Appendix

A.1 Tables

Table 11: Random effects logit regressions of action choice: $y = \mathbf{1}_{\{a_i=Y\}}$

Model	(1) all	(2) CM	(3) CF		(4) CM	(5) CM	(6) CF	(7) CF
t2	-0.58	0.31	-0.71***	role	-0.07	0.60	0.38	-0.25
	(0.40)	(0.67)	(0.26)		(0.65)	(0.86)	(0.23)	(0.52)
cf	1.86***			k_4	0.92***	1.32**	0.21	-0.81*
	(0.30)				(0.15)	(0.60)	(0.40)	(0.48)
cf * t2	-0.23			k_6	1.11***	1.57***	-0.01	-0.01
	(0.37)				(0.29)	(0.58)	(0.40)	(0.50)
role		-0.06	0.38	role * k_4		-0.77		1.90***
		(0.53)	(0.23)			(1.20)		(0.65)
role * t2		-0.65	-0.44	role * k_6		-0.87		0.00
		(0.97)	(0.37)			(1.26)		(0.63)
1/round	6.55	22.00***	5.22	1/round	1.29**	1.32***	-0.12	-0.12
	-5.94	(7.34)	(6.62)		(0.51)	(0.46)	(0.41)	(0.44)
constant	-3.81***	-6.05***	-2.04***	Constant	-5.10***	-5.51***	-1.57***	-1.31***
	(0.73)	(0.85)	(0.60)		(1.13)	(0.94)	(0.33)	(0.36)
Log-likelihood	-513.09	-167.24	-342.10	Log-likelihood	-106.22	-105.93	-206.11	-201.55
#obs.	1,488	744	744	#obs.	372	372	372	372
#subjects	124	124	124	#subjects	124	124	124	124

Model (1) combines data from CM and CF whereas models (2)-(7) separate them. Independent variables: cf = 1 if CF, t2 = 1 if T2, role = 1 if role 1, $k_4 = 1$ if $k = 4$, and $k_6 = 1$ if $k = 6$. The variable 1/round equals the inverse of the round number within each task block, and is included given that all other independent variables are dummies. *, ** and ***: significant at 10%, 5% and 1%, respectively. Robust standard errors clustered by session in parentheses.

Table 12: Logit regressions of action profiles

Model	(1)	(2)	(3)	(4)	(5)	(6)
	All		CM		CF	
Dep. var.	$\mathbf{1}_{\{(X,X)\}}$	$\mathbf{1}_{\{(X,X) \text{ or } (Y,Y)\}}$	$\mathbf{1}_{\{(X,X)\}}$	$\mathbf{1}_{\{(X,X) \text{ or } (Y,Y)\}}$	$\mathbf{1}_{\{(X,X)\}}$	$\mathbf{1}_{\{(X,X) \text{ or } (Y,Y)\}}$
t2	0.81***	0.68***	1.09	1.06	0.85***	0.80***
	(0.23)	(0.22)	(0.79)	(0.78)	(0.33)	(0.21)
cf	-1.84***	-1.45***				
	(0.23)	(0.16)				
cf*t2	0.29	0.15				
	(0.38)	(0.35)				
1/round	-0.37	-0.40*	-0.64*	-0.45	0.02	-0.13
	(0.27)	(0.21)	(0.36)	(0.36)	(0.37)	(0.39)
k_4			-0.90***	-0.79***	0.00	0.23
			(0.15)	(0.13)	(0.48)	(0.55)
k_6			-0.98***	-0.85***	0.38	0.69**
			(0.24)	(0.28)	(0.45)	(0.34)
t2*k_4			0.26	0.10	0.43	0.06
			(0.96)	(0.94)	(0.79)	(0.79)
t2*k_6			-0.59	-0.68	0.34	-0.02
			(0.68)	(0.59)	(0.49)	(0.33)
constant	1.86***	1.84***	2.96***	2.78***	-0.24	-0.02
	(0.20)	(0.17)	(0.31)	(0.32)	(0.34)	(0.18)
#obs	744	744	372	372	372	372
Log likelihood	-374.40	-377.83	-136.58	-136.81	-233.66	-232.96

Models (1) and (2) combine data from CM and CF whereas models (3)-(6) separate them. See Table 11 for the definitions of the independent variables. *, ** and ***: significant at 10%, 5% and 1%, respectively. Robust standard errors clustered by session in parentheses.

