

# Supplementary Materials

## APPENDIX A

Overview of the Motivational Trait Items used in Experiment 1

### **Fairness**

Item 1: I want to make a decision that leads to an equal outcome for everyone.

Item 2: I want to make a choice that I consider sincere for everybody.

Item 3: I want to choose the option that I find most justified.

Item 4: I want to act honestly.

Item 5: I want to select the option that is most fair for everybody.

### **Altruism**

Item 1: I take especially the outcomes of the others into account.

Item 2: Above all, I want the others to benefit.

Item 3: I want to act in a generous way that mainly serves the interests of the others.

### **Social Welfare Concerns**

Item 1: I find it important to undertake actions that make our world a better place.

Item 2: I find it important to help people in need without expecting anything in return.

Item 3: I find it important undertake actions that improve our society.

Item 4: I find it important to help others to improve their lives.

### **Concern for Others**

Item 1: If someone else were having a personal problem, I would help him or her even if it meant sacrificing my time or money.

Item 2: I value others who are caring, empathic individuals.

Item 3: It is important to me that I uphold my commitments to others in my life.

Item 4: Caring deeply about others is important to me.

Item 5: Knowing that others acknowledge and value the role that I play in their life makes me feel like a worthwhile person.

### **Greed**

Item 1: No matter how much I have of something, I always want more.

Item 2: One can never have enough.

Item 3: Even when I am fulfilled, I often seek more.

Item 4: The pursuit of more and better is an important goal in life for me.

Item 5: A simple basic life is sufficient for me. (R)

Item 6: I am easily satisfied with what I've got. (R)

### **Competitiveness**

Item 1: Even in a group working towards a common goal, I still want to outperform others.

Item 2: My self-worth could be validated only if I outperform others.

Item 3: Sometimes I consider appraisals as an opportunity to prove that I am smarter than others.

- Item 4: I like competition because it gives me a chance to discover my own potential.
- Item 5: I like challenges that are brought by competing with others.
- Item 6: I like competition because it allows me to play my best.
- Item 7: Being outperformed by others annoys me.
- Item 8: I would be very sad if I lose in sport contests.
- Item 9: I will be jealous when others get rewarded for their achievements.
- Item 10: I cannot stand being beaten in an argument by others.

### **Entitlement**

- Item 1: I honestly feel I'm just more deserving than others.
- Item 2: Great things should come to me.
- Item 3: If I were on the Titanic, I would deserve to be on the first lifeboat.
- Item 4: I demand the best because I'm worth it.
- Item 5: I do not necessarily deserve special treatment. (R)
- Item 6: I deserve more things in my life.
- Item 7: People like me deserve an extra break now and then.
- Item 8: Things should go my way.
- Item 9: I feel entitled to more of everything.

### **Fear**

- Item 1: I feel unsure about taking a risk.
- Item 2: I fear the unpleasant consequences in future cooperation.
- Item 3: I am afraid to be rejected by others.
- Item 4: I am scared.
- Item 5: I don't want to be the sucker.
- Item 6: I am terrified others will laugh with me.
- Item 7: I am afraid that others will exploit me.
- Item 8: I am scared to have a fight with others.
- Item 9: I am frightened to blow up my good relation with others.

### **Risk Aversion**

- Item 1: I do not feel comfortable about taking chances.
- Item 2: I prefer situations that have foreseeable outcomes.
- Item 3: Before I make a decision, I like to be absolutely sure how things will turn out.
- Item 4: I avoid situations that have uncertain outcomes.
- Item 5: I feel comfortable improvising in new situations. (R)
- Item 6: I feel nervous when I have to make decisions in uncertain situations.

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(R) = Reverse-scored item. All items were rated on seven-point Likert scales ranging from (1) *strongly disagree* to (7) *strongly agree*. The fairness, altruism, and fear items were preceded by the following phrase: "When I have to make a decision that also influences others ..."

## APPENDIX B

Table b1: Pattern matrix of the motivational trait items (Experiment 1).

