Nice traits or nasty states : dispositional and situational correlates of prosocial and antisocial behavior in childhood

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Chapter 7

Supplementary material

Supplementary material
Chapter 2

Differences between the classes of physical and non-physical aggression trajectories on background variables

Physical aggression classes did not differ on maternal age, ethnicity, maternal educational level, and birth weight in all imputed datasets. Classes differed on gender, $\chi^2(2, n = 2753) = 109.92$, $p < .001$ (the range of the five imputed datasets is reported in **TABLE S2.4**), $\varphi = .20$ with more girls in the low decreasing class ($res_{adj} = 10.4$) and more boys in the intermediate ($res_{adj} = 9.2$) and high increasing class ($res_{adj} = 4.4$). Marital status of the mother differed between classes in two out of five imputed datasets $\chi^2(2, n = 2753) = 4.43\text{-}8.15$, p .017-.109, $\varphi = .04\text{-}.05$. In the datasets in which the classes differed on marital status, the high increasing class included more children of mothers without a partner ($res_{adj} = 2.2\text{-}2.5$), whereas the low decreasing class contained more mothers who were married/living together as compared to the other classes ($res_{adj} = 2.2\text{-}2.5$). Classes differed on hostility of the mother, $F(2, 2750) = 27.49$, $p < .001$, partial $\eta^2 = .02$ (the range of the five imputed datasets is reported in **TABLE S2.4**). Children in the low decreasing class ($M = 0.26$, $SE = .01$, 95% CI 0.24-0.27) had less hostile mother than the intermediate class ($M = 0.36$, $SE = .02$, 95% CI 0.33-0.38, $p < .001$, Cohen's $d = 0.31$) and the high increasing class ($M = 0.43$, $SE = .04$, 95% CI 0.0.36-0.50, $p < .001$, Cohen's $d = 0.56$). The intermediate and high increasing class did not differ on maternal hostility. Last, classes differed on parity, $\chi^2(2, n = 2753) = 7.30$, $p = .026$, $\varphi = .05$ (the range of the five imputed datasets is reported in **TABLE S2.4**). The low decreasing class contained more children without a sibling ($res_{adj} = 2.7$), whereas the intermediate class contained more children with one or more sibling ($res_{adj} = 2.4$) as compared to the other classes.

Non-physical aggression classes did not differ on maternal age, ethnicity, and birth weight in all imputed datasets. Classes differed on gender, $\chi^2(2, n = 2749) = 22.13$, $p < .001$, $\varphi = .09$ (the range of the five imputed datasets is reported in **TABLE S2.4**), with more girls in the low decreasing class ($res_{adj} = 4.5$) and more boys in the intermediate ($res_{adj} = 3.5$) and high increasing class ($res_{adj} = 2.8$). Furthermore, marital status of the mother differed between classes, $\chi^2(2, n = 2749) = 10.43$, $p = .005$, $\varphi = .06$ (the range of the five imputed datasets is reported in **TABLE S2.4**). The low decreasing class included more children of mothers who were married / living together (re-

s_{adj} = 3.2), besides the intermediate class contained more mothers without a partner (res_{adj} = 2.8) as compared to the other classes. Classes differed on hostility of the mother, $F(2, 2746) = 48.74$, $p < .001$, partial $\eta^2 = .03$ (the range of the five imputed datasets is reported in **TABLE S2.4**). Children in the high increasing class had more hostile mothers ($M = 0.47$, $SE = .03$, 95% CI 0.41-0.53) than the intermediate ($M = 0.36$, $SE = .01$, 95% CI 0.33-0.38, $p = .002$, Cohen's $d = 0.37$) and low decreasing class ($M = 0.25$, $SE = .01$, 95% CI 0.23-0.26, $p < .001$, Cohen's $d = 0.73$). The children in the intermediate class had more hostile mothers than the low decreasing class, $p < .001$, Cohen's $d = 0.35$. The classes also differed on maternal education, $\chi^2(4, n = 2749) = 12.36$, $p = .015$, $\varphi = .07$ (the range of the five imputed datasets is reported in **TABLE S2.4**). Children in the low decreasing class had more often mothers who were higher educated (res_{adj} = 3.1) and fewer with secondary education (res_{adj} = -2.6) whereas children in the intermediate class more often had mothers with none / primary (res_{adj} = 2.5) or secondary education (res_{adj} = 2.9) and less often mothers with higher education (res_{adj} = -3.4) as compared to the other classes. Last, parity differed between classes in four out of five imputed datasets $\chi^2(2, n = 2749) = 5.46\text{-}6.96$, $p = .031\text{-}.065$, $\varphi = .05$. Children in the high increasing class had more often no siblings (res_{adj} = 2.2-2.4) as compared to the other classes.

Supplementary results of five imputed datasets

In case all five imputed datasets provided significant results, we provided tables including the range of the statistics from these five datasets (**TABLE S2.4**, **S2.5,** and **S2.6**). The results of the first imputed dataset are mentioned in text. In case that the significance differed between datasets, we provided the range of the statistics in the text.

