A Appendix

A.1 Supplemental Material: Experimental Design

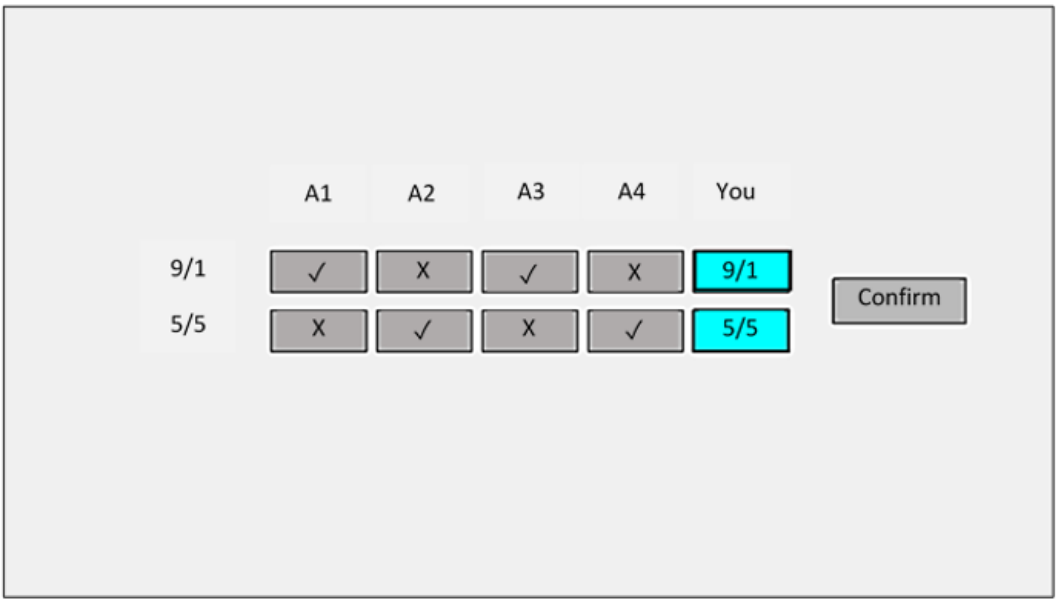


Figure A1: Exemplary screen for a voter

Note: The voter is on position five. Original text translated into English and font size enlarged for better readability.

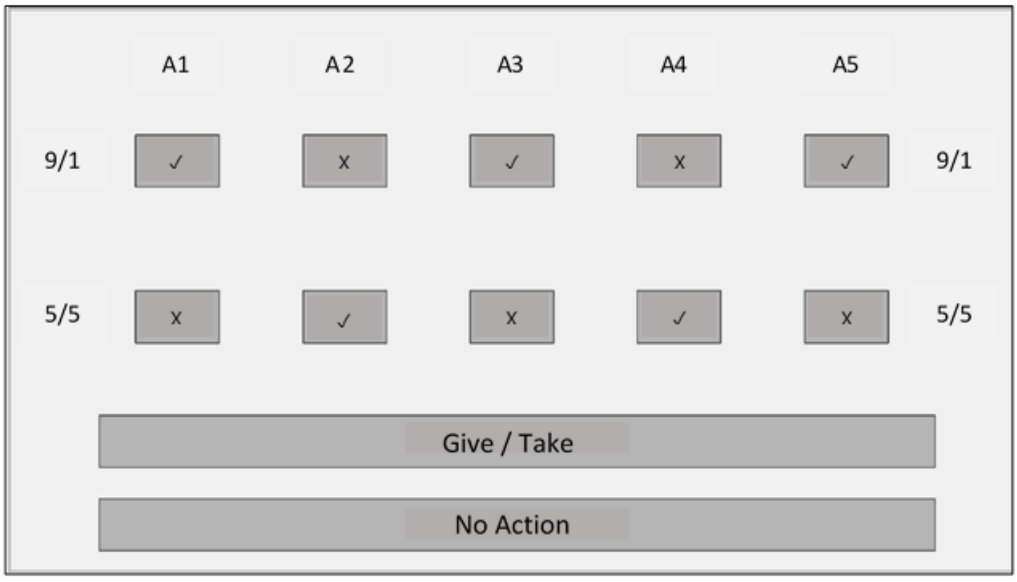


Figure A2: Exemplary first decision screen of a recipient

Note: The recipient is in the *Both* treatment. Original text translated into English and font size enlarged for better readability.