Table 13: Mixed effects Tobit regressions of final payoffs

	Role 1		Role 2	
	CM	CF	CM	CF
Model	(1)	(2)	(3)	(4)
t2	-3.12	7.691	10.08***	12.56***
	(6.48)	(5.33)	(2.48)	(1.78)
k_4	174.40***	132.10***	-5.61***	3.07
	(11.45)	(7.22)	(1.18)	(4.10)
k_6	367.60***	230.10***	-5.63***	5.86***
	(18.49)	(10.53)	(1.76)	(1.60)
t2 * k_4	12.18	-6.034	19.68***	11.44
	(10.65)	(16.43)	(4.99)	(7.42)
t2 * k_6	-15.65	21.00	32.65***	23.03***
	(23.98)	(18.25)	(6.54)	(5.39)
1/round	12.01	0.713	-0.13	1.75
	(19.92)	(11.45)	(4.60)	(3.72)
constant	204.80***	115.90***	103.90***	66.93***
	(6.11)	(6.20)	(2.71)	(0.80)
# of obs.	372	372	372	372
Log likelihood	-2333.37	-2283.6033	-1944.21	-1839.3891

*, ** and ***: significant at 10%, 5% and 1%, respectively. Standard errors clustered by session in parentheses.

Table 14: Role 1's payoff in T2 conditional on the action profile in T1

T1	CF2	CF4	CF6	CM2	CM4	CM6
(X,X)	132.429	231.393	384.857	206.855	405.438	560.208
	(40.547)	(106.812)	(136.046)	(34.280)	(85.694)	(166.431)
	28	28	35	55	48	48
	0.001	0.002	0.002	0.0106	0.008	0.001
(X,Y)	134.059	266.375	472.727	166.667	345.143	565.714
	(34.965)	(92.751)	(13.484)	(92.376)	(137.914)	(224.117)
	17	8	11	3	7	7
	0	0.0004	0	0.1835	0.0016	0.001
(Y,X)	99.800	275.286	322.444	214.500	366.667	548.333
	(31.134)	(65.198)	(193.891)	(9.713)	(78.655)	(153.677)
	15	21	9	4	6	6
	0.9805	0.2954	0.1696	–	–	–
(Y,Y)	100.000	220.000	337.143	–	438.000	460.000
	(0.000)	(88.318)	(142.912)	–	–	–
	2	5	7	–	1	1
	–	–	–	–	–	–

For each action profile in T1, the table lists the average payoff in T2 (line 1), standard deviations (line 2), the number of observations (line 3), and p-value of the hypothesis: "payoff in T1= payoff in T2" by t-test (line 4). "−" implies insufficient observations.

Table 15: Determinants of the size and likelihood of transfer

Model	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
	All			CM			CF		
	absolute	relative	likelihood	absolute	relative	likelihood	absolute	relative	likelihood
2's Y	-149.14***	-0.28***	-2.16***						
	(7.71)	(0.01)	(0.27)						
cf	23.54**	0.08***	1.06***						
	(10.20)	(0.02)	(0.27)						
2's Y * cf	28.21	0.132*	-0.23						
	(31.12)	(0.08)	(0.67)						
k_4				40.83***	0.04**	0.31	32.53**	0.00	0.33
				(12.88)	(0.02)	(0.29)	(15.68)	(0.03)	(0.42)
k_6				81.93***	0.07***	0.38	51.14***	0.00	0.56
				(13.29)	(0.02)	(0.26)	(13.96)	(0.03)	(0.49)
1/round	23.64	0.0469*	0.81*	46.44**	0.10***	1.48***	23.92	-0.01	0.16
	(18.79)	(0.03)	(0.48)	(19.81)	(0.03)	(0.55)	(22.00)	(0.05)	(0.79)
constant	-48.33***	-0.10***	-1.22***	-134.15***	-0.20***	-2.00***	-54.43**	-0.03	-0.62
	(18.26)	(0.04)	(0.37)	(13.34)	(0.02)	(0.38)	(24.99)	(0.05)	(0.70)
#obs.	335	335	335	179	179	179	156	156	156
Log-likelihood	-808.31	-17.03	-157.29	-379.61	-23.88	-87.71	-432.53	-11.46	-88.52

Models (1), (2), (4), (5), (7) and (8) are the mixed effects Tobit regressions of the relative and absolute transfer amounts, whereas (3), (6) and (9) are the random effects probit regressions of the likelihood $\mathbf{1}_{\{t_1>0\}}$ of positive transfer. The variable "2's Y"= 1 if role 2's action is Y. *, ** and ***: significant at 10%, 5% and 1%, respectively. Robust standard errors clustered by session in parentheses.

