Altruism and Creativity: Beyond Transformational Creativity

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Abstract

In this paper, we demonstrate the link between altruism—a concern for the well-being of others—and creativity. Further, we show some counterintuitive properties, like the persistence of the link across settings of transformational and more mundane creative tasks. In our large-scale experiment, we demonstrate…

Keywords: creativity, idea generation, altruism, other-regarding, prosocial

Introduction

Ward (2017) reminds us that creativity research should keep returning to the big questions: What are creative people like? And how are creative ideas generated? In this paper, we consider both of those questions, focusing on the role of altruism—a concern for the well-being of others—in creativity. Are altruistic people more creative and can nudging people toward altruism help them be more creative? Our topic is linked to the current discussion in the creativity literature about "transformational creativity," production of novel and useful ideas to improve the world (Sternberg and Karami 2024, Verger 2024). Sternberg (2024) contrasts transformational creativity with "transactional creativity," where creativity is part of an exchange.

Prior research has shown that traditional types of extrinsic rewards and incentives are not highly effective at motivating people in tasks of creative production (Amabile 1998, Toubia 2006, Boudreau et al. 2011, Ederer and Manso 2013, Erat and Gneezy 2016). Instead, creativity requires intrinsic motivation, and prior work has shown that altruism enhances intrinsic motivation and prosocial engagement (Grant 2008, Grant and Berry 2011). This enhanced engagement could motivate individuals to think more deeply, broadly, or persistently when generating ideas.

We use a large-scale experiment to study the relationship between altruism and creativity. We report the following findings:

1. There is a clear link between altruism, measured as willingness to give to others, and creativity.

2. Intrinsic motivation mediates altruism and creativity, meaning that the people we measure as more altruistic also rated higher on intrinsic motivation, which in turn predicted higher creativity ratings on their ideas.
3. The creativity advantage that altruistic people have is not limited to transformational idea generation: the boost is present across idea generation calling for transformational creativity *and* more mundane, profit-oriented tasks of idea generation.
4. Our attempt to nudge people to be more altruistic backfired and did not raise creativity. However, our nudge toward altruism does marginally replicate findings from Shin and Lee (2020), where creativity is enhanced by non-specific charitable giving *only in people with high construal level*.

From our evidence, we cannot conclude that altruism *causes* greater creativity. But we can conclude that there is an association. Our highly powered study helps us identify the strong link between altruism and creativity as well as confidently present evidence about weak links.

In the next sections, we describe the experiment in detail and present the analyses that support our findings.

Procedure

Our experiment had two phases, idea generation and idea rating.

- In the first phase, each idea generator was randomly assigned to the altruism treatment or control condition and then asked to write ideas for five prompts.
- In the second phase, a new set of participants were shown ideas to rate for how well the idea meets the need implied by the prompt and how creative the idea is.

The following subsections provide the details of our experiment.

Idea generation prompts

We created 25 idea generation prompts for societal and commercial challenges to be used for an idea generation task. We used ChatGPT interactively to develop the list. Table 1 contains five out of the 25 final prompts, and the full list is in Appendix 1. The full list contains societal challenges—providing the opportunity for idea generators to display transformational creativity—as well as commercial (profit-oriented) challenges, calling for more mundane types of creativity.

We started by creating a custom GPT with the instructions "The GPT writes possible prompts for an idea generation task for a research project. The prompts should vary in their degree of altruism, including some that have no association with altruistic aims." We included some examples in the instructions. We then used the custom GPT interactively to expand and refine the list of ideas. We edited the final set to vary the prompt stem (e.g., "design a…" or "suggest ways…").

To keep the size of the idea generation task reasonable, we asked each subject to generate ideas for five of the prompts. We grouped the 25 prompts into five blocks of five, with each block having balance on how much the prompt itself was "altruistic," that is, was a topic whose ideas could benefit individual others or the community. We used the five-blocks-of-five-prompts structure for a few reasons. First, compared to a single block of five, we reduce the concerns that results are idiosyncratic to a specific small set of prompts. Second, the block structure allowed each idea generator to see a set of prompts balanced on altruism.

We first had ChatGPT give an "altruism rating," from 1-10, and we used those ratings to form blocks of five ideas with the block containing high, medium, and low ratings. Later we validated those ratings with a survey of human raters and found strong agreement. See Appendix 1 for details about that validation.