TABLE S2.1

Analysis of Covariance Relating Aggressive Behavior age 1.5, 3 and 6 to Teacher-reported Problem Behavior

	Aggression[a]		Attention[b]		Rule breaking[c]	
Model	*F*	partial η^2	*F*	partial η^2	*F*	partial η^2
Aggression[1] age 1.5	6.34*	.00	0.96	.00	3.33	.00
Aggression[1] age 3	27.40***	.01	20.02***	.01	14.04***	.01
Aggression[1] age 6	88.33 ***	.03	54.71***	.02	33.38***	.01
	Physical aggression[d]		Non-physical aggresion[e]			
Model	*F*	partial η^2	*F*	partial η^2		
Aggression[1] age 1.5	22.95***	.01	6.69*	.00		
Aggression[1] age 3	44.09***	.02	22.27***	.01		
Aggression[1] age 6	72.40***	.03	84.19***	.03		

Note. All models were adjusted for the same covariates as reported in Table 2.
[1]Aggression = total aggression in model [a,b,] and [c]. Aggression = physical aggression in model [d]. Aggression = non-physical aggression in model [e].
The results of the first imputed dataset are reported in this table. The range of the statistics over all imputed datasets is reported in Supplementary **TABLE S2.6**. When results were significant in some but not all imputed datasets, we provided the range of the statistics below. The range of all the model R^2_{adj} over the five imputed datasets are also reported below.
Model TRF rule breaking - aggression age 1.5: range F = 2.78-5.50, range p = .019-.096, all partial η^2 = .00.
[a]Effect size aggression model including covariates: 1.5 years all R^2_{adj} = .08; 3 years all R^2_{adj} = .09; 6 years all R^2_{adj} = .11
[b]Effect size attention model including covariates: 1.5 years all R^2_{adj} = .14; 3 years all R^2_{adj} = .15; 6 years all R^2_{adj} = .16
[c]Effect size rule breaking model including covariates: 1.5 years all R^2_{adj} = .07; 3 years all R^2_{adj} = .08; 6 years all R^2_{adj} = .08
[d]Effect size physical aggression model including covariates: 1.5 years R^2_{adj} = .06-.07; 3 years all R^2_{adj} = .07; 6 years all R^2_{adj} = .08
[e]Effect size non-physical aggression model including covariates: 1.5 years R^2_{adj} = .07-.08; 3 years all R^2_{adj} = .08; 6 years all R^2_{adj} = .10
*p < .05, **p < .01, ***p < .001

TABLE S2.2

Correlations Between Outcomes, Predictors and Covariates in the Physical Aggression Model

	1.	2.	3.	4.	5.	6.	7.	8.
1. TRF physical aggression[c]								
2. Class physical aggression (intermediate)[1]	.14***							
3. Class physical aggression (high increasing)[1]	.11***	-.07***						
4. Physical aggression age 6	.20***	.56***	.66***					
5. Gender[2,a]	-.21***	-.17***	-.08***	-.18****				
6. Age TRF[c]	.07**	.01	.03	.03	-.01			
7. Time interval CBCL and TRF[b,c]	.06**	.01	.03	.03	-.01	.97***		
8. Marital status[3,b]	.08***	.03	.04	.04*	-.03	.00	-.02	
9. Probability of class assignment	-.10***	-.20***	-.03	-.14***	.06**	-.03	-.02	-.05**

n = 2,753.
Note. Pooled Pearson and point-biseral correlations were used in case of two continuous or one continuous and one dichotomous variable respectively.
Pooled phi-coefficients were used for correlations between two dichotomous variables.
[1]Low decreasing class is reference category. [2]Gender is coded as 0 (boy) and 1 (girl). [3]Marital status is coded as 0 (married/living together) and 1 (no partner).
[a]Data collected prior to or at birth. [b]Data collected at age 6. [c]Data collected at age 6.5
*p < .05, **p < .01, ***p < .001.

TABLE S2.3

Correlations Between Outcomes, Predictors, and Covariates in the Non-physical Aggression Model

	1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.	12.
1. TRF non-physical aggression[d]												
2. Class non-physical aggression (intermediate)[1]	.11***											
3. Class non-physical aggression (high increasing)[1]	.15***	-.10***										
4. Non-physical aggression age 6	.22***	.58***	.55***									
5. Gender[2,a]	-.18***	-.07**	-.05**	-.10***								
6. Age TRF[d]	.11***	.03	.02	.03	-.01							
7. Time interval CBCL and TRF[c,d]	.10***	.03	.03	.04	-.01	.97***						
8. Education mother (low)[3,c]	.05**	.03	.02	.03	-.00	.03	.02					
9. Education mother (secondary)[3,c]	.09**	.05**	-.01	.06**	.01	.04*	.01	-.15***				
10. Marital status[c,4]	.12***	.05**	.02	.07***	-.03	.00	-.02	.06**	.11***			
11. Hostility[b]	.04*	.13***	.12***	.21***	-.01	.03	.01	.04	-.01	.09***		
12. Probability of class assignment	-.12***	-.49***	-.08***	-.39***	.06**	-.03	-.02	-.02	.06**	-.05**	-.10***	
13. Parity[d]	-.07***	-.02	-.04*	-.07**	.00	-.02	-.02	.03	-.10***	-.26***	-.02	-.02

n = 2,749.