Table 16: Tobit regressions of the payoff ratio

VARIABLES	(1) CM	(2) CM	(3) CM	(4) CF	(5) CF	(6) CF
t2	-0.51***	-0.51***	-0.17***	-0.47***	-0.47***	-0.37***
	(0.15)	(0.16)	(0.05)	(0.15)	(0.11)	(0.06)
k4		1.64***	1.79***		1.51***	1.59***
		(0.18)	(0.16)		(0.12)	(0.18)
k6		3.36***	3.73***		2.80***	2.85***
		(0.24)	(0.30)		(0.13)	(0.05)
1/round	0.88	0.29	0.26	-0.87	-0.01	-0.05
	(0.77)	(0.50)	(0.40)	(0.85)	(0.11)	(0.15)
t2 * k4			-0.28			-0.17
			(0.20)			(0.17)
t2 * k6			-0.73**			-0.11
			(0.35)			(0.27)
constant	3.51***	2.09***	1.93***	3.98***	2.21***	2.18***
	(0.09)	(0.28)	(0.12)	(0.34)	(0.06)	(0.08)
Log likelihood	-794.54	-681.63	-679.59	-768.93	-686.67	-686.56
#obs	372	372	372	372	372	372
#subject pairs	62	62	62	62	62	62

*, ** and ***: significant at 10%, 5% and 1%, respectively. Robust standard errors clustered by session in parentheses.

Table 17: Payoffs incorporating the average transfer from role 1: $(g_1 - \bar{t}_1, g_2 + \bar{t}_1)$

CF2					CF4					CF6				
	X (51)		Y (11)			X (52)		Y (10)			X (52)		Y (10)	
$X(48)$	149.1,	90.9	53.3,	26.7	$X(53)$	292.1,	107.9	60,	20	$X(55)$	437.6,	122.4	59.7,	20.3
$Y(14)$	95.4,	64.6	100,	100	$Y(9)$	244.3,	75.8	100,	100	$Y(7)$	376,	104	100,	100

#observations in parentheses.

Table 18: Types in T1 and T2

	CM						CF					
	role 1			role 2			role 1			role 2		
	TY2	TX2	other	TY2	TX2	other	TY2	TX2	other	TY2	TX2	other
TY1	2	4	1	2	4	2	6	9	0	5	9	3
TX1	2	49	1	2	48	0	1	32	1	2	34	5
other	0	3	0	1	3	0	0	12	1	1	3	0

Table 19: Reciprocity types in CM-T2 and CF-T2

		CM-T2			
		SR	WR	NR	other
CF-T2	SR	14	3	11	0
	WR	2	2	2	0
	NR	1	5	18	0
	other	1	1	2	0

Type "other" refers to role 1 who didn't experience (X, X).

A.2 Figures

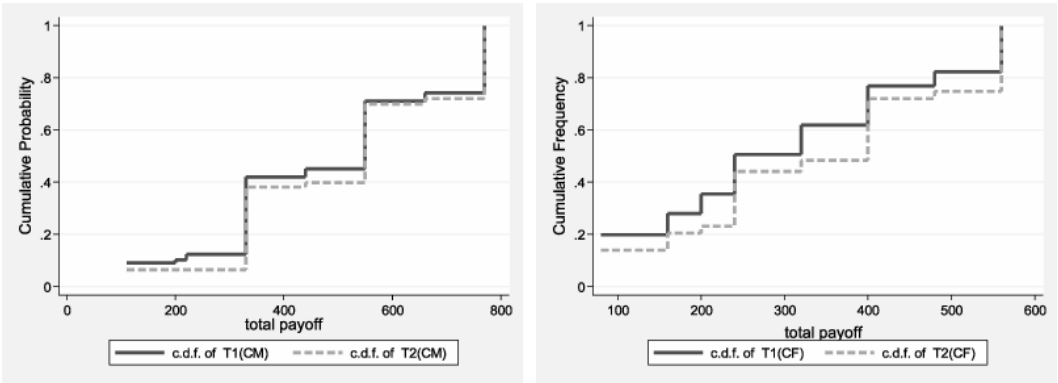

Figure 4: Cumulative distributions of total payoffs in T1 and T2: CM (left) and CF (right)