Table 1: Examples of Idea Generation Prompts

Prompt	Altruism Rating
Imagine a fun, community-based game that encourages people to clean up litter. How would it work?	10
Suggest an idea for a TV show that teaches important life skills to teenagers.	7
Come up with a creative way that rooftops in a dense urban area might be transformed.	6
Suggest a way to make virtual meetings more engaging and fun.	3
Design a new type of pet-friendly furniture.	2

Experimental manipulation

Our experimental manipulation was designed to put participants into a giving frame of mind. Both the treatment and control conditions used five allocation tasks, that is, an instruction to indicate how much of $100 would go to each of two options. In the treatment condition, the options were a specific charity and oneself; in the control condition, the

options were two branded gift cards. For incentive compatibility, we told subjects that a random participant would have one of their allocations become real.

In the treatment condition, the five charities were The American Red Cross, Feed the Children, Doctors Without Borders, The Salvation Army, and Oxfam International. Subjects saw the allocation tasks one at a time: for each charity, the instruction said that they were to indicate (via a slider) how much of $100 they would donate to that charity (if they were randomly selected), with the remainder to keep for themselves. After the five allocations, we then asked for a written explanation of one or more of the allocation decisions. This reflection was intended to strengthen any effect of the treatment.

In the control condition, the subjects also did five allocations, but unlike the treatment condition, in this condition they allocated between two gift cards (Amazon vs. AMC, Target vs. Uber, Best Buy vs. Domino's, Apple vs. Macy's, Dunkin' Donuts vs. Chevron). To keep the treatment and control conditions as similar as possible, we also asked subjects in the control condition to write a written reflection about their allocations.

Idea generation

After the allocation task, each of subjects in the idea generation task was randomly assigned to one of the five blocks (of five prompts) and asked to generate an idea for each prompt. Table 1 shows which prompts were in which block.

We narrowly constrained the character range for the ideas to 250-300 characters. This restriction, with both minimum and maximum, is based on research that shows the character length of ideas affects ratings (Kornish and Jones 2021). We gave an instruction "Do not use Artificial Intelligence tools. Write in your own words." And to more strictly reduce the use of AI in idea generation, we disabled pasting into the fields.

Manipulation checks and potential mediators

Each idea generator answered a battery of questions after generating ideas. This battery was based on our theorizing about the manipulation and the mechanisms of our effects. The questions were

- A four-question intrinsic motivation scale
- Generosity, measured by agreement with the statement, "Right now, I feel generous and concerned with others' well-being."
- Self-perception of charitable giving: "How much have you donated to charity during the past 12 months?" The scale was 0 to 10, where 0 is "none at all" and 10 is "a great deal"
- Hypothetical dictator game: "Suppose you are given $100 and have the opportunity to give any amount of it anonymously to another person. How much will you give?"

- The seven-question behavioral identification form to capture concrete vs. abstract framing.

Dependent variables: idea ratings

In the second phase of the experiment, we had a different group of participants rate the idea on how well it met the intended need (based on the prompt) and how creative it was. Kornish and Ulrich (2014) find that general population online participants do a good job of providing such ratings.

A well-accepted definition of creativity in academic studies of the subject is useful and novel (Runco and Jaegar 2012); in everyday language, the word creativity is tightly linked to novelty and less so to usefulness (Kudrowitz and Wallace 2013, Diedrich et al. 2015, Acar et al. 2017, Berg 2019). But our concern is with both usefulness and novelty, thus, we measure both how well the idea meets the need and how creative the idea is.

Each participant rated 30 ideas: six from each of five prompts. Every idea rated was shown along with its prompt, and the ideas were grouped by prompt to simplify the task for the participants.

We organized the prompts into different blocks from the idea generator phase. More specifically, we designed the rating task so raters would not see more than a single idea from an idea generator and that the altruism ratings of the prompts the raters saw were balanced, with some high, some in the middle, and some low.

Power analysis

We performed a power analysis to determine the size of the idea generating and idea rating samples. The power analysis was based on results from a small pilot study. Our analysis revealed that 1400 raters, each generating 5 ideas, and 6 ratings per idea, would provide a 94% chance that if the result holds, this sample size would reveal it.