	Factor 1: Proself	Factor 2: Fearful	Factor 3: Prosocial
Competitiveness (item 5)	.80	-.22	.30
Competitiveness (item 4)	.70	-.25	.34
Competitiveness (item 6)	.69	-.20	.33
Competitiveness (item 1)	.63	.17	.10
Entitlement (item 2)	.61	-.13	-.17
Competitiveness (item 3)	.56	.25	.09
Competitiveness (item 7)	.55	.27	-.08
Entitlement (item 4)	.53	-.17	-.23
Competitiveness (item 2)	.51	.32	-.04
Greed (item 2)	.51	.10	-.22
Entitlement (item 9)	.51	.01	-.32
Greed (item 3)	.50	.19	-.19
Greed (item 4)	.49	.18	-.19
Entitlement (item 8)	.48	-.07	-.27
Greed (item 1)	.48	.12	-.17
Entitlement (item 1)	.48	-.05	-.31
Entitlement (item 7)	.46	-.10	-.23
Competitiveness (item 10)	.42	-.02	.01
Entitlement (item 3)	.38	.00	-.33
Entitlement (item 6)	.37	.01	-.16
Competitiveness (item 9)	.34	.30	-.13
Competitiveness (item 8)	.24	.07	.02
Entitlement (item 5)	.13	.06	-.02
Fear (item 4)	-.05	.84	-.04
Fear (item 3)	-.02	.82	.12
Fear (item 8)	-.03	.78	.11
Fear (item 6)	.03	.77	.02
Fear (item 2)	-.01	.76	.00
Fear (item 1)	-.11	.74	-.05
Fear (item 5)	.03	.71	.03
Fear (item 9)	.08	.71	.19
Fear (item 7)	.06	.69	.12
Risk Aversion (item 1)	-.14	.49	-.09
Risk Aversion (item 2)	-.04	.43	-.06
Risk Aversion (item 6)	-.04	.43	.00
Risk Aversion (item 3)	.17	.42	.11
Risk Aversion (item 4)	.17	.41	.01

*Table b1 continued*

	Factor 1: Proself	Factor 2: Fearful	Factor 3: Prosocial
Social Welfare Concerns (item 3)	.00	.00	.74
Social Welfare Concerns (item 4)	.01	-.03	.73
Social Welfare Concerns (item 2)	-.01	-.01	.71
Social Welfare Concerns (item 1)	-.01	.06	.65
Fairness (item 1)	-.16	-.03	.62
Fairness (item 4)	-.18	-.04	.61
Concern for Others (item 3)	-.03	.10	.61
Concern for Others (item 2)	-.21	-.07	.58
Concern for Others (item 4)	-.06	.06	.58
Fairness (item 2)	.00	-.12	.57
Fairness (item 3)	-.02	-.01	.57
Concern for Others (item 1)	-.15	-.05	.52
Fairness (item 5)	-.01	-.01	.49
Altruism (item 3)	.14	.21	.44
Altruism (item 1)	.19	.21	.42
Concern for Others (item 5)	-.06	-.02	.41
Altruism (item 2)	.15	.23	.37

*Note.*  $N = 178$ . Extraction method: Principal Axis Factoring (three-fixed factors). Rotation method: Oblimin with Kaiser Normalization. Factor loadings are sorted by size. Three items (i.e. Greed item 5, Greed item 6, and Risk Aversion item 5) had their primary loadings on the wrong factor and were therefore discarded from this analysis.

# APPENDIX C

## Overview of the Motivational State Items used in Experiment 2

### **Fairness**

Item 1: I wanted the other(s) and me to be equally well off.

Item 2: I wanted to share equally between the other(s) and myself.

Item 3: I wanted to minimize the differences in outcomes between the other(s) and myself.

### **Altruism**

Item 1: I was mindful of the outcomes of the other(s), without considering my own outcomes.

Item 2: I wanted the other(s) to get the highest possible outcomes, regardless of my own outcomes.

Item 3: I wanted to act in a generous way that only benefited the other(s).

### **Social Welfare Concerns**

Item 1: I wanted the other(s) and me to be well of together.

Item 2: I wanted to act in the mutual interest of the other(s) and me.

Item 3: I wanted to get the highest possible outcomes for the both of us.

### **Concern for Others**

Item 1: besides my own outcomes, I also took into account the outcomes of the other(s).