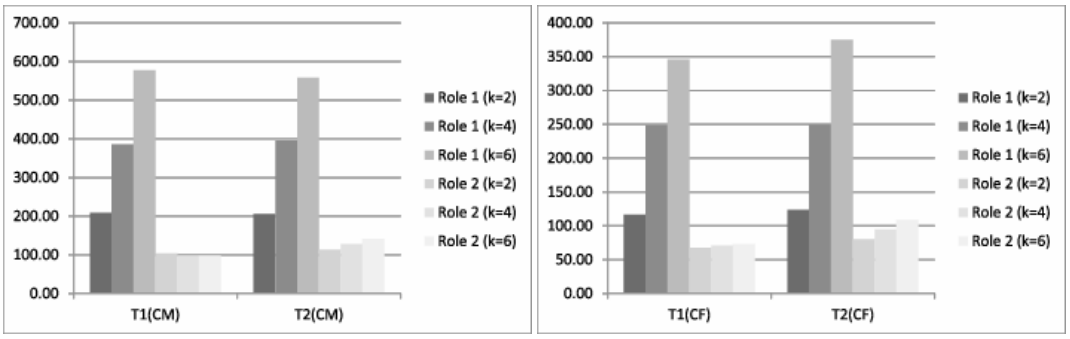

Figure 5: Final payoffs u_i in CM (left) and CF (right): role 1 (dark) and role 2 (light)

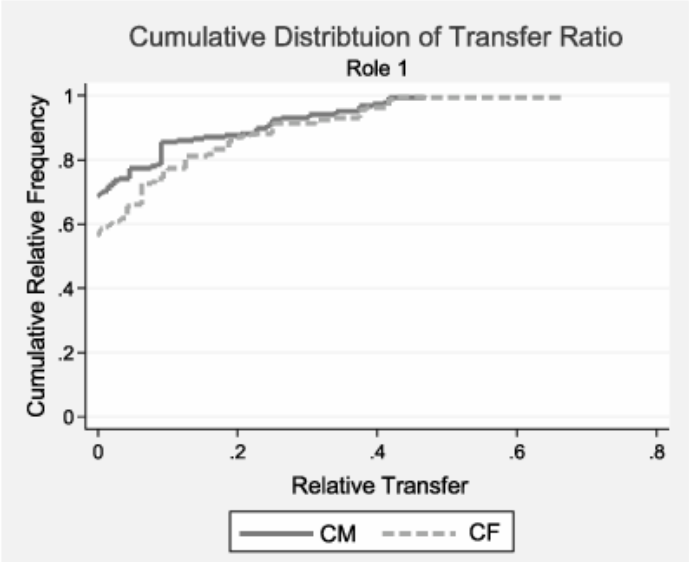

Figure 6: Cumulative distributions of relative transfer by role 1 subjects

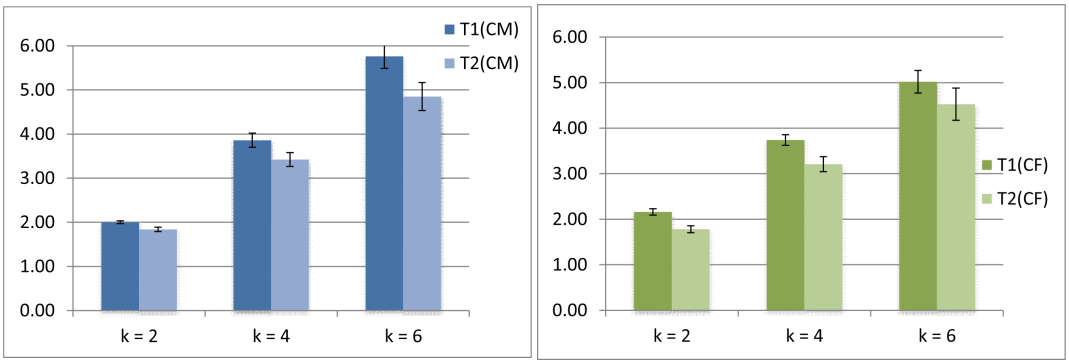

Figure 7: Final payoff ratios u_1/u_2 in CM (left) and CF (right): T1 (dark) and T2 (light)