Having raters rate 30 ideas is a task that most raters can complete in 10-15 minutes. We therefore planned for 1400 subjects in the idea generation task (about 700 in each condition) and 1400 raters. The 1400 idea generators will produce 7000 ideas. At 6 ratings per idea and 30 ratings per rater, that yields 42000/30 = 1400 raters. We did not restrict the two samples to be of equal size, but these sizes produced the highest power given our budget.

Sample sizes

We yielded 1409 idea generators (and 7045 ideas) and 1336 idea raters. The idea rating task had an attention check question formatted like a rating question but instead of an idea, the

text was an instruction to choose specific responses to the two rating questions displayed. The pass rate was 95%.

Analyses and Results

In this section, we present both null findings about our attempted treatment and positive findings that show the links between altruism and creativity.

Treatment vs. control conditions

In our Introduction, we state that we cannot conclude that altruism *causes* greater creativity. Table 2 shows several versions of the basic analysis to support that claim, using both the need and creativity ratings as dependent variables. The first and third columns of results use OLS and the subsequent columns show multi-level analyses with random effects. In the models with random effects, we use random effects for the idea generators (1409 of them), the prompts (25 of them), and the raters (1336 of them).

Directionally, Table 2 shows that the treatment condition is associated with lower need and creativity ratings of the ideas. The table shows that including the random effects makes very little difference in the magnitude of the coefficients and no difference in the sign. The multi-level models are more appropriate because the treatment was applied at the idea generator level, but the ratings were given at the idea level. The OLS models can overstate the significance of results by treating all observations as independent; the multi-level models link shared properties of generator, rater, and prompt, so all observations are not treated as independent. We show them for comparison to demonstrate that the random effects are not a main determinant of the coefficient estimates.

Table 2: Condition and Idea Ratings. Models predicting idea ratings from experimental conditions. The entries in each cell are coefficient, standard error in parentheses, and p value. The models with random effects include effects for generator, prompt, and rater.

	OLS		**OLS**	
DV >>>	**Need**	**Need**	**Creativity**	**Creativity**
Treatment	-0.046 (0.011) p<0.0001	-0.041 (0.021) p=0.047	-0.027 (0.013) p=0.036	-0.029 (0.022) p=0.187
Adj R^2	0.0004		0.00008	
Random Effects?	No	Yes	No	Yes
N	40,080			

We see a small reduction in the ratings for ideas generated under the treatment intended to raise altruism: the coefficients on the treatment indicator are negative. In the models with

random effects, the creativity ratings (last column of Table 2) are not statistically significantly different between the two conditions (p=0.187).

We saw no meaningful difference in the manipulation check measures we collected between treatment and control conditions. See Table A-2-1 in Appendix 2.

In Table A-2-2 in Appendix 2, we also show a null result for the interaction of the altruism rating and the treatment. That is, the treatment does not have a differential effect for the more vs. less altruistic prompts (e.g., "Imagine a fun, community-based game that encourages people to clean up litter. How would it work?" vs. "Design a new type of pet-friendly furniture.")

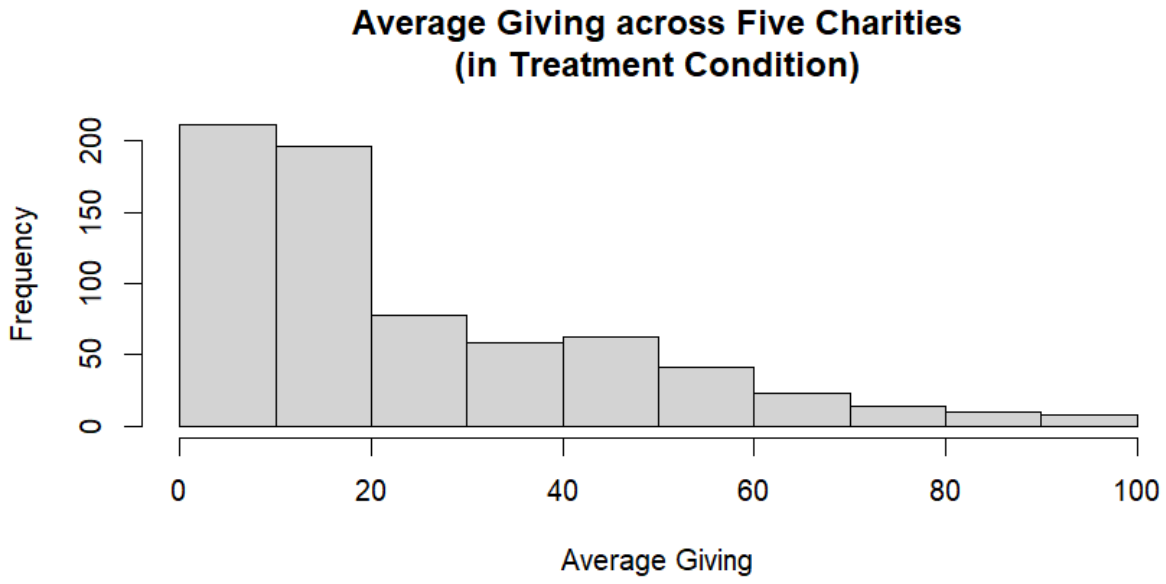
Although our manipulation "failed," in the next section, we show a robust association between altruism and creativity.