Item 2: I wanted the other(s) to also receive a lot of resources.

Item 3: I wanted to act in a way that not only served my own interest, but also the interest of the other(s).

### **Greed**

Item 1: I wanted to earn as much as possible for myself.

Item 2: I wanted to achieve the greatest possible profit for myself.

Item 3: I wanted to earn much for myself, regardless of the consequences for the other(s).

### **Competitiveness**

Item 1: I wanted to earn more than the other(s).

Item 2: I was aspired to get more than the other(s).

Item 3: I wanted to ensure that I get more than the other(s).

### **Entitlement**

Item 1: I simply feel that I deserve more than the other(s).

Item 2: I am worth the best possible outcomes.

Item 3: I feel entitled to more than the other(s).

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All items were rated on seven-point Likert scales ranging from (1) *strongly disagree* to (7) *strongly agree*. The items of every scale were preceded by the followings phrase: "*I decided the way I did because ...*"

## APPENDIX D

Table d1: Descriptive statistics and correlations between the motives; separately for each of the four games (Experiment 2).

	<i>M</i>	<i>SD</i>	$\alpha$	Game beh	1.	2.	3.	4.	5.	6.	7.	8.
<b>Commons Dilemma Game</b>												
1. Fairness	5.41	1.49	.93	.30								
2. Altruism	4.29	1.54	.86	.21	.52							
3. Social Welfare Concerns	5.68	1.38	.94	.50	.75	.50						
4. Concern for Others	5.41	1.42	.92	.40	.74	.51	.82					
5. Greed	3.70	1.71	.89	-.22	-.44	-.34	-.49	-.55				
6. Competitiveness	2.71	1.60	.96	-.39	-.42	-.28	-.59	-.54	.66			
7. Entitlement	2.35	1.25	.80	-.26	-.37	-.23	-.43	-.41	.48	.68		
8. Prosocial Factor	-	-	-	.41	.90	.69	.90	.90	-.53	-.50	-.38	
9. Proself Factor	-	-	-	-.38	-.48	-.28	-.63	-.61	.75	.97	.79	-.56
<b>Public Goods Dilemma Game</b>												
1. Fairness	5.37	1.40	.94	.36								
2. Altruism	4.20	1.56	.87	.34	.50							
3. Social Welfare Concerns	5.59	1.28	.93	.47	.82	.43						
4. Concern for Others	5.44	1.27	.92	.43	.76	.54	.84					
5. Greed	4.02	1.65	.88	-.12 (ns)	-.44	-.28	-.39	-.44				
6. Competitiveness	2.83	1.60	.96	-.32	-.52	-.27	-.56	-.58	.65			
7. Entitlement	2.46	1.35	.84	-.22	-.32	-.08 (ns)	-.40	-.40	.49	.70		
8. Prosocial Factor	-	-	-	.45	.91	.68	.90	.91	-.43	-.52	-.29	
9. Proself Factor	-	-	-	-.27	-.50	-.17	-.55	-.57	.74	.94	.85	-.47

Table d1 continued

	<i>M</i>	<i>SD</i>	$\alpha$	Game beh	1.	2.	3.	4.	5.	6.	7.	8.
<b>Bandit Game</b>												
1. Fairness	5.04	2.11	.97	.16								
2. Altruism	3.76	1.64	.85	.56	.14							
3. Social Welfare Concerns	5.05	1.87	.95	.36	.83	.31						
4. Concern for Others	5.06	1.68	.93	.59	.62	.55	.80					
5. Greed	3.24	1.92	.94	-.67	-.45	-.37	-.51	-.62				
6. Competitiveness	2.70	1.96	.98	-.68	-.54	-.39	-.62	-.68	.85			
7. Entitlement	2.44	1.40	.85	-.49	-.35	-.28	-.43	-.54	.63	.69		
8. Prosocial Factor	-	-	-	.29	.95	.25	.96	.76	-.51	-.62	-.41	
9. Proself Factor	-	-	-	-.71	-.48	-.40	-.58	-.70	.93	.96	.80	-.57
<b>Dictator Game</b>												
1. Fairness	5.17	2.01	.97	.62								
2. Altruism	3.91	1.63	.87	.50	.43							
3. Social Welfare Concerns	5.25	1.84	.97	.62	.92	.47						
4. Concern for Others	5.19	1.69	.94	.69	.78	.56	.87					
5. Greed	3.31	1.89	.95	-.63	-.67	-.37	-.68	-.72				
6. Competitiveness	3.00	1.98	.98	-.66	-.76	-.44	-.74	-.73	.83			
7. Entitlement	2.52	1.41	.86	-.47	-.54	-.29	-.55	-.55	.64	.74		
8. Prosocial Factor	-	-	-	.67	.89	.68	.95	.92	-.65	-.71	-.46	
9. Proself Factor	-	-	-	-.63	-.75	-.33	-.74	-.72	.90	.96	.84	-.66