Table A1: Scenarios of Voters

Voter 1	Voter 2	Voter 3	Voter 4	Voter 5	Scenario	Voter Position
-	-	-	-	-	1	1
U	-	-	-	-	2	2
F	-	-	-	-	3	2
U	U	-	-	-	4	3
U	F	-	-	-	5	3
F	U	-	-	-	6	3
F	F	-	-	-	7	3
U	U	U	-	-	8	4
U	U	F	-	-	9	4
U	F	U	-	-	10	4
U	F	F	-	-	11	4
F	F	F	-	-	12	4
F	F	U	-	-	13	4
F	U	F	-	-	14	4
F	U	U	-	-	15	4
U	U	U	U	-	16	5
U	U	U	F	-	17	5
U	U	F	U	-	18	5
U	U	F	F	-	19	5
U	F	U	U	-	20	5
U	F	U	F	-	21	5
U	F	F	U	-	22	5
U	F	F	F	-	23	5
F	F	F	U	-	24	5
F	F	F	F	-	25	5
F	F	U	U	-	26	5
F	F	U	F	-	27	5
F	U	F	U	-	28	5
F	U	F	F	-	29	5
F	U	U	U	-	30	5
F	U	U	F	-	31	5

A.2 Behavioral Results

Table A2: Average sanction points for different voter roles and voter positions

		Fair Outcome - Voter Position						Unfair Outcome - Voter Position					
		1	2	3	4	5	Total	1	2	3	4	5	Total
Both	Minority 1	-0.65	-0.64	-0.71	-0.79	-1.08	-0.71	0.45	0.52	0.55	0.71	1.20	0.57
	Minority 2	.	-0.53	-0.53	-0.55	-0.50	-0.52	.	0.45	0.20	0.18	0.25	0.24
	Initiator	0.20	0.32	0.23	.	.	0.23	-0.98	-1.02	-1.33	.	.	-1.02
	Majority 2	.	0.18	0.27	0.22	.	0.22	.	-0.53	-0.69	-0.75	.	-0.72
	Pivotal	.	.	0.27	0.22	0.41	0.30	.	.	-0.65	-0.73	-1.02	-0.82
	Majority 4	.	.	.	0.17	0.12	0.14	.	.	.	-0.37	-0.29	-0.32
	Majority 5	.	.	.	.	0.18	0.18	.	.	.	.	-0.38	-0.38
Punish	Minority 1	-0.74	-0.74	-0.94	-1.13	-1.03	-0.85	-0.03	-0.04	-0.06	-0.03	-0.03	-0.04
	Minority 2	.	-0.62	-0.77	-0.63	-0.86	-0.75	.	-0.02	-0.09	0	-0.04	-0.04
	Initiator	-0.02	-0.03	-0.2	.	.	-0.03	-1.11	-1.21	-1.8	.	.	-1.18
	Majority 2	.	0	-0.06	-0.05	.	-0.04	.	-0.87	-1.37	-1.28	.	-0.99
	Pivotal	.	.	-0.06	-0.06	0	-0.04	.	.	-1.54	-1.4	-1.64	-1.52
	Majority 4	.	.	.	-0.05	-0.03	-0.04	.	.	.	-0.63	-0.7	-0.67
	Majority 5	.	.	.	.	-0.03	-0.03	.	.	.	.	-0.52	-0.52
Reward	Minority 1	0.15	0.2	0.25	0.29	0.41	0.22	0.69	0.88	0.95	0.7	1.31	0.84
	Minority 2	.	0.12	0.12	0.12	0.18	0.14	.	0.62	0.68	0.72	0.5	0.62
	Initiator	0.88	1.04	1.12	.	.	0.94	0.09	0.19	0.17	.	.	0.12
	Majority 2	.	1.09	1.02	1.13	.	0.97	.	0.12	0.1	0.12	.	0.12
	Pivotal	.	.	1.01	1.14	1.36	1.19	.	.	0.09	0.12	0.16	0.13
	Majority 4	.	.	.	0.54	0.54	0.54	.	.	.	0.12	0.12	0.12
	Majority 5	.	.	.	.	0.53	0.53	.	.	.	.	0.14	0.14