Note. Pooled Pearson and point-biseral correlations were used in case of two continuous or one continuous and one dichotomous variable respectively. Pooled phi-coefficients were used for correlations between two dichotomous variables.

[1]Low decreasing class is reference category. [2]Gender is coded as 0 (boy) and 1 (girl). [3]Higher education is reference category. [4]Marital status is coded as 0 (married/living together) and 1 (no partner). [a]Data collected prior to or at birth. [b]Data collected at age 3. [c]Data collected at age 6. [d]Data collected at age 6.5

*p < .05, **p < .01, ***p < .001.

TABLE S2.4

Range of Statistics of the Analyses on Class Differences for Total, Physical, and on-physical Aggression When all Five Imputed Datasets Showed Significant Results

Differences between classes	F / χ^2	p	partial η^2 / φ
Total aggression class membership			
Gender[a]	30.74	< .001	.11
Hostility[b]	40.42 - 47.20	< .001	.03
Physical aggression class membership			
Gender[a]	109.92	< .001	.20
Hostility[b]	26.15 - 31.98	< .001	.02
Parity[a]	6.63 - 9.20	.036 - .010	.05 - .06
Non-physical aggression class membership			
Gender[a]	22.13	< .001	.09
Marital status[a]	7.95 - 11.55	.003 - .019	.06 - .07
Maternal education[a]	10.79 - 13.15	.011 - .029	.06 - .07
Hostililty[b]	44.30 - 52.15	< .001	.03 - .04

n = 2,756 for total aggression. n = 2,753 for physical aggression. n = 2,749 for non-physical aggression.
[a] χ^2 and φ are reported
[b] F and partial eta squared are reported

TABLE S2.5

Range of Statistics of the Multivariate Analyses on Total Aggression Class Membership and Teacher-Reported Total Aggression, Attention Problems and Rule Breaking Behavior of the Five Imputed Datasets

Multivariate analyses class membership	F	p	partial η^2
Unadjusted analysis total aggression class membership	21.56-21.57	< .001	.02
Partly adjusted analysis total aggression class membership	17.19-17.21	< .001	.02
Fully adjusted total aggression class membership	14.17-14.56	< .001	.02
Fully adjusted total aggression age 6	28.83-31.67	< .001	.03

n = 2,756.

TABLE S2.6 1/2

Range of Statistics of the Univariate Analyses on Total, Physical and Non-physical ggression of the Five Imputed Datasets

Univariate analyses	*F*	*p*	partial η^2	M (SE) low decreasing	M (SE) intermediate	M (SE) high increasing
Class membership						
Fully adjusted total aggression						
Total aggression	39.00 - 39.35	< .001	.03	0.30 - 0.31 (.02)	0.37 - 0.38 (.02)	0.67 - 0.68 (.05)
Attention	28.55 - 29.16	< .001	.02	0.64 - 0.65 (.02)	0.71 - 0.72 (.03)	1.04 - 1.05 (.06)
Rule breaking	15.49 - 15-78	< .001	.01	0.16 - 0.17 (.01)	0.18 - 0.19 (.01)	0.32 (.03)
Fully adjusted physical aggression	30.54 - 31.02	< .001	.02	0.21 (.02)	0.37 (.03)	0.53 - 0.54 (.06)
Fully adjusted non-physical aggression	32.15 - 33.44	< .001	.02	0.28 - 0.29 (.02)	0.35 - 0.36 (.02)	0.53 - 0.54 (.04)
Aggression age 6						
Fully adjusted total aggression						
Total aggression	81.24 - 90.76	< .001	.03			
Attention	54.71 - 57.54	< .001	.02			
Rule breaking	32.19 - 36.14	< .001	.01			
Fully adjusted physical aggression	66.69 - 77.98	< .001	.02 - .03			
Fully adjusted non-physical aggression	78.72 - 87.58	< .001	.03			

n = 2,756 for total aggression.
n = 2,753 for physical aggression.
n = 2,749 for non-physical aggression.

TABLE S2.6 2/2

Range of Statistics of the Univariate Analyses on Total, Physical and Non-physical ggression of the Five Imputed Datasets

Univariate analyses	*F*	*p*	partial η^2	*M* (SE) low decreasing	*M* (SE) intermediate	*M* (SE) high increasing
Aggression age 3						
Fully adjusted total aggression						
Total aggression	27.40-32.69	< .001	.01			
Attention	20.02-22.54	< .001	.01			
Rule breaking	13.75-15.32	< .001	.01			
Fully adjusted physical aggression	44.09-56.28	< .001	.02			
Fully adjusted non-physical aggression	22.27-26.91	< .001	.01			
Aggression age 1.5						
Fully adjusted total aggression						
Total aggression	6.31-10.06	.002-.012	.00			
Attention	0.96-2.29	.131-.326	.00			
Rule breaking	2.78-5.50	.019-.096	.00			
Fully adjusted physical aggression	17.17-26.31	.001	.01			
Fully adjusted non-physical aggression	6.69-10.08	.002-.010	.00			

n = 2,756 for total aggression.
n = 2,753 for physical aggression.
n = 2,749 for non-physical aggression.