A.3 Effect of the Payoff Formula in the Instructions

This section examines the effects of including the payoff formula (1) in the instructions. There are a total of 106 subjects who participated in five sessions without the payoff formula but with the same task sequence as in the main experiments. Tables 20 and 21 describe the frequency of action Y by each role and the frequency of each action profile, respectively, in T1 and T2 with and without the payoff formula. We observe that role 1 chooses Y less often in every game with the formula, and that role 2 does so in four out of six games (CF2 and CM6). The effect is stronger in T2. In the case of action profiles, the efficient coordination profile (X, X) increases with the formula in every game, whereas the inefficient coordination profile decreases or does not change with the formula in every game. Again, these effects are generally stronger in T2. As seen in logit regressions reported in Tables 22 and 23, many of these changes are significant. In terms of transfer, the inclusion of the payoff formula also has positive impact on the average transfer by role 1 as seen in the Tobit regressions reported in Table 24.

On the other hand, the redistribution scheme increases the choice of X even without the formula: Going from T1 to T2, the rate of X increases by 6.8 percentage points in CM (83% $\rightarrow$ 89.3% for role 1 and 83% $\rightarrow$ 90.3% for role 2), and by 13.2 percentage points in CF (57.3% $\rightarrow$ 67.3% for role 1 and 65.3% $\rightarrow$ 81.7% for role 2). However, the increase is smaller than the corresponding number with the formula reported in Section 6.2.

Table 20: Frequencies of Y with and without formula

	role 1						role 2					
T1	CF2	CF4	CF6	CM2	CM4	CM6	CF2	CF4	CF6	CM2	CM4	CM6
without	0.34	0.51	0.43	0.19	0.15	0.17	0.38	0.28	0.38	0.09	0.21	0.21
53	(0.07)	(0.07)	(0.07)	(0.54)	(0.05)	(0.05)	(0.07)	(0.06)	(0.07)	(0.04)	(0.06)	(0.06)
with	0.27	0.42	0.27	0.06	0.11	0.11	0.31	0.21	0.31	0.05	0.13	0.13
62	(0.06)	(0.06)	(0.06)	(0.03)	(0.04)	(0.04)	(0.06)	(0.05)	(0.06)	(0.03)	(0.04)	(0.04)
T2												
without	0.38	0.26	0.34	0.06	0.13	0.13	0.17	0.17	0.21	0.09	0.09	0.11
53	(0.07)	(0.06)	(0.07)	(0.03)	(0.05)	(0.05)	(0.05)	(0.05)	(0.06)	(0.04)	(0.04)	(0.04)
with	0.23	0.15	0.11	0.00	0.05	0.06	0.18	0.16	0.16	0.05	0.05	0.10
62	(0.05)	(0.04)	(0.04)	(0.00)	(0.03)	(0.03)	(0.05)	(0.05)	(0.04)	(0.03)	(0.03)	(0.04)

Standard errors in parentheses

Table 21: Action profiles with and without formula

		CF2		CF4		CF6	
		without	with	without	with	without	with
T1	(X, X)	0.42	0.45	0.32	0.45	0.38	0.53
	(X, Y)	0.25	0.27	0.17	0.13	0.19	0.19
	(Y, X)	0.21	0.24	0.40	0.34	0.25	0.16
	(Y, Y)	0.13	0.03	0.11	0.08	0.19	0.11
	Fisher's test	0.365		0.542		0.307	
T2	(X, X)	0.53	0.63	0.60	0.71	0.55	0.76
	(X, Y)	0.09	0.15	0.13	0.15	0.11	0.13
	(Y, X)	0.30	0.19	0.23	0.13	0.25	0.08
	(Y, Y)	0.08	0.03	0.04	0.02	0.09	0.03
	Fisher's test	0.32		0.459		0.033	
		CM2		CM4		CM6	
T1	(X, X)	0.77	0.89	0.64	0.77	0.64	0.77
	(X, Y)	0.04	0.05	0.21	0.11	0.19	0.11
	(Y, X)	0.13	0.06	0.15	0.10	0.15	0.10
	(Y, Y)	0.06	0.00	0.00	0.02	0.02	0.02
	Fisher's test	0.145		0.274		0.472	
T2	(X, X)	0.87	0.95	0.81	0.90	0.79	0.84
	(X, Y)	0.08	0.05	0.06	0.05	0.08	0.10
	(Y, X)	0.04	0.00	0.09	0.05	0.09	0.06
	(Y, Y)	0.02	0.00	0.04	0.00	0.04	0.00
	Fisher's test	0.254		0.318		0.409	