Level of generosity within the treatment condition

Although the treatment exercise of charitable allocations was not enough to meaningfully nudge attitudes and responses, there is evidence of validity of the responses to the treatment task *within the treated group*. The people in treatment condition (N=702) who gave more to the charities rated themselves as more generous: the correlation between the average amount given in the charity allocation task and the self-perception of generosity is r=0.30 (p<0.0001 for N=702) and self-perception of charitable giving is r=0.29 (p<0.0001 for N=702).

Figure 1 shows that there was substantial variation in the amount that people allocated to charities in the treatment condition.

Figure 1: Histogram of average charitable allocations from the N=702 subjects in the treatment condition. The average is $25.10 and the median $20.



This wide variation suggests that one reason that the manipulation may have failed is that simply giving people the opportunity to be altruistic does not make them so. And in fact, being faced with the reality that one had the opportunity to donate and chose not to could make one feel less altruistic.

A natural question is whether the ideas of more generous participants were rated differently from ideas of less generous participants. Table TREATMENT shows that they were: people who gave more in the charity allocations also generated ideas that were rated higher. Even though the treatment didn't meaningfully change people's level of altruism, the treatment did reveal a link. It could be that more altruistic people generate more creative ideas or that more creative people are also more altruistic. Both are plausible and of interest to scholars of creativity. We do not need to establish the direction of causation to show the association.

Table TREATMENT: People who donated more to charity generated more creative ideas. These models include random effects for generator, prompt, and rater. Cels show estimate, standard error, and p-value.

DV >>>	**Need**	**Need**	**Need**	**CRTV**	**CRTV**	**CRTV**
LN(Average Charity Giving + 1) Mean Centered (MC)	0.0264 (0.0136) p=0.052	0.0265 (0.0136) p=0.051	0.0266 (0.0136) p=0.050	0.0362 (0.0141) p=0.0102	0.0362 (0.0141) p=0.0102	0.0361 (0.0141) p=0.0104

Altruism Rating Mean Centered (MC)		0.0284 (0.0102) p=0.0054	0.0284 (0.0102) p=0.0054		-0.0012 (0.0119) p=0.9165	-0.0013 (0.0119) p=0.9142
LN Giving MC x Altruism MC			-0.0013 (0.0023) p=0.5814			0.0027 (0.0026) p=0.3016
N	19,973					

Dictator response as proxy for generosity in both conditions

The prior analysis was limited to ideas from people in the treatment condition. However, we have a good proxy for altruism in the dictator question, which people in both conditions answered. The wording of the dictator question: "Suppose you are given $100 and have the opportunity to give any amount of it anonymously to another person. How much will you give?" In the treatment condition, the dictator response was correlated 0.58 with the average charity allocation ($p<0.0001$ for N=702). Figure DICTATOR HIST shows the responses to the dictator question in the full set of subjects.

Turning our attention to the whole data set again (both Treatment and Control conditions) and using the Dictator response as a proxy for altruism, we again see that altruism is associated with higher rated ideas. See Table DICTATOR.

Figure DICTATOR HIST: The mean dictator offer is $32.52 and the median is 6$30. The modal response was $50, with 22.6% of responses. The second most common response was 0, with 17.7% of responses.