Supplementary material
Chapter 3

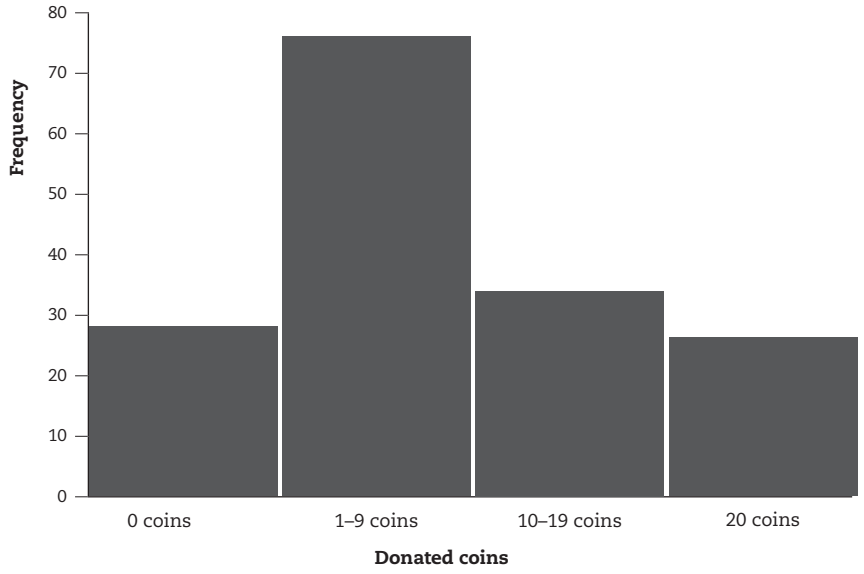

FIGURE S3.1
Distribution of donated coins after recoding the original variable (range 0-20).

Supplementary material
Chapter 4

TABLE S4.1 1/3
Correlations Between all Variables in the Models

	1.	2.	3.	4.	5.	6.	7.	8.
1. Unfamiliar - defender vs. rest[a]								
2. Unfamiliar - complicit vs. rest[a]	-.23**							
3. Familiar - defender vs. rest[a]	.11	.03						
4. Familiar - complicit vs. rest[a]	-.07	.06	-.20**					
5. Gender	-.03	-.18**	-.07	-.09				
6. Age	-.02	-.16*	.06	-.09	-.08			
7. IQ	.05	-.09	-.05	.13	.02	-.05		
8. Education parents	.03	.08	-.12	.01	-.09	.09	.06	
9. Income	.08	-.05	-.12	-.19**	.11	-.01	.05	.37***
10. Parity	.06	.06	-.18**	-.02	.02	-.03	.03	.21**
11. Empathy	.04	-.01	.08	.05	.16*	.11	.04	.00
12. Guilt	.02	.08	.07	-.00	.09	.10	.16*	-.01
13. Inhibition	.00	-.14*	-.09	-.06	.03	.23**	.05	.04
14. Donating[b]	-.08	-.02	-.03	-.14*	.14	.05	.03	.05
15. Persistent liars vs. rest[c]	.04	.00	.05	.04	-.18**	-.16*	-.20*	-.20*
16. Situation liars vs. rest[c]	-.07	.07	-.05	-.03	.19*	-.01	.10	.10
17. Prosocial vs. rest	-.05	-.04	-.07	.03	.03	-.04	.06	.06
18. Antisocial vs. rest	.04	-.06	.09	-.03	-.07	.21**	-.09	-.06
19. Bully	-.08	.03	.06	.03	.08	.03	-.11	-.06
20. Victim	-.06	-.01	.21**	-.04	.01	.02	-.13	-.06
21. Anxiety	.01	.01	.07	-.01	-.11	.13	-.10	-.02
22. Social responsiveness problems	.09	.02	.14	-.04	-.22**	.08	-.08	-.20*
23. Harsh parenting father	-.09	.01	.09	-.05	-.08	.09	-.08	-.17*
24. Harsh parenting mother	.05	-.06	.08	.01	-.12	.06	-.13	-.07

$N = 215$
Note. Pearson and point-biseral correlations were used in case of two continuous or one continuous and one dichotomous variable, respectively. Phi coefficients were used for correlations between two dichotomous variables.
* $p < .05$, ** $p < .01$, *** $p < .001$
[a] Passive bystander is reference category
[b] Partial correlation controlling for the version of the donating task
[c] Honest is reference category

TABLE S4.1 2/3
Correlations Between all Variables in the Models

	9.	10.	11.	12.	13.	14.	15.	16.
1. Unfamiliar - defender vs. rest[a]								
2. Unfamiliar - complicit vs. rest[a]								
3. Familiar - defender vs. rest[a]								
4. Familiar - complicit vs. rest[a]								
5. Gender								
6. Age								
7. IQ								
8. Education parents								
9. Income								
10. Parity	.15*							
11. Empathy	-.05	.06						
12. Guilt	.00	.07	.45***					
13. Inhibition	.17*	-.06	-.17*	-.01				
14. Donating[b]	.13	.03	-.02	.13	.06			
15. Persistent liars vs. rest[c]	-.10	.01	-.13	-.11	-.01	-.04		
16. Situation liars vs. rest[c]	.16*	.08	.11	.05	-.01	.02	-.63***	
17. Prosocial vs. rest	.02	-.09	.14*	-.04	-.02	.03	-.04	.06
18. Antisocial vs. rest	.02	.14	-.12	.03	-.01	-.03	.04	-.01
19. Bully	.08	.03	-.04	.05	.12	.04	-.05	.01
20. Victim	.04	-.07	-.03	.06	.03	.05	.07	-.07
21. Anxiety	-.06	.05	.03	.26***	-.05	-.03	.06	-.04
22. Social responsiveness problems	-.12	.10	-.15*	.07	-.06	-.07	.11	-.14
23. Harsh parenting father	-.10	-.02	.01	.02	.02	-.06	.12	-.08
24. Harsh parenting mother	.00	.01	-.06	.03	-.01	-.01	.11	-.02