Table 22: Random effects logit regressions of action choice Y with and without formula

VARIABLES	(1) CF role1	(2) CF role1	(3) CM role1	(4) CM role1	(5) CF role2	(6) CF role2	(7) CM role2	(8) CM role2
formula	-1.141**	-0.506	-1.386***	-0.855*	-0.825**	-0.445	-1.038	-0.749
	(0.50)	(0.52)	(0.46)	(0.45)	(0.38)	(0.36)	(0.69)	(0.71)
t2	-0.057	-0.042	-0.0808**	-0.0699**	-0.128***	-0.118***	-0.0630**	-0.0564*
	(0.05)	(0.05)	(0.03)	(0.03)	(0.03)	(0.03)	(0.03)	(0.03)
1/round	0.842***	0.893***	1.185**	1.227**	-1.062***	-1.082***	-0.376	-0.347
	(0.30)	(0.32)	(0.60)	(0.57)	(0.35)	(0.38)	(0.70)	(0.70)
t2 * formula		-1.405***		-1.371***		-0.804***		-0.625
		(0.31)		(0.39)		(0.16)		(0.61)
Constant	-0.937**	-1.035**	-3.442***	-3.546***	-0.552	-0.585	-2.522***	-2.566***
	(0.46)	(0.47)	(0.63)	(0.64)	(0.36)	(0.37)	(0.61)	(0.64)
Log likelihood	-351.95	-342.23	-178.54	-175.15	-332.86	-329.45	-198.85	-197.88
#obs	690	690	690	690	690	690	690	690
#subjects	115	115	115	115	115	115	115	115

The variable formula = 1 for sessions with the formula. *, ** and ***: significant at 10%, 5% and 1%, respectively. Robust standard errors clustered by session in parentheses.

Table 23: Logit regressions of action profiles with and without formula

VARIABLES	(1) CF yy	(2) CF yy	(3) CM yy	(4) CM yy	(5) CF xx/yy	(6) CF xx/yy	(7) CM xx/yy	(8) CM xx/yy
formula	-1.428***	-0.950*	-1.727**	-0.99	0.417**	0.02	0.918**	0.596
	(0.54)	(0.56)	(0.83)	(0.86)	(0.17)	(0.18)	(0.37)	(0.37)
t2	-0.09	-0.08	0.00	0.01	0.04	0.03	0.0766***	0.0695***
	(0.07)	(0.07)	(0.05)	(0.05)	(0.03)	(0.03)	(0.01)	(0.01)
1/round	-1.563***	-1.637***	1.405**	1.416**	-0.431**	-0.442**	-0.113	-0.129
	(0.42)	(0.43)	(0.70)	(0.65)	(0.20)	(0.20)	(0.38)	(0.36)
t2 * formula		-1.303***		omitted		0.772***		0.696**
		(0.30)				(0.21)		(0.27)
Constant	-2.006***	-2.045***	-4.784***	-4.832***	0.340	0.383*	1.395***	1.432***
	(0.57)	(0.58)	(0.55)	(0.56)	(0.22)	(0.22)	(0.51)	(0.52)
Log likelihood	-166.33	-163.64	-51.63	-50.20	-456.03	-450.20	-298.47	-296.31
#obs	690	690	690	504	690	690	690	690
#subjects	115	115	115	115	115	115	115	115

*, ** and ***: significant at 10%, 5% and 1%, respectively. Standard errors clustered by session in parentheses.