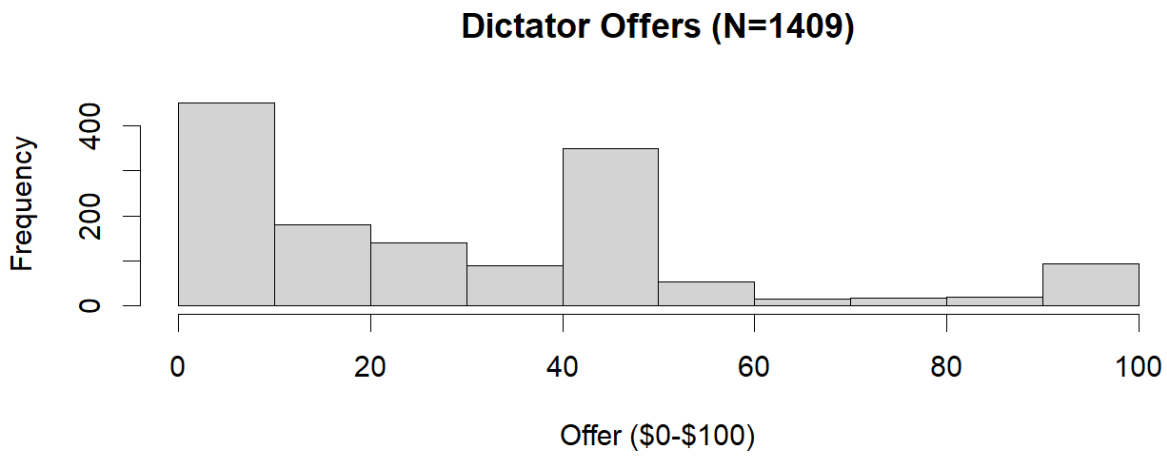


Table DICTATOR: This table uses all ideas generated, across treatment and control conditions, looking whether the dictator offer of the idea generator and the level of altruism of the prompt predict ratings. These models include random effects for generator, prompt, and rater.

DV >>>	**Need**	**Need**	**Need**	**Creativity**	**Creativity**	**Creativity**
LN(Dictator Offer + 1) Mean Centered (MC)	0.0166 (0.0069) p=0.0158	0.0166 (0.0069) p=0.0156	0.0166 (0.0069) p=0.0156	0.0155 (0.0074) p=0.036	0.0155 (0.0074) p=0.036	0.0155 (0.0074) p=0.036
Altruism Rating Mean Centered (MC)		0.0262 (0.0095) p=0.006	0.0262 (0.0095) p=0.006		0.0003 (0.0104) p=0.978	0.0003 (0.0103) p=0.978
LN Dictator MC x Altruism MC			-0.0002 (0.0012) p=0.898			-0.0004 (0.0014) p=0.754
N	40,080					

From Table DICTATOR, we see that the more people give as dictators, the better their ideas are rated: the positive significant coefficients in the first row show that. Further, the prompts that are more concerned with the well-being of others (have higher altruism ratings) do score significantly higher on the "does this meet the need intended by the prompt," but *do not* score significantly higher on creativity.

Finally, the interaction of the dictator response and the altruism rating is not significant: there is no evidence that people who are more generous are differentially better at generating useful or creative ideas for prompts focused on other people. This study's large sample size allows us to detect very small effects with great certainty. We have a minimum detectable interaction effect (of dictator and altruism level) of 0.0045 for creativity and slightly lower for need, with 90% power. The 0.0045 is the estimated standard error of the interaction term, 0.0014, times 3.24. And 3.24 is the sum of the z-scores for 95% and 90%, so that 90% of the time, we reject the null hypothesis with alpha = 0.05. In other words, this study is large enough to detect even very small interactions.

A similar analysis for Table TREATMENT, where the standard error on the interaction term of giving and altruism for creativity is 0.0026 (and slightly lower for need) means that the minimum detectable interaction effect is 0.0084 with 90% power.

Together, Table TREATMENT and Table DICTATOR show that people who are more altruistic write ideas that are rated higher, both on how well their idea meets the need in the prompt

and how creative the ideas are. And that the ability for more altruistic people to write higher rated ideas is not limited to the "transformational creativity" tasks, those prompts rated high in altruism.