$N = 215$
Note. Pearson and point-biseral correlations were used in case of two continuous or one continuous and one dichotomous variable, respectively. Phi coefficients were used for correlations between two dichotomous variables.
* $p < .05$, ** $p < .01$, *** $p < .001$
[a] Passive bystander is reference category
[b] Partial correlation controlling for the version of the donating task
[c] Honest is reference category

TABLE S4.1 3/3
Correlations Between all Variables in the Models

	17.	18.	19.	20.	21.	22.	23.
1. Unfamiliar - defender vs. rest[a]							
2. Unfamiliar - complicit vs. rest[a]							
3. Familiar - defender vs. rest[a]							
4. Familiar - complicit vs. rest[a]							
5. Gender							
6. Age							
7. IQ							
8. Education parents							
9. Income							
10. Parity							
11. Empathy							
12. Guilt							
13. Inhibition							
14. Donating[b]							
15. Persistent liars vs. rest[c]							
16. Situation liars vs. rest[c]							
17. Prosocial vs. rest							
18. Antisocial vs. rest	-.43**						
19. Bully	-.10	.17*					
20. Victim	-.09	.03	.40***				
21. Anxiety	.33***	.53***	.08	.03			
22. Social responsiveness problems	-.39***	.48***	.12	.02	.42***		
23. Harsh parenting father	-.23**	.28***	.02	.01	0.15	.24**	
24. Harsh parenting mother	-.17*	.41***	.11	.08	.22**	.22**	.25***

N = 215

Note. Pearson and point-biseral correlations were used in case of two continuous or one continuous and one dichotomous variable, respectively. Phi coefficients were used for correlations between two dichotomous variables.

* $p < .05$, ** $p < .01$, *** $p < .001$

[a] Passive bystander is reference category

[b] Partial correlation controlling for the version of the donating task

[c] Honest is reference category

Multinomial logistic regression models for the unfamiliar condition

TABLE S4.2

Multinomial Logistic Regression Associating Background Variables with Bystander Roles in the Unfamiliar Condition

		B	SE	*p*	OR	95% CI Low	95% CI High
Complicit[a]	Age	-0.93	0.34	.007	0.40	0.20	0.77
	Gender	-1.15	0.43	.007	0.32	0.14	0.73
	IQ	-0.02	0.01	.190	0.98	0.95	1.01
	Education	0.92	0.66	.159	2.52	0.70	9.12
	Income	-0.10	0.14	.468	0.90	0.69	1.19
	Parity	0.63	0.82	.446	1.87	0.37	9.40
Defender[a]	Age	-0.24	0.24	.318	0.79	0.49	1.26
	Gender	-0.46	0.35	.196	0.63	0.32	1.26
	IQ	0.00	0.01	.775	1.00	0.98	1.03
	Education	0.05	0.50	.920	1.05	0.39	2.82
	Income	0.10	0.13	.468	1.10	0.85	1.43
	Parity	0.59	0.69	.393	1.81	0.46	7.04

N = 215

Note. Nagelkerke R^2 = .12-.14 (range over imputed datasets).

[a]Passive bystander is reference category

TABLE S4.3

Multinomial Logistic Regression Associating Prosocial Variables with Bystander Roles in the Unfamiliar Condition

		B	SE	*p*	OR	95% CI Low	95% CI High
Complicit[a]	Age	-0.85	0.35	.014	0.43	0.22	0.84
	Gender	-1.29	0.44	.004	0.27	0.11	0.65
	Empathy	-0.15	0.25	.566	0.86	0.53	1.42
	Guilt	0.56	0.28	.041	1.75	1.02	3.01
	Inhibition	-1.24	0.80	.122	0.29	0.06	1.39
	Donating[b]	-0.06	0.23	.793	0.94	0.60	1.48
Defender[a]	Age	-0.24	0.25	.340	0.79	0.48	1.29
	Gender	-0.45	0.35	.200	0.64	0.32	1.27
	IQ	0.09	0.22	.687	1.09	0.71	1.68
	Education	0.15	0.24	.531	1.16	0.73	1.85
	Income	-0.07	0.63	.906	0.93	0.27	3.22
	Donating[b]	-0.21	0.20	.280	0.81	0.55	1.19

N = 215

Note. Nagelkerke R^2 = .13-.14 (range over imputed datasets).

