 287.16, \text{Nagelkerke } R^2 = .09, p = .01$		

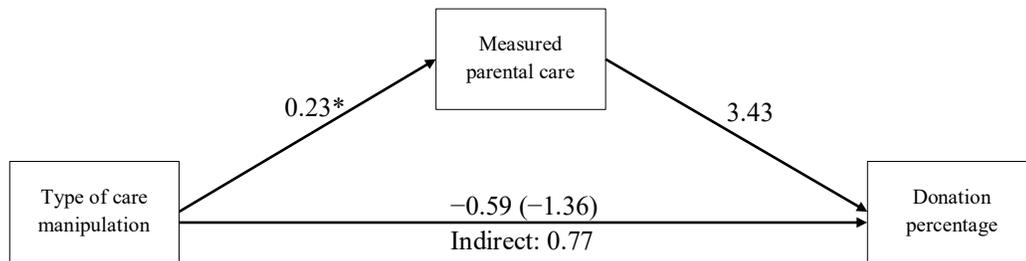
Note: Bootstrapping fixed to 5000 re-samples, bias-corrected; * = CIs does not include zero. Children-cue: 0 = control, 1 = present; Type of care: 0 = friendship care, 1 = parental care; Manipulation order: 0 = Children-cue manipulation presented first, 1 = Type of care manipulation presented first.

Model 1



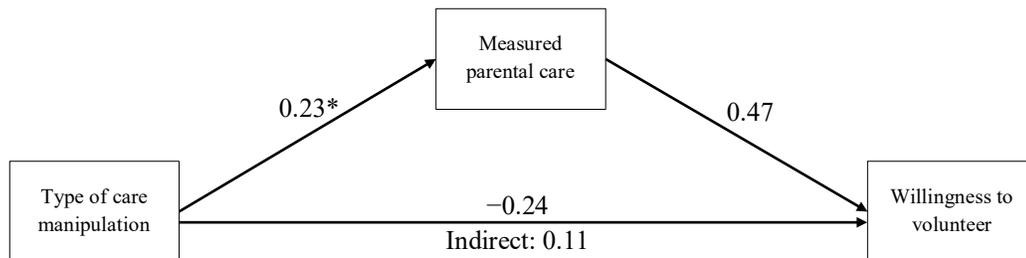
Full model: $F(2, 307) = 15.86, p < .001, R^2 = .09$.

Model 2



Full model: $F(2, 307) = 1.13, p = .33, R^2 = .01$.

Model 3



Logistic regression: $-2LL = 301.58, p = .22, Nagelkerke R^2 = .02$.

Note: Bootstrapping fixed to 5000 re-samples, bias-corrected; * = CIs does not include zero.
 Type of care manipulation: 0 = Friendship care, 1 = Parental care
 Total effects in Model 1 and Model 2 are presented between parenthesis, next to the direct ones.

Figure S4. Effects of the type of care manipulation on environmental behavioral intentions and environmental altruistic intentions in Study 4 without statistical controls

Table S2. Pre-specified discounting parameter (k) for each item of the Temporal discounting task (Study 3)

Item	K parameter
Do you want to receive \$64 tomorrow OR \$65 in 33 days?	0,0005
Do you want to receive \$69 tomorrow OR \$71 in 33 days?	0,0009
Do you want to receive \$86 tomorrow OR \$92 in 33 days?	0,0021
Do you want to receive \$45 tomorrow OR \$49 in 33 days?	0,0027
Do you want to receive \$42 tomorrow OR \$47 in 33 days?	0,0036
Do you want to receive \$49 tomorrow OR \$57 in 33 days?	0,0049
Do you want to receive \$72 tomorrow OR \$86 in 33 days?	0,0059
Do you want to receive \$41 tomorrow OR \$51 in 33 days?	0,0074
Do you want to receive \$58 tomorrow OR \$76 in 33 days?	0,0094
Do you want to receive \$37 tomorrow OR \$54 in 33 days?	0,0139
Do you want to receive \$53 tomorrow OR \$87 in 33 days?	0,0194
Do you want to receive \$56 tomorrow OR \$99 in 33 days?	0,0233
Do you want to receive \$35 tomorrow OR \$67 in 33 days?	0,0277
Do you want to receive \$39 tomorrow OR \$81 in 33 days?	0,0326
Do you want to receive \$28 tomorrow OR \$62 in 33 days?	0,0368
Do you want to receive \$31 tomorrow OR \$78 in 33 days?	0,0459
Do you want to receive \$35 tomorrow OR \$98 in 33 days?	0,0545
Do you want to receive \$16 tomorrow OR \$55 in 33 days?	0,0739
Do you want to receive \$24 tomorrow OR \$94 in 33 days?	0,0884
Do you want to receive \$9 tomorrow OR \$60 in 33 days?	0,1717