Table A3: Average Sanction Points per Scenario

	Both					Punishment					Reward				
Scenario	Voter 1	Voter 2	Voter 3	Voter 4	Voter 5	Voter 1	Voter 2	Voter 3	Voter 4	Voter 5	Voter 1	Voter 2	Voter 3	Voter 4	Voter 5
U U U U U	-0.90	-0.60	-0.52	-0.38	-0.38	-0.93	-0.90	-1.57	-0.63	-0.52	0.10	0.09	0.09	0.12	0.14
U U U U F	-0.77	-0.53	-0.63	-0.35	1.20	-1.07	-0.87	-1.57	-0.73	-0.03	0.02	0.12	0.10	0.10	1.31
U U U F U	-0.75	-0.45	-0.53	1.05	-0.30	-1.05	-0.83	-1.48	-0.07	-0.77	0.14	0.07	0.05	0.86	0.09
U U U F F	-0.83	-0.88	-0.92	0.37	0.27	-1.27	-0.97	-1.53	0.00	-0.03	0.10	0.10	0.12	0.53	0.50
U U F U U	-0.92	-0.67	0.95	-0.60	-0.32	-1.13	-0.92	-0.07	-1.48	-0.57	0.07	0.09	1.41	0.07	0.07
U U F U F	-1.22	-0.98	0.42	-0.80	0.10	-1.10	-0.87	-0.08	-1.72	0.00	0.05	0.05	0.72	0.17	0.53
U U F F U	-0.93	-0.53	0.28	0.07	-0.97	-1.15	-0.87	-0.03	0.00	-1.93	0.12	0.12	0.71	0.81	0.12
U U F F F	-0.60	-0.53	0.23	0.15	0.20	-0.65	-0.62	-0.20	-0.02	-0.02	0.21	0.12	1.12	1.14	1.21
U F U U U	-0.78	1.05	-0.83	-0.65	-0.23	-0.95	-0.08	-0.93	-1.18	-0.70	0.07	1.21	0.10	0.14	0.14
U F U U F	-1.15	0.38	-0.65	-0.87	0.12	-1.25	0.00	-1.25	-1.43	-0.05	0.12	1.07	0.22	0.10	0.57
U F U F U	-1.35	0.33	-0.77	0.28	-0.87	-1.05	0.00	-1.13	0.00	-1.63	0.14	0.72	0.12	0.78	0.17
U F U F F	-0.57	0.45	-0.57	0.35	0.47	-0.70	0.00	-0.75	-0.05	0.00	0.09	1.00	0.10	1.05	1.31
U F F U U	-1.23	0.30	0.22	-0.87	-1.12	-1.27	-0.08	-0.10	-1.07	-1.50	0.09	0.52	0.52	0.12	0.16
U F F U F	-0.47	0.30	0.18	-0.30	0.32	-0.68	0.00	-0.07	-0.83	0.00	0.09	1.07	1.07	0.10	1.57
U F F F U	-0.75	0.25	0.22	0.20	-0.68	-0.73	-0.05	-0.15	-0.03	-0.80	0.09	1.17	1.24	1.45	0.10
U F F F F	-0.85	0.28	0.20	0.15	0.05	-0.95	-0.07	-0.08	-0.13	-0.02	0.28	0.91	0.95	1.14	0.60
F U U U U	0.95	-0.83	-0.58	-0.73	-0.32	-0.07	-1.37	-1.00	-1.18	-0.75	0.93	0.14	0.10	0.12	0.17
F U U U F	0.55	-1.13	-0.83	-0.72	0.50	0.00	-1.28	-1.22	-1.38	-0.08	0.60	0.16	0.22	0.12	0.41
F U U F U	0.18	-1.15	-0.80	0.18	-1.40	0.00	-1.12	-0.92	0.00	-1.75	0.60	0.29	0.12	0.59	0.26
F U U F F	0.02	-0.38	-0.50	0.22	0.32	-0.02	-0.73	-0.78	0.00	0.00	0.88	0.14	0.14	1.10	1.34
F U F U U	0.17	-0.98	0.18	-0.68	-0.97	-0.03	-1.07	-0.08	-1.15	-1.45	0.79	0.19	0.84	0.12	0.05
F U F U F	0.28	-0.55	0.33	-0.63	0.50	0.00	-0.53	-0.08	-0.48	0.00	1.02	0.16	1.02	0.10	1.36
F U F F U	0.25	-0.80	0.18	0.27	-0.50	0.00	-0.62	-0.05	-0.08	-0.88	0.95	0.16	1.02	0.98	0.14
F U F F F	0.15	-0.83	0.25	0.20	0.12	-0.02	-1.07	-0.07	-0.03	0.00	0.71	0.34	0.74	1.17	0.55
F F U U U	0.42	0.45	-1.33	-0.80	-0.78	-0.03	-0.02	-1.80	-0.95	-1.60	0.53	0.62	0.17	0.14	0.21
F F U U F	0.23	0.18	-0.62	-0.72	0.65	0.00	0.00	-0.65	-0.58	0.00	0.88	1.09	0.10	0.16	1.36
F F U F U	0.20	0.23	-0.77	0.27	-0.43	0.00	0.00	-0.80	-0.08	-0.95	1.00	0.97	0.14	1.14	0.29
F F U F F	0.28	0.22	-0.73	0.22	0.13	0.00	-0.02	-1.38	0.00	-0.05	0.84	0.83	0.52	0.98	0.59
F F F U U	0.08	0.17	0.33	-0.47	-0.37	0.00	-0.03	-0.08	-0.90	-0.82	1.17	1.12	1.34	0.12	0.17
F F F U F	0.22	0.20	0.23	-1.12	0.18	-0.10	-0.02	-0.08	-1.35	-0.05	0.76	0.74	0.86	0.47	0.41
F F F F U	0.23	0.27	0.35	0.17	-1.08	0.00	0.00	-0.02	-0.07	-1.03	0.72	0.72	0.90	0.55	0.41
F F F F F	0.28	0.23	0.17	0.17	0.18	-0.03	-0.07	-0.05	-0.05	-0.03	0.76	0.74	0.95	0.57	0.53