[a]Passive bystander is reference category

[b]Corrected for version of the donating task

TABLE S4.4

Multinomial Logistic Regression Associating Problem Behavior Variables with Bystander Roles in the Unfamiliar Condition

		B	*SE*	*p*	OR	95% CI Low	95% CI High
Complicit[a]	Age	-0.92	0.37	.012	0.40	0.20	0.82
	Gender	-1.42	0.46	.002	0.24	0.10	0.60
	Guilt	0.45	0.26	.085	1.56	0.94	2.60
	Persistent liars vs. rest[b]	0.35	0.76	.653	1.41	0.30	6.63
	Situational liars vs. rest[b]	0.75	0.64	.242	2.13	0.60	7.53
	Prosocial vs. rest[c]	-0.45	0.52	.390	0.64	0.23	1.78
	Antisocial vs. rest[c]	-0.51	0.60	.397	0.60	0.18	1.96
	Bully	0.29	0.58	.619	1.34	0.41	4.35
	Victim	-0.25	0.48	.596	0.78	0.30	1.99
	Anxiety	-0.03	0.31	.923	0.97	0.53	1.77
	Social responsiveness problems	0.06	1.03	.957	1.06	0.14	7.89
Defender[a]	Age	-0.30	0.26	.252	0.75	0.45	1.23
	Gender	-0.35	0.37	.353	0.71	0.34	1.47
	Guilt	0.20	0.22	.365	1.22	0.79	1.87
	Persistent liars vs .rest[b]	-0.05	0.53	.927	0.95	0.34	2.71
	Situational liars vs. rest[b]	-0.18	0.50	.718	0.84	0.31	2.23
	Prosocial vs. rest[c]	-0.26	0.46	.574	0.77	0.31	1.90
	Antisocial vs. rest[c]	0.08	0.50	.870	1.09	0.40	2.92
	Bully	-0.37	0.50	.466	0.69	0.26	1.89
	Victim	-0.24	0.47	.615	0.79	0.30	2.05
	Anxiety	-0.17	0.27	.532	0.85	0.50	1.43
	Social responsiveness problems	0.91	0.92	.326	2.48	0.40	15.27

$N = 215$

Note. Nagelkerke R^2 = .14-.18 (range over imputed datasets).

[a] Passive bystander is reference category

[b] Honest is reference category

[c] Typical is reference category

TABLE S4.5

Multinomial Logistic Regression Associating Parenting Variables with Bystander Roles in the Unfamiliar Condition

		B	*SE*	*p*	OR	95% CI Low	95% CI High
Complicit[a]	Age	-1.02	0.36	.004	0.36	0.18	0.73
	Gender	-1.43	0.44	.001	0.24	0.10	0.57
	Guilt	0.48	0.24	.047	1.62	1.01	2.61
	Harsh parenting father	-0.07	0.43	.872	0.93	0.40	2.17
	Harsh parenting mother	-0.56	0.46	.220	0.57	0.23	1.40
Defender[a]	Age	-0.25	0.24	.305	0.78	0.48	1.25
	Gender	-0.46	0.35	.192	0.63	0.31	1.26
	Guilt	0.18	0.21	.391	1.20	0.79	1.82
	Harsh parenting father	-0.56	0.39	.153	0.57	0.26	1.23
	Harsh parenting mother	0.26	0.36	.477	1.29	0.64	2.64

N = 215
Note. Nagelkerke R^2 = .12-.15 (range over imputed datasets).
[a]Passive bystander is reference category

Multinomial logistic regression models for familiar condition

TABLE S4.6

Multinomial Logistic Regression Associating Background Variables with Bystander Roles in the Familiar Condition

		B	*SE*	*p*	OR	95% CI Low	95% CI High
	Age	-0.38	0.30	.208	0.69	0.38	1.24
	Gender	-0.48	0.42	.251	0.62	0.27	1.40
	IQ	0.03	0.02	.085	1.03	1.00	1.06
	Education	0.59	0.59	.315	1.80	0.57	5.70
	Income	-0.42	0.15	.004	0.66	0.49	0.87
	Parity	-0.51	0.68	.452	0.60	0.16	2.27
Defender[a]	Age	-0.11	0.25	.653	1.11	0.69	1.82
	Gender	-0.44	0.39	.257	0.64	0.30	1.38
	IQ	-0.00	0.01	.947	1.00	0.97	1.03
	Education	0.29	0.52	.575	0.75	0.27	2.08
	Income	-0.20	0.16	.231	0.82	0.59	1.15
	Parity	-1.10	0.56	.050	0.34	0.11	1.00

N = 215
Note. Nagelkerke R^2 = .13-.18 (range over imputed datasets).
[a]Passive bystander is reference category

TABLE S4.7

Multinomial Logistic Regression Associating Prosocial Variables with Bystander Roles in the Familiar Condition

		B	SE	*p*	OR	95% CI Low	95% CI High
Complicit[a]	IQ	0.03	0.02	.067	1.03	1.00	1.06
	Income	-0.37	0.14	.009	0.69	0.52	0.91
	Parity	-0.39	0.68	.569	0.68	0.18	2.57
	Empathy	0.19	0.26	.459	1.21	0.73	2.02
	Guilt	-0.08	0.27	.786	0.93	0.54	1.60
	Inhibition	-0.50	0.76	.511	0.61	0.14	2.69
	Donating[b]	-0.44	0.26	.088	0.64	0.39	1.07
Defender[a]	IQ	-0.00	0.01	.792	1.00	0.97	1.03
	Income	-0.21	0.15	.169	0.81	0.60	1.10
	Parity	-1.34	0.48	.021	0.26	0.08	0.82
	Empathy	0.18	0.25	.481	1.19	0.73	1.95
	Guilt	0.23	0.26	.384	1.26	0.75	2.12
	Inhibition	-0.88	0.71	.214	0.41	0.10	1.66
	Donating[b]	-0.15	0.22	.485	0.86	0.56	1.31

N =215

Note. Nagelkerke R^2 = .17-.21 (range over imputed datasets).