Table 24: Mixed effects Tobit regressions of transfer with and without formula

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
						conditional on (X, X)		
VARIABLES	CF	CF	CM	CM	CF	CF	CM	CM
formula	-6.332	-31.94*	-13.3	-51.41**	-5.67	-24.79	-15.23	-57.88**
	(7.94)	(18.05)	(15.17)	(25.64)	(6.33)	(17.52)	(13.68)	(24.27)
cf								
1/round	9.765	10.08	41.75***	41.87***	7.939	8.215	36.62**	36.74**
	(13.48)	(13.49)	(13.96)	(13.97)	(15.30)	(15.32)	(14.67)	(14.65)
role	70.99***	50.22***	82.77***	50.53**	80.93***	63.55***	81.71***	45.27**
	(14.68)	(15.36)	(18.61)	(19.64)	(16.04)	(16.76)	(19.98)	(22.07)
role * formula		41.15**		63.76***		31.21		71.34***
		(20.47)		(23.46)		(23.02)		(25.14)
Constant	-89.54***	-77.02***	-156.2***	-136.8***	-83.46***	-73.09***	-144.6***	-122.9***
	(16.97)	(16.65)	(24.65)	(24.58)	(19.21)	(19.90)	(22.29)	(22.71)
	-1196.78	-1194.73	-1026.13	-1024.40	-865.89	-864.96	-943.98	-941.82
Observations	690	690	690	690	438	438	596	596
Number of groups	230	230	230	230	200	200	225	225

*, ** and ***: significant at 10%, 5% and 1%, respectively. role = 1 if role 1. Standard errors clustered by session in parentheses.

A.4 Proofs

Proof of Proposition 1. The utility function U_i is concave in the own transfer t_i so that the first-order condition fully characterizes the solution to the maximization problem. In particular, the solution is either at a corner ($t_i = 0$ or $t_i = g_i$) or in the interior ($t_i = \gamma_i(x) - g_j(x) + t_j$). When $\gamma_1(x) + \gamma_2(x) \neq g_1(x) + g_2(x)$, we cannot have both t_1 and t_2 as interior solutions. The first-order condition for t_i against $t_j = 0$ or $t_j = g_j$ then yields the relationship between (γ_1, γ_2) and t_i in (4).

Reasoning for Hypothesis 1 is as follows:

1a. When $c_1 > a$ and $x = (Y, X)$, $\gamma_1(x) = \nu_1$ and $\gamma_2(x) = 0$ since $g_1(x) = c_1 > a > b = g_2(x)$. It follows that $\sigma_1(x) = \nu_1 - g_2(x)$ and $\sigma_2(x) = 0$ by (4) and hence that the payoff profile including the SPE transfer at $x = (Y, X)$ is given by $(b + c_1 - \nu_1, \nu_1)$. Hence, when $c_1 > a$ and $\nu_1 > a$, then player 2's choice of Y is strictly dominated and (X, X) is the unique SPE action profile. On the other hand, when $c_1 \leq a$ or $\nu_1 \leq a$, (X, X) and (Y, Y) are both SPE action profiles. See Table 25.

1b. By Figure 1, at most one player i chooses $\sigma_i(x) > 0$ when $\gamma_1(x) + \gamma_2(x) < g_1(x) + g_2(x)$. If in addition $\gamma_1(x) = \gamma_2(x)$, then $\sigma_2(x) = 0$ while $\sigma_1(x) > 0$ if $\gamma_1(x) > g_2(x)$ and $\sigma_1(x) = 0$ if $\gamma_1(x) < g_2(x)$. Since $\gamma_1(x) > g_2(x)$ implies $g_1(x) > a$, $\sigma_1(x) > 0$ if and only if $x = (X, X)$ or (Y, X). Regarding the comparison between CM-T2 and CF-T2, note that at $x = (X, X)$, player 1 chooses $\sigma_1(x) > 0$ if $\gamma_1(x) = \mu_1 > b + c_2 = g_2(x) > a$ in CM and $\gamma_1(x) = \nu_1 >$

$b + c_2 = g_2(x) < a$ in CF. Hence, if $\mu_1 \leq b + c_2 = 110$ and $\nu_1 > 80$, player 1 chooses $\sigma_1(x) > 0$ at $x = (X, X)$ only in CF.

1c. When $\gamma_1(x) + \gamma(x) < g_1(x) + g_2(x)$, $\sigma_1(x) > 0$ if $\gamma_2(x) > g_2(x)$. Since we specify $g_2(x)$ to be independent of the degree k of inequality in each class of games, $\sigma_1(x)$ is also independent of k. This further implies that the action choice is independent of k as well in each class of games.

■

Table 25: Payoff profiles including SPE transfer σ

Under the assumptions that $\gamma_1(x) > g_2(x)$ at $x = (X, X)$, (Y, X) and $c_1 > a$.