A.3 Responsibility Models

Table A4: Responsibility for voters in BF Model - Punishment Treatment (Allocation 9,1 vs. 5,5)

	BF Responsibility (U)					BF Responsibility (F)				
Scenario	Voter 1	Voter 2	Voter 3	Voter 4	Voter 5	Voter 1	Voter 2	Voter 3	Voter 4	Voter 5
UUUUU	0.52	0.30	0.19	0.00	0.00	0.00	0.00	0.00	0.00	0.00
UUUUF	0.52	0.30	0.19	0.00	0.00	0.00	0.00	0.00	0.00	0.00
UUUFU	0.52	0.30	0.19	0.00	0.00	0.00	0.00	0.00	0.00	0.00
UUUFF	0.52	0.30	0.19	0.00	0.00	0.00	0.00	0.00	0.00	0.00
UUFUU	0.42	0.24	0.00	0.35	0.00	0.00	0.00	0.00	0.00	0.00
UUFUF	0.42	0.24	0.00	0.35	0.00	0.00	0.00	0.00	0.00	0.00
UUFFU	0.29	0.16	0.00	0.00	0.55	0.00	0.00	0.00	0.00	0.00
UUFFF	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.10	0.22	0.68
UFUUU	0.33	0.00	0.36	0.32	0.00	0.00	0.00	0.00	0.00	0.00
UFUUF	0.33	0.00	0.36	0.32	0.00	0.00	0.00	0.00	0.00	0.00
UFUFU	0.22	0.00	0.24	0.00	0.54	0.00	0.00	0.00	0.00	0.00
UFUFF	0.00	0.00	0.00	0.00	0.00	0.00	0.21	0.00	0.27	0.52
UFFUU	0.19	0.00	0.00	0.21	0.60	0.00	0.00	0.00	0.00	0.00
UFFUF	0.00	0.00	0.00	0.00	0.00	0.00	0.21	0.40	0.00	0.39
UFFFU	0.00	0.00	0.00	0.00	0.00	0.00	0.26	0.51	0.23	0.00
UFFFF	0.00	0.00	0.00	0.00	0.00	0.00	0.26	0.51	0.23	0.00
FUUUU	0.00	0.44	0.30	0.26	0.00	0.00	0.00	0.00	0.00	0.00
FUUUF	0.00	0.44	0.30	0.26	0.00	0.00	0.00	0.00	0.00	0.00
FUUFU	0.00	0.34	0.23	0.00	0.43	0.00	0.00	0.00	0.00	0.00
FUUFF	0.00	0.00	0.00	0.00	0.00	0.26	0.00	0.00	0.18	0.57
FUFUU	0.00	0.29	0.00	0.34	0.37	0.00	0.00	0.00	0.00	0.00
FUFUF	0.00	0.00	0.00	0.00	0.00	0.23	0.00	0.27	0.00	0.50
FUFFU	0.00	0.00	0.00	0.00	0.00	0.31	0.00	0.37	0.32	0.00
FUFFF	0.00	0.00	0.00	0.00	0.00	0.31	0.00	0.37	0.32	0.00
FFUUU	0.00	0.00	0.21	0.35	0.44	0.00	0.00	0.00	0.00	0.00
FFUUF	0.00	0.00	0.00	0.00	0.00	0.25	0.22	0.00	0.00	0.53
FFUFU	0.00	0.00	0.00	0.00	0.00	0.35	0.31	0.00	0.34	0.00
FFUFF	0.00	0.00	0.00	0.00	0.00	0.35	0.31	0.00	0.34	0.00
FFFUU	0.00	0.00	0.00	0.00	0.00	0.45	0.40	0.15	0.00	0.00
FFFUF	0.00	0.00	0.00	0.00	0.00	0.45	0.40	0.15	0.00	0.00
FFFFU	0.00	0.00	0.00	0.00	0.00	0.45	0.40	0.15	0.00	0.00
FFFFF	0.00	0.00	0.00	0.00	0.00	0.45	0.40	0.15	0.00	0.00

Note: The responsibility measure is the normalized version of raw responsibility.