[a]Passive bystander is reference category

[b]Corrected for version of the donating task

TABLE S4.8

Multinomial Logistic Regression Associating Problem Behavior Variables with Bystander Roles in the Familiar Condition

		B	SE	*p*	OR	95% CI Low	95% CI High
Complicit[a]	IQ	0.04	0.02	.040	1.04	1.00	1.07
	Income	-0.41	0.15	.007	0.66	0.50	0.89
	Parity	-0.33	0.70	.642	0.72	0.18	2.85
	Donating[b]	-0.45	0.26	.078	0.64	0.38	1.05
	Persistent liars vs .rest[c]	0.57	0.60	.343	1.77	0.54	5.76
	Situational liars vs. rest[c]	0.25	0.59	.672	1.28	0.41	4.06
	Prosocial vs. rest[d]	0.13	0.54	.812	1.14	0.40	3.27
	Antisocial vs. rest[d]	0.12	0.59	.833	1.13	0.36	3.59
	Bully	0.61	0.54	.258	1.85	0.63	5.37
	Victim	-0.12	0.55	.832	0.89	0.30	2.67
	Anxiety	0.05	0.35	.881	1.05	0.53	2.11
	Social responsiveness problems	-0.62	1.08	.571	0.54	0.07	4.53
Defender[a]	IQ	0.01	0.02	.631	1.01	0.98	1.04
	Income	-0.25	0.15	.103	0.78	0.58	1.05
	Parity	-1.32	0.65	.047	0.27	0.07	0.98
	Donating[b]	-0.15	0.22	.510	0.87	0.56	1.33
	Persistent liars vs .rest[c]	0.31	0.59	.598	1.37	0.42	4.41
	Situational liars vs. rest[c]	0.25	0.65	.699	1.29	0.35	4.76
	Prosocial vs. rest[d]	0.05	0.55	.924	1.05	0.36	3.08
	Antisocial vs. rest[d]	0.46	0.55	.402	1.59	0.54	4.66
	Bully	-0.13	0.48	.793	0.88	0.34	2.29
	Victim	1.26	0.48	.009	3.53	1.38	9.02
	Anxiety	-0.06	0.30	.847	0.94	0.53	1.69
	Social responsivenessprobl.	1.18	1.01	.241	3.25	0.45	23.45

N =215

Note. Nagelkerke R^2 = .23-.28 (range over imputed datasets).

[a]Passive bystander is reference category

[b]Corrected for version of the donating task

[c]Honest is reference category

[d]Typical is reference category

TABLE S4.9
Multinomial Logistic Regression Associating Parenting Variables with Bystander Roles in the Familiar Condition

		B	*SE*	*p*	*OR*	95% CI Low	95% CI High
Complicit[a]	IQ	0.03	0.02	.054	1.03	1.00	1.07
	Income	-0.40	0.14	.004	0.67	0.51	0.88
	Parity	-0.32	0.67	.630	0.73	0.20	2.69
	Donating[b]	-0.45	0.25	.077	0.64	0.39	1.05
	Victim	0.12	0.47	.801	1.13	0.45	2.85
	Harsh parenting father	-0.25	0.49	.612	0.78	0.30	2.05
	Harsh parenting mother	0.39	0.44	.378	1.48	0.62	3.53
Defender[a]	IQ	0.01	0.02	.702	1.01	0.98	1.04
	Income	-0.25	0.14	.077	0.78	0.59	1.03
	Parity	-1.08	0.59	.068	0.34	0.11	1.08
	Donating[b]	-0.16	0.22	.467	0.85	0.55	1.31
	Victim	1.19	0.42	.005	3.29	1.44	7.53
	Harsh parenting father	0.30	0.43	.492	1.35	0.58	3.14
	Harsh parenting mother	0.31	0.43	.477	1.36	0.58	3.19

N =215
Note. Nagelkerke R^2 = .20-.25 (range over imputed datasets).
[a]Passive bystander is reference category
[b]Corrected for version of the donating task

Variables associated with the continuous Prosocial Cyberball Game score in the unfamiliar condition

In the hierarchical linear regression analysis of the unfamiliar condition with the continuous Prosocial Cyberball Game (PCG) score (proportion of throws to the excluded player in the unfair phase minus proportion of throws to the excluded player in the fair phase) as dependent variable, predictor variables were entered in the same order and steps as in the multinomial logistic regression analyses. We also included the proportion of throws to the player at the top in the fair phase as a covariate in all steps. According to the collinearity diagnostics VIF and Tolerance there was no multicollinearity in any of the models. Results of each step are reported in **TABLE S4.10**. None of the variables in any of the steps was associated with the continuous PCG score, except for gender in step 4 and 5. Being a girl was associated with more prosocial (compensation) behavior. Furthermore, the proportion of throws to the player at the top in the fair phase was also significant in all models. None of the models showed a significant R^2 change.