	CM					CF			
	X		Y			X		Y	
X	$2b + c_1 + c_2 - \mu_1,$	μ_1	$b,$	c_2	X	$2b + c_1 + c_2 - \nu_1,$	ν_1	$b,$	c_2
Y	$b + c_1 - \nu_1,$	ν_1	$a,$	a	Y	$b + c_1 - \nu_1,$	ν_1	$a,$	a

Equilibrium under distributive social preferences Let e_i^{T0} denote player i's optimal choice in the dictator task T0, and E^{T1} and E^{T2} denote the set of (pure) NE and SPE action profiles in the inequality game G in tasks T1 and T2, respectively.

1) Inefficiency aversion

In T0, the optimal action for player 1 is $e_1^{T0} = (X, X)$ regardless of κ_1, and for player 2,

$$e_2^{T0} = \begin{cases} (X, X) & \text{if } \kappa_2 > \frac{a-b-c_2}{2b+c_1+c_2-2a}, \\ (Y, Y) & \text{if } \kappa_2 < \frac{a-b-c_2}{2b+c_1+c_2-2a}. \end{cases}$$

In T1,

$$E^{T1} = \begin{cases} \{(X, X)\} & \text{if } b + c_1 > 2a \text{ and } \kappa_2 > \frac{a-b}{b+c_1-2a},^{47} \\ \{(X, X), (Y, Y)\} & \text{if } b + c_1 \leq 2a, \text{ or if } b + c_1 > 2a \text{ and } \kappa_2 < \frac{a-b}{b+c_1-2a}. \end{cases} \quad (7)$$

Since the threshold $\frac{a-b}{b+c_1-2a}$ decreases as c_1 increases (or $k = \frac{b+c_1}{b+c_2}$ increases), (7) implies that (X, X) is the unique NE for a larger set of κ_2 for a larger k, implying Hypothesis 2c. In T2, the transfer equals zero at any action profile and the set of SPE action profiles is as given in (7): $E^{T2} = E^{T1}$. We hence have Hypotheses 2a and 2b.

[47] $b + c_1 > 2a$ holds in all but one (CF2) of our parameter specifications. See Table 3.

2) Inequality aversion

In T0,

$$e_1^{T0} = \begin{cases} (X,X) & \text{if } \lambda_1 < \frac{b+c_1-a}{c_1-c_2}, \\ (Y,Y) & \text{if } \lambda_1 > \frac{b+c_1-a}{c_1-c_2}, \end{cases}$$

and

$$e_2^{T0} = \begin{cases} (X,X) & \text{if } \lambda_2 < \frac{b+c_2-a}{c_1-c_2}, \\ (Y,Y) & \text{if } \lambda_2 > \frac{b+c_2-a}{c_1-c_2}, \end{cases}$$

In T1,

$$E^{T1} = \begin{cases} \{(Y,Y)\} & \text{if } \lambda_1 > \frac{b}{b-c_2} \text{ or } \lambda_2 > \frac{b}{c_1-b}, \\ \{(X,X),(Y,Y)\} & \text{if } \lambda_1 \leq \frac{b}{b-c_2} \text{ and } \lambda_2 \leq \frac{b}{c_1-b}. \end{cases} \tag{8}$$

Since the threshold $\frac{b}{c_1-b}$ decreases as c_1 increases (or k increases), (Y,Y) is the unique NE for a larger set of λ_2 for a larger k, implying the first part of Hypothesis 3c. In T2, if $\lambda_1 < \frac{1}{2}$, then no transfer takes place in SPE, and the SPE action profile in stage 1 is the same as in T1: $E^{T2} = E^{T1}$. If $\lambda_1 > \frac{1}{2}$, then (x,t) is an SPE if and only if x is a NE of the following game of identical-interest:

P1 \ P2	X		Y	
X	$2b+c_1+c_2$	$2b+c_1+c_2$	$b+c_2$	$b+c_2$
Y	$b+c_1$	$b+c_1$	$2a$	$2a$

and the transfer function t in SPE satisfies

$$t_1(x) - t_2(x) = \frac{g_1(x) - g_2(x)}{2} \text{ for every } x.$$

Hence, Hypothesis 3b as well as the second part of Hypothesis 3c hold. Furthermore,

$$E^{T2} = \begin{cases} \{(X,X),(Y,Y)\} & \text{if } 2a \geq b+c_1, \\ \{(X,X)\} & \text{if } 2a < b+c_1. \end{cases}$$

Except for CF2, $2a < b+c_1$ holds and hence (X,X) is the unique SPE action profile. This along with (8) implies that (X,X) is played more often in T2 than in T1 (Hypothesis 3a).