Table A5: Responsibility for voters in BF Model - Punishment Treatment (Allocation 8,2 vs. 6,4)

	BF Responsibility (U)					BF Responsibility (F)				
Scenario	Voter 1	Voter 2	Voter 3	Voter 4	Voter 5	Voter 1	Voter 2	Voter 3	Voter 4	Voter 5
UUUUU	0.42	0.33	0.25	0.00	0.00	0.00	0.00	0.00	0.00	0.00
UUUUF	0.42	0.33	0.25	0.00	0.00	0.00	0.00	0.00	0.00	0.00
UUUFU	0.42	0.33	0.25	0.00	0.00	0.00	0.00	0.00	0.00	0.00
UUUFF	0.42	0.33	0.25	0.00	0.00	0.00	0.00	0.00	0.00	0.00
UUFUU	0.35	0.27	0.00	0.37	0.00	0.00	0.00	0.00	0.00	0.00
UUFUF	0.35	0.27	0.00	0.37	0.00	0.00	0.00	0.00	0.00	0.00
UUFFU	0.26	0.20	0.00	0.00	0.54	0.00	0.00	0.00	0.00	0.00
UUFFF	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.12	0.27	0.61
UFUUU	0.28	0.00	0.36	0.36	0.00	0.00	0.00	0.00	0.00	0.00
UFUUF	0.28	0.00	0.36	0.36	0.00	0.00	0.00	0.00	0.00	0.00
UFUFU	0.21	0.00	0.26	0.00	0.53	0.00	0.00	0.00	0.00	0.00
UFUFF	0.00	0.00	0.00	0.00	0.00	0.00	0.26	0.00	0.29	0.44
UFFUU	0.21	0.00	0.00	0.26	0.53	0.00	0.00	0.00	0.00	0.00
UFFUF	0.00	0.00	0.00	0.00	0.00	0.00	0.27	0.29	0.00	0.45
UFFFU	0.00	0.00	0.00	0.00	0.00	0.00	0.37	0.40	0.23	0.00
UFFFF	0.00	0.00	0.00	0.00	0.00	0.00	0.37	0.40	0.23	0.00
FUUUU	0.00	0.34	0.29	0.37	0.00	0.00	0.00	0.00	0.00	0.00
FUUUF	0.00	0.34	0.29	0.37	0.00	0.00	0.00	0.00	0.00	0.00
FUUFU	0.00	0.27	0.23	0.00	0.51	0.00	0.00	0.00	0.00	0.00
FUUFF	0.00	0.00	0.00	0.00	0.00	0.21	0.00	0.00	0.22	0.57
FUFUU	0.00	0.24	0.00	0.31	0.45	0.00	0.00	0.00	0.00	0.00
FUFUF	0.00	0.00	0.00	0.00	0.00	0.19	0.00	0.30	0.00	0.51
FUFFU	0.00	0.00	0.00	0.00	0.00	0.27	0.00	0.43	0.30	0.00
FUFFF	0.00	0.00	0.00	0.00	0.00	0.27	0.00	0.43	0.30	0.00
FFUUU	0.00	0.00	0.22	0.32	0.46	0.00	0.00	0.00	0.00	0.00
FFUUF	0.00	0.00	0.00	0.00	0.00	0.20	0.22	0.00	0.00	0.58
FFUFU	0.00	0.00	0.00	0.00	0.00	0.29	0.32	0.00	0.39	0.00
FFUFF	0.00	0.00	0.00	0.00	0.00	0.29	0.32	0.00	0.39	0.00
FFFUU	0.00	0.00	0.00	0.00	0.00	0.41	0.46	0.13	0.00	0.00
FFFUF	0.00	0.00	0.00	0.00	0.00	0.41	0.46	0.13	0.00	0.00
FFFFU	0.00	0.00	0.00	0.00	0.00	0.41	0.46	0.13	0.00	0.00
FFFFF	0.00	0.00	0.00	0.00	0.00	0.41	0.46	0.13	0.00	0.00

Table A6: Responsibility for voters in BF Model - Reward Treatment (Allocation 9,1 vs. 5,5)