Intrinsic motivation mediates the relationship between altruism and creativity

Grant (2008) and Grant and Berry (2011) show the connection between altruism and intrinsic motivation. In this subsection, we show that intrinsic motivation mediates the relations between altruism and creativity.

The "a path": altruism to intrinsic motivation

The first step of the mediation is from altruism (X) to intrinsic motivation (M). We once again measure altruism with the dictator response (specifically, the log of the dictator response plus 1). We measure intrinsic motivation with the average of the four Intrinsic Motivation Inventory items we measured. We examine this relationship at the idea generator level, N=1409. The results in Table A PATH show that relationship is significant.

Table A PATH

	Estimate	Std. Error	t value	Pr(>|t|)
(Intercept)	4.300194	0.080951	53.12118	0
log_dictator	0.341642	0.025202	13.55633	1.94E-39

Adj R^2: 0.1149

The "b path" from intrinsic motivation to creativity

	Estimate	Std. Error	Df	t value	Pr(>|t|)
(Intercept)	3.120212	0.050339	259.7602	61.98424	1.15E-157
IMIavg	0.05482	0.007746	1416.07	7.077536	2.30E-12
log_dictator	-0.00312	0.007747	1411.345	-0.40261	0.687292617

To estimate the "b path" from intrinsic motivation (M) to creativity (Y), we use a model with random effects for generator, prompt, and rater (similar to the analyses in Table DICTATOR). This regression is at the rating level N=40,080 and uses random effects to properly account for the shared variance among subsets of the observations. Table B PATH shows that relationship between IMI and creativity (the DV) is significant. Notably, the relationship between "log_dictator" and creativity is no longer significant, in contrast to the models shown in Table DICTATOR. That switch suggests that intrinsic motivation (M) "totally mediates" the relationship between altruism (X) and creativity (Y). Similar results hold for the need ratings of the ideas.

*The a*b path estimate and estimated confidence interval*

The indirect path, the product of the a path (0.341642 coefficient) and the b path (0.05482) is 0.0187. The bootstrapped confidence interval is too computationally slow to run in a reasonable amount of time, with over forty-thousand observations and a specific nesting structure for the random effects. However, using a Monte Carlo simulation using the means and standard errors, we estimate a 95% confidence interval for the indirect path of (0.013 to 0.025). The interval excludes zero, providing strong confidence of a positive effect.

As previous work would suggest, this mediation analysis supports the explanation that altruism fuels intrinsic motivation, and that the pathway to improved creativity.

Construal level, a complement to giving that boosts creativity

Finally, we return to the experimental manipulation to revisit an important antecedent study, that of Shin and Lee (2020) who study whether charitable giving has a positive effect on creativity. Like us, they find a nuanced result: they do not find an unconditional effect of giving on creativity. But they do find that if giving is for non-specific uses *and* the giver has a high construal level, the creativity of their ideas are rated as higher. In their study, the creative generation task is to develop ideas for how to improve undergraduate and graduate education.

In our experiment, our charitable giving exercise in the treatment condition was for non-specific uses, consistent with the Shin and Lee finding. We measure construal level for all idea generators with the seven-question Behavioral Identification Form (BIF). Shin and Lee also use the BIF, but in a modified format (allowing a continuous scale rather than binary choices).

Our results are consistent with theirs, and their framework provides an important lens for our experiment. In Table 2 above, we saw a small and not statistically significant effect of the treatment on creativity (b=-0.029, p=0.187). In Table SHIN2020, we show the results from our experiment that replicate their effect. Charitable giving alone—via the main effect of the treatment—does not raise creativity, but the highest-construal participants who received the treatment *do* generate ideas that are rated as more creative on average. The result is marginally statistically significant (p=0.0966).

Table SHIN2020: Analyzing the role of construal level in predicting creativity, following Shin and Lee (2020). These models include random effects for generator, prompt, and rater.