Variables associated with the continuous Prosocial Cyberball Game score in the familiar condition

In the hierarchical linear regression analysis of the familiar condition with the continuous PCG score (proportion of throws to the excluded player in the unfair phase minus proportion of throws to the excluded player in the fair phase) as dependent variable, predictor variables were entered in the same order and steps as in the multinomial logistic regression analyses. According to the collinearity diagnostics VIF and Tolerance there was no multicollinearity in any of the models. Results of each step are reported in **TABLE S4.11**. None of the variables in any of the steps were associated with the continuous Cyberball score, except for IQ in step 1-5; higher IQ was associated with more antisocial (exclusion) behavior. Furthermore, the proportion of throws to the player at the top in the fair phase was also significant in all models. None of the models showed a significant R^2 change.

Hierarchical linear regression model for the unfamiliar condition

TABLE S4.10

Background, Prosocial, Problem Behavior, and Parenting Variables Associated with the Continuous PCG Score in the Unfamiliar Condition

	B	*SE*	β	*p*
Step 1				
Proportion throws fair	-0.83	0.08	-.60 - -.61	.000
Step 2				
Age	-0.01	0.02	-.01 - -.03	.758
Gender	0.05	0.02	.13	.030
IQ	0.00	0.00	-.00 - .03	.779
Education	-0.03	0.03	-.05 - -.07	.431
Income	0.01	0.01	.03 - .07	.412
Parity	-0.01	0.04	-.01 - -.04	.695
Step 3				
Empathy	0.02	0.01	.10 - .12	.107
Guilt	-0.02	0.02	-.05 - -.12	.289
Inhibition	0.04	0.04	.03 - .07	.383
Donating[a]	-0.01	0.01	-.02 - -.05	.508
Step 4				
Persistent liars vs rest	-0.02	0.04	-.01 - -.12	.650
Situational liars vs rest	-0.05	0.03	-.07 - -.15	.141
Prosocial vs rest	-0.02	0.03	-.02 - -.05	.552
Antisocial vs rest	0.01	0.03	.01 - .05	.708
Bully	-0.01	0.04	.02 - .08	.870
Victim	-0.01	0.03	.00 - -.11	.676
Anxiety	0.01	0.02	.01 - .05	.763
Social responsiveness problems	0.05	0.06	.03 - .08	.376
Step 5				
Harsh parenting father	-0.02	0.03	-.01 - -.07	.429
Harsh parenting mother	0.02	0.02	.05 - .08	.313

N = 215

Note. For all variables the final (step 5) statistics are reported.

[a]Corrected for version of the donating task.

Step 1: R^2 (range) = .37; Step 2: R^2 (range) = .39, R^2 Δ (range) = .02; Step 3: R^2 (range) = .40, R^2 Δ (range) = .01; Step 4 R^2 (range) = .42-.43, R^2 Δ (range) = .02-.03; Step 5: R^2 (range) = .43-.44, R^2 Δ (range) = .00-.01

Hierarchical linear regression model for familiar condition

TABLE S4.11

Background, Prosocial, Problem Behavior, and Parenting Variables Associated with the Continuous PCG Score in the Familiar Condition

	B	*SE*	β	*p*
Step 1				
Proportion throws fair	-0.69	0.08	-.54	.000
Step 2				
Age	-0.00	0.02	.01	.955
Gender	0.03	0.03	.08 - .10	.194
IQ	-0.00	0.00	-.14 - -.17	.018
Education	-0.02	0.04	-.03 - -.07	.555
Income	0.00	0.01	.00 - .06	.667
Parity	-0.03	0.04	.00 - -.07	.552
Step 3				
Empathy	0.00	0.02	-.03 - .05	.918
Guilt	0.00	0.02	.00 - .05	.952
Inhibition	0.00	0.04	-.01 - .02	.940
Donating[a]	0.01	0.01	.03 - .08	.397
Step 4				
Persistent liars vs rest	0.01	0.03	.00 - .05	.768
Situational liars vs rest	0.01	0.03	-.02 - .06	.709
Prosocial vs rest	0.03	0.03	.05 - .08	.413
Antisocial vs rest	0.01	0.04	.01 - .05	.691
Bully	-0.01	0.03	-.02 - -.09	.737
Victim	0.04	0.03	.06 - .16	.262
Anxiety	0.00	0.02	-.03 - .05	.991
Social responsiveness problems	0.08	0.06	.06 - .13	.212
Step 5				
Harsh parenting father	0.02	0.03	.02 - .07	.500
Harsh parenting mother	-0.02	0.03	.00 - .06	.581

$N = 215$

Note. For all variables the final (step 5) statistics are reported.

[a]Corrected for version of the donating task.

Step 1: R^2 (range) = .27; Step 2: R^2 (range) = .31-.32, R^2 Δ (range) = .04-.05; Step 3: R^2 (range) = .31-.33, R^2 Δ (range) = .00-.01; Step 4 R^2 (range) = .32-.34, R^2 Δ (range) = .01-.03; Step 5: R^2 (range) = .32-.35, R^2 Δ (range) = .00-.01.