	BF Responsibility (U)					BF Responsibility (F)				
Scenario	Voter 1	Voter 2	Voter 3	Voter 4	Voter 5	Voter 1	Voter 2	Voter 3	Voter 4	Voter 5
UUUUU	0.32	0.46	0.22	0.00	0.00	0.00	0.00	0.00	0.00	0.00
UUUUF	0.32	0.46	0.22	0.00	0.00	0.00	0.00	0.00	0.00	0.00
UUUFU	0.32	0.46	0.22	0.00	0.00	0.00	0.00	0.00	0.00	0.00
UUUFF	0.32	0.46	0.22	0.00	0.00	0.00	0.00	0.00	0.00	0.00
UUFUU	0.26	0.38	0.00	0.35	0.00	0.00	0.00	0.00	0.00	0.00
UUFUF	0.26	0.38	0.00	0.35	0.00	0.00	0.00	0.00	0.00	0.00
UUFFU	0.19	0.28	0.00	0.00	0.52	0.00	0.00	0.00	0.00	0.00
UUFFF	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.11	0.22	0.67
UFUUU	0.25	0.00	0.45	0.29	0.00	0.00	0.00	0.00	0.00	0.00
UFUUF	0.25	0.00	0.45	0.29	0.00	0.00	0.00	0.00	0.00	0.00
UFUFU	0.18	0.00	0.33	0.00	0.49	0.00	0.00	0.00	0.00	0.00
UFUFF	0.00	0.00	0.00	0.00	0.00	0.00	0.13	0.00	0.24	0.63
UFFUU	0.18	0.00	0.00	0.45	0.36	0.00	0.00	0.00	0.00	0.00
UFFUF	0.00	0.00	0.00	0.00	0.00	0.00	0.12	0.22	0.00	0.66
UFFFU	0.00	0.00	0.00	0.00	0.00	0.00	0.18	0.34	0.48	0.00
UFFFF	0.00	0.00	0.00	0.00	0.00	0.00	0.18	0.34	0.48	0.00
FUUUU	0.00	0.43	0.34	0.23	0.00	0.00	0.00	0.00	0.00	0.00
FUUUF	0.00	0.43	0.34	0.23	0.00	0.00	0.00	0.00	0.00	0.00
FUUFU	0.00	0.34	0.27	0.00	0.39	0.00	0.00	0.00	0.00	0.00
FUUFF	0.00	0.00	0.00	0.00	0.00	0.15	0.00	0.00	0.16	0.69
FUFUU	0.00	0.31	0.00	0.37	0.31	0.00	0.00	0.00	0.00	0.00
FUFUF	0.00	0.00	0.00	0.00	0.00	0.13	0.00	0.21	0.00	0.66
FUFFU	0.00	0.00	0.00	0.00	0.00	0.19	0.00	0.30	0.52	0.00
FUFFF	0.00	0.00	0.00	0.00	0.00	0.19	0.00	0.30	0.52	0.00
FFUUU	0.00	0.00	0.24	0.37	0.39	0.00	0.00	0.00	0.00	0.00
FFUUF	0.00	0.00	0.00	0.00	0.00	0.14	0.22	0.00	0.00	0.64
FFUFU	0.00	0.00	0.00	0.00	0.00	0.20	0.32	0.00	0.48	0.00
FFUFF	0.00	0.00	0.00	0.00	0.00	0.20	0.32	0.00	0.48	0.00
FFFUU	0.00	0.00	0.00	0.00	0.00	0.28	0.43	0.29	0.00	0.00
FFFUF	0.00	0.00	0.00	0.00	0.00	0.28	0.43	0.29	0.00	0.00
FFFFU	0.00	0.00	0.00	0.00	0.00	0.28	0.43	0.29	0.00	0.00
FFFFF	0.00	0.00	0.00	0.00	0.00	0.28	0.43	0.29	0.00	0.00

Table A7: Responsibility for voters in BF Model - Reward Treatment (Allocation 8,2 vs. 6,4)