DV >>>	**Need**	**Creativity**
Treatment	-0.0392 (0.0206) p=0.0564	-0.027 (0.0222) p=0.2232
Behavioral Identification Form (BIF) Mean-Centered (MC)	0.0207 (0.0475) p=0.6637	0.0241 (0.0512) p=0.6374
Treatment * BIF MC	0.0769 (0.0677) p=0.2563	0.1213 (0.073) t=1.6615 p=0.0966
N	40,080	

We mean-center the BIF value (which ranges from 1 to 2) so that the Treatment coefficient has the interpretation of "effect of Treatment at average BIF level." The mean of BIF is 1.52, nearly exactly in the center of the range from 1 to 2. The effect of the treatment on ratings is still negative, for need significantly and for creativity not significantly.

Table SHIN2020 shows that giving (Treatment) alone or construal level alone (BIF) are not associated with statistically significantly higher creativity ratings, but the interaction of them is marginally significant (b=0.1213, t=1.662, p=0.0966). That interaction means that the slopes on BIF differ (marginally significantly) between Treatment and Control conditions. Further, we tested whether slope on BIF within the Treatment condition (0.0241+0.1213 = 0.1454) is significant, and it is (Chi-Sq is 7.803 and p=0.005136). In other words, when people give to charity, higher construal is associated with greater creativity, consistent with the complementarity that Shin and Lee (2020) find.

Conclusion

In a large-scale experiment, we demonstrate a link between altruism and creativity: people who exhibit more altruism also generate more creative ideas. This finding extends previous work that shows the people with prosocial motivations are more intrinsically motivated (Grant 2008 and Grant and Berry 2011), and that intrinsic motivations are helpful in creative production. We demonstrate that intrinsic motivation mediates the relationship between altruism and creativity.

Our experimental manipulation did not effectively raise any of the measures of altruism we measured—or overall raise the creativity of ideas generated in the treatment condition—but we were able to detect the relationship between altruism and creativity through measurements we took in both arms of the experiment. Opposite to our prediction, we did see a small and statistically significant *reduction* in the measure of how well the idea meets the need implied by the prompt for people in the treatment condition requiring charitable allocations.

Surprisingly to us, we did not see an interaction between donation behavior and how much the idea-generation task called for the consideration of the well-being of others (what we call the "altruism rating" of the prompt) in predicting creativity of ideas. We had predicted that the boost in creativity that more altruistic people had with inherently altruistic prompts would be greater than the boost in creativity that they had for commercial prompts. Although our prediction didn't pan out, the null result is of interest. More altruistic people generate more creative ideas for prompts of all sorts: those that require "transformational" creativity to make the world a better place, and those that require the more mundane type, solving some commercial or profit-oriented problem. Our large-scale study is well-powered to detect even a small effect, and not even a small effect was found.

Finally, we replicated earlier results that show that charitable giving for non-specific causes is associated with greater creativity from the people who have a high level of construal. Within our treatment condition, higher construal is associated with more creative ideas.

Much research has focused on the personality characteristics that predict creative production, using the Big-5 Model (OCEAN) and the newer HEXACO model of personality traits. Neither one of these personality models has an explicit dimension of altruism, and yet there are reasons to believe that people who care more about the well-being of others are good at creative tasks. In this paper, we demonstrate that link and show some counterintuitive properties, like the persistence of the link in settings of transformational and more mundane creative tasks.

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Appendix 1 – Final List of Idea Generation Prompts and Validation of ChatGPT's Altruism Ratings

Table A-1-1: The 25 Idea Generation Prompts

Prompt	Altruism Rating	Block
If you could organize a national campaign to promote kindness, what would the slogan be?	9	1
Propose a small business idea that helps reduce loneliness in the elderly.	8	1
Invent a wearable that helps people unplug and reduce screen time. How would it function?	5	1
Design a pop-up shop that offers an unexpected experience. What would it sell or provide?	4	1
Imagine a futuristic invention that would make daily tasks easier. What would it be?	2	1
Invent a tool that helps renters make their homes more energy-efficient. What features would it have?	9	2
Propose a mentorship program that pairs teenagers with professionals in different fields. How would it operate?	7	2
Suggest a creative way to use empty public spaces in a city.	6	2
Design a fun new game that could be played using only paper and pencils.	3	2
Create an idea for a reality TV show that would attract a large audience. What's the premise?	1	2
If you could introduce one policy to make healthcare more accessible, what would it be?	10	3
Propose an idea for a public mural that changes over time. How would it evolve?	6	3
Design a new type of vending machine that offers something unexpected. What would it dispense?	5	3
Imagine a new type of amusement park ride. What would it be like?	3	3
Invent a gadget that adds a fun twist to everyday cooking. What does it do?	2	3
Suggest an initiative that would reduce food waste in your community.	9	4
Propose an interactive public art installation that encourages conversations between strangers. What would it look like?	7	4
Imagine a mobile app that helps neighbors share skills or services (like pet sitting or tutoring). What features would it include?	6	4
Imagine a new sport for the Summer Olympics. What would it involve?	3	4
Suggest a creative design for a limited-edition pair of sneakers. What makes it special?	2	4