Note.  $N = 229$ . For the Bandit Game, we used the two motivational factors that were extracted in Model B (see Appendix E). For the Commons Dilemma Game and the Bandit Game, the signs of the correlations (with game behavior) were reversed. All reported correlations are statistically significant (with exception of the correlation between greed and behavior in the Public Goods Dilemma Game, and the correlation between altruism and entitlement as measured after the Public Goods Dilemma Game).

## APPENDIX E

Table e1: Pattern matrix of the motivational state items; separately for each of the four games (Experiment 2).

	Commons Dilemma		Public Goods Dilemma		Bandit Game		Bandit Game: Model B		Dictator Game	
	Prosocial	Proself	Prosocial	Proself	Prosocial	Proself	Prosocial	Proself	Prosocial	Proself
Fairness (item 1)	.81	-.07	.84	-.12	.92	-.02	.93	.01	.65	-.33
Fairness (item 2)	.86	.00	.84	-.13	.95	-.06	.95	.04	.65	-.33
Fairness (item 3)	.80	.05	.71	-.07	.94	-.13	.94	.12	.67	-.26
Altruism (item 1)	.63	.06	.70	.12	.04	.54	-	-	.72	.11
Altruism (item 2)	.64	.10	.67	.21	-.09	.45	-	-	.57	.10
Altruism (item 3)	.68	.14	.60	.11	-.04	.46	-	-	.67	.14
Social Welfare (item 1)	.79	-.18	.78	-.18	.87	.11	.88	-.08	.80	-.19
Social Welfare (item 2)	.76	-.19	.77	-.18	.76	.22	.78	-.17	.72	-.30
Social Welfare (item 3)	.64	-.24	.69	-.16	.89	.01	.90	.02	.73	-.24
Concern Others (item 1)	.77	-.11	.75	-.17	.41	.53	-	-	.74	-.20
Concern Others (item 2)	.72	-.20	.78	-.15	.41	.52	-	-	.64	-.30
Concern Others (item 3)	.70	-.22	.73	-.21	.60	.34	.62	-.26	.72	-.22
Greed (item 1)	-.12	.56	-.11	.53	.03	-.83	.05	.86	-.13	.75
Greed (item 2)	-.15	.51	-.08	.55	.02	-.85	.04	.89	-.09	.79
Greed (item 3)	-.24	.66	-.15	.71	-.11	-.82	-.10	.84	-.23	.70
Competitiveness (item 1)	.04	.91	-.16	.78	-.13	-.84	-.12	.86	-.16	.81
Competitiveness (item 2)	.05	.94	-.09	.87	-.14	-.82	-.12	.86	-.22	.79
Competitiveness (item 3)	-.06	.89	-.13	.84	-.17	-.82	-.16	.84	-.21	.79
Entitlement (item 1)	.04	.80	.11	.88	-.02	-.74	.01	.78	.06	.85
Entitlement (item 2)	.06	.52	.09	.61	.08	-.60	.09	.62	.14	.69
Entitlement (item 3)	-.01	.79	.08	.87	-.05	-.72	-.01	.76	-.01	.79

Note.  $N = 229$ . Extraction method: Principal Axis Factoring (two-fixed factors). Rotation method: Oblimin with Kaiser Normalization. Factor loadings are not sorted by size. For the Bandit Game, the three altruism items and the first two concern for others items had their primary loadings on the wrong factor and were therefore discarded from the analysis in Model B.