	BF Responsibility (U)					BF Responsibility (F)				
Scenario	Voter 1	Voter 2	Voter 3	Voter 4	Voter 5	Voter 1	Voter 2	Voter 3	Voter 4	Voter 5
UUUUU	0.40	0.42	0.18	0.00	0.00	0.00	0.00	0.00	0.00	0.00
UUUUF	0.40	0.42	0.18	0.00	0.00	0.00	0.00	0.00	0.00	0.00
UUUFU	0.40	0.42	0.18	0.00	0.00	0.00	0.00	0.00	0.00	0.00
UUUFF	0.40	0.42	0.18	0.00	0.00	0.00	0.00	0.00	0.00	0.00
UUFUU	0.34	0.36	0.00	0.30	0.00	0.00	0.00	0.00	0.00	0.00
UUFUF	0.34	0.36	0.00	0.30	0.00	0.00	0.00	0.00	0.00	0.00
UUFFU	0.25	0.26	0.00	0.00	0.49	0.00	0.00	0.00	0.00	0.00
UUFFF	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.11	0.30	0.60
UFUUU	0.30	0.00	0.26	0.44	0.00	0.00	0.00	0.00	0.00	0.00
UFUUF	0.30	0.00	0.26	0.44	0.00	0.00	0.00	0.00	0.00	0.00
UFUFU	0.23	0.00	0.20	0.00	0.57	0.00	0.00	0.00	0.00	0.00
UFUFF	0.00	0.00	0.00	0.00	0.00	0.00	0.22	0.00	0.27	0.51
UFFUU	0.25	0.00	0.00	0.30	0.46	0.00	0.00	0.00	0.00	0.00
UFFUF	0.00	0.00	0.00	0.00	0.00	0.00	0.20	0.19	0.00	0.61
UFFFU	0.00	0.00	0.00	0.00	0.00	0.00	0.29	0.27	0.44	0.00
UFFFF	0.00	0.00	0.00	0.00	0.00	0.00	0.29	0.27	0.44	0.00
FUUUU	0.00	0.40	0.40	0.20	0.00	0.00	0.00	0.00	0.00	0.00
FUUUF	0.00	0.40	0.40	0.20	0.00	0.00	0.00	0.00	0.00	0.00
FUUFU	0.00	0.30	0.29	0.00	0.41	0.00	0.00	0.00	0.00	0.00
FUUFF	0.00	0.00	0.00	0.00	0.00	0.14	0.00	0.00	0.26	0.61
FUFUU	0.00	0.29	0.00	0.28	0.43	0.00	0.00	0.00	0.00	0.00
FUFUF	0.00	0.00	0.00	0.00	0.00	0.14	0.00	0.29	0.00	0.57
FUFFU	0.00	0.00	0.00	0.00	0.00	0.19	0.00	0.41	0.40	0.00
FUFFF	0.00	0.00	0.00	0.00	0.00	0.19	0.00	0.41	0.40	0.00
FFUUU	0.00	0.00	0.22	0.30	0.49	0.00	0.00	0.00	0.00	0.00
FFUUF	0.00	0.00	0.00	0.00	0.00	0.16	0.19	0.00	0.00	0.65
FFUFU	0.00	0.00	0.00	0.00	0.00	0.22	0.28	0.00	0.50	0.00
FFUFF	0.00	0.00	0.00	0.00	0.00	0.22	0.28	0.00	0.50	0.00
FFFUU	0.00	0.00	0.00	0.00	0.00	0.33	0.41	0.27	0.00	0.00
FFFUF	0.00	0.00	0.00	0.00	0.00	0.33	0.41	0.27	0.00	0.00
FFFFU	0.00	0.00	0.00	0.00	0.00	0.33	0.41	0.27	0.00	0.00
FFFFF	0.00	0.00	0.00	0.00	0.00	0.33	0.41	0.27	0.00	0.00

Table A8: Responsibility for voters in BF Model - Both Treatment (Allocation 9,1 vs. 5,5)

	BF Responsibility (U)					BF Responsibility (F)				
Scenario	Voter 1	Voter 2	Voter 3	Voter 4	Voter 5	Voter 1	Voter 2	Voter 3	Voter 4	Voter 5
UUUUU	0.36	0.34	0.31	0.00	0.00	0.00	0.00	0.00	0.00	0.00
UUUUF	0.36	0.34	0.31	0.00	0.00	0.00	0.00	0.00	0.00	0.00
UUUFU	0.36	0.34	0.31	0.00	0.00	0.00	0.00	0.00	0.00	0.00
UUUFF	0.36	0.34	0.31	0.00	0.00	0.00	0.00	0.00	0.00	0.00
UUFUU	0.30	0.28	0.00	0.42	0.00	0.00	0.00	0.00	0.00	0.00
UUFUF	0.30	0.28	0.00	0.42	0.00	0.00	0.00	0.00	0.00	0.00
UUFFU	0.24	0.23	0.00	0.00	0.54	0.00	0.00	0.00	0.00	0.00
UUFFF	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.14	0.21	0.65
UFUUU	0.27	0.00	0.41	0.32	0.00	0.00	0.00	0.00	0.00	0.00
UFUUF	0.27	0.00	0.41	0.32	0.00	0.00	0.00	0.00	0.00	0.00
UFUFU	0.21	0.00	0.32	0.00	0.47	0.00	0.00	0.00	0.00	0.00
UFUFF	0.00	0.00	0.00	0.00	0.00	0.00	0.21	0.00	0.23	0.56
UFFUU	0.20	0.00	0.00	0.24	0.56	0.00	0.00	0.00	0.00	0.00
UFFUF	0.00	0.00	0.00	0.00	0.00	0.00	0.22	0.28	0.00	0.50
UFFFU	0.00	0.00	0.00	0.00	0.00	0.00	0.31	0.39	0.30	0.00
UFFFF	0.00	0.00	0.00	0.00	0.00	0.00	0.31	0.39	0.30	0.00
FUUUU	0.00	0.34	0.30	0.36	0.00	0.00	0.00	0.00	0.00	0.00
FUUUF	0.00	0.34	0.30	0.36	0.00	0.00	0.00	0.00	0.00	0.00
FUUFU	0.00	0.27	0.24	0.00	0.49	0.00	0.00	0.00	0.00	0.00
FUUFF	0.00	0.00	0.00	0.00	0.00	0.16	0.00	0.00	0.20	0.65
FUFUU	0.00	0.25	0.00	0.23	0.52	0.00	0.00	0.00	0.00	0.00
FUFUF	0.00	0.00	0.00	0.00	0.00	0.16	0.00	0.28	0.00	0.57
FUFFU	0.00	0.00	0.00	0.00	0.00	0.21	0.00	0.37	0.43	0.00
FUFFF	0.00	0.00	0.00	0.00	0.00	0.21	0.00	0.37	0.43	0.00
FFUUU	0.00	0.00	0.15	0.34	0.50	0.00	0.00	0.00	0.00	0.00
FFUUF	0.00	0.00	0.00	0.00	0.00	0.16	0.24	0.00	0.00	0.60
FFUFU	0.00	0.00	0.00	0.00	0.00	0.24	0.38	0.00	0.38	0.00
FFUFF	0.00	0.00	0.00	0.00	0.00	0.24	0.38	0.00	0.38	0.00
FFFUU	0.00	0.00	0.00	0.00	0.00	0.33	0.51	0.17	0.00	0.00
FFFUF	0.00	0.00	0.00	0.00	0.00	0.33	0.51	0.17	0.00	0.00
FFFFU	0.00	0.00	0.00	0.00	0.00	0.33	0.51	0.17	0.00	0.00
FFFFF	0.00	0.00	0.00	0.00	0.00	0.33	0.51	0.17	0.00	0.00