Imagine a fun, community-based game that encourages people to clean up litter. How would it work?	10	5
Suggest an idea for a TV show that teaches important life skills to teenagers.	7	5
Come up with a creative way that rooftops in a dense urban area might be transformed.	6	5
Suggest a way to make virtual meetings more engaging and fun.	3	5
Design a new type of pet-friendly furniture.	2	5

As described in the main text, we used ChatGPT to help generate idea prompts. We asked for a balance (by giving ChatGPT this instruction: "The prompts should vary in their degree of altruism, including some that have no association with altruistic aims").
ChatGPT automatically provided altruism ratings for the prompts from 1-10. We note that individual ideas generated for a prompt could further vary in their degree of altruism, but our focus was on the prompts.
To validate those ratings, we ran two surveys on Prolific where we collected ratings of the prompts.
The first survey asked about "concern for other" and "benefiting others." Here is the exact wording:
Please rate all of these prompts (which we are using in other studies) on how strongly they reflect concern for others.
The response scale was

- Not related to benefiting others [coded as 1]
- Minimally related to benefiting others [2]
- Moderately focused on benefiting others [3]
- Strongly focused on benefiting others [4]

We received 49 responses that passed an attention check. The correlation of the average of the 49 responses with the ChatGPT altruism rating was 0.77.

The second survey asked about "public benefit" vs. "private profit." Here is the exact wording:

Please rate all of these brainstorming prompts (which we are using in other studies) on the extent to which they encourage ideas focused on public benefits as opposed to generating private profits.

The response scale was

- Mostly for private profit [coded as 1]
- Somewhat more for private profit than public benefit [2]
- Equally for private profit and public benefit [3]
- Somewhat more for public benefit than private profit [4]
- Mostly for public benefit [5]

We received 45 responses that passed an attention check. The correlation of the average of the 45 responses with the ChatGPT altruism rating was 0.81.

Appendix 2 – Comparison of Measures in Treatment and Control Conditions of Experiment

We present this "failure" (null results) of our experimental manipulation, for full disclosure. While the null results of the treatment mean we cannot tell a causal story, the patterns in other parts of our data support our conclusions. We acknowledge that the individual differences in altruism and generosity swamped the effect of the nudge in our experimental manipulation.

Table A-2-1: Comparisons between treatment and control conditions

	Control	**SD**	**Treatment**	**SD**	**t-value**	**p**
N	**707**		**702**			
Intrinsic Motivation (average of 4 items)	5.33	1.47	5.21	1.54	1.4203	0.156
Generosity	4.95	0.98	4.85	1.05	1.9241	0.055
Self-perception of charitable giving	3.37	2.81	3.39	2.79	-0.1701	0.865
Dictator Response	32.95	27.93	32.09	27.49	0.5869	0.557
Behavioral Identification (1=concrete construal; 2= abstract construal)	1.54	0.31	1.51	0.30	1.7364	0.083
Time Spent on Survey (in seconds)	1471	975	1469	1196	0.0359	0.9714

Table A-2-2: Interaction between prompt altruism

We do not see an interaction of the treatment with the altruism of the prompt. That is, the idea generating subjects primed with the giving task did not produce higher rated ideas for more altruistic prompts (compared to less altruistic ones). Cells show estimates (with standard errors) and p values. These models include random effects for idea generator, prompt, and rater.

DV >>>	**Need**	**Creativity**
Treatment	-0.041 (0.021) p=0.047	-0.029 (0.022) p=0.187
Altruism Rating of Prompt (Mean-Centered, MC)	0.024 (0.010) p=0.0135	0.001 (0.011) p=0.907
Treatment * Altruism (MC)	0.005 (0.004) p=0.204	-0.002 (0.004) p=0.6284
N	40,080	