Table A9: Responsibility for voters in BF Model - Both Treatment (Allocation 8,2 vs. 6,4)

	BF Responsibility (U)					BF Responsibility (F)				
Scenario	Voter 1	Voter 2	Voter 3	Voter 4	Voter 5	Voter 1	Voter 2	Voter 3	Voter 4	Voter 5
UUUUU	0.33	0.24	0.43	0.00	0.00	0.00	0.00	0.00	0.00	0.00
UUUUF	0.33	0.24	0.43	0.00	0.00	0.00	0.00	0.00	0.00	0.00
UUUFU	0.33	0.24	0.43	0.00	0.00	0.00	0.00	0.00	0.00	0.00
UUUFF	0.33	0.24	0.43	0.00	0.00	0.00	0.00	0.00	0.00	0.00
UUFUU	0.25	0.19	0.00	0.56	0.00	0.00	0.00	0.00	0.00	0.00
UUFUF	0.25	0.19	0.00	0.56	0.00	0.00	0.00	0.00	0.00	0.00
UUFFU	0.19	0.14	0.00	0.00	0.67	0.00	0.00	0.00	0.00	0.00
UUFFF	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.21	0.31	0.48
UFUUU	0.24	0.00	0.34	0.42	0.00	0.00	0.00	0.00	0.00	0.00
UFUUF	0.24	0.00	0.34	0.42	0.00	0.00	0.00	0.00	0.00	0.00
UFUFU	0.18	0.00	0.25	0.00	0.56	0.00	0.00	0.00	0.00	0.00
UFUFF	0.00	0.00	0.00	0.00	0.00	0.00	0.23	0.00	0.28	0.49
UFFUU	0.19	0.00	0.00	0.24	0.58	0.00	0.00	0.00	0.00	0.00
UFFUF	0.00	0.00	0.00	0.00	0.00	0.00	0.23	0.26	0.00	0.51
UFFFU	0.00	0.00	0.00	0.00	0.00	0.00	0.32	0.36	0.32	0.00
UFFFF	0.00	0.00	0.00	0.00	0.00	0.00	0.32	0.36	0.32	0.00
FUUUU	0.00	0.24	0.37	0.38	0.00	0.00	0.00	0.00	0.00	0.00
FUUUF	0.00	0.24	0.37	0.38	0.00	0.00	0.00	0.00	0.00	0.00
FUUFU	0.00	0.18	0.28	0.00	0.54	0.00	0.00	0.00	0.00	0.00
FUUFF	0.00	0.00	0.00	0.00	0.00	0.20	0.00	0.00	0.28	0.52
FUFUU	0.00	0.18	0.00	0.20	0.61	0.00	0.00	0.00	0.00	0.00
FUFUF	0.00	0.00	0.00	0.00	0.00	0.22	0.00	0.29	0.00	0.49
FUFFU	0.00	0.00	0.00	0.00	0.00	0.29	0.00	0.39	0.32	0.00
FUFFF	0.00	0.00	0.00	0.00	0.00	0.29	0.00	0.39	0.32	0.00
FFUUU	0.00	0.00	0.15	0.31	0.54	0.00	0.00	0.00	0.00	0.00
FFUUF	0.00	0.00	0.00	0.00	0.00	0.21	0.21	0.00	0.00	0.58
FFUFU	0.00	0.00	0.00	0.00	0.00	0.32	0.31	0.00	0.37	0.00
FFUFF	0.00	0.00	0.00	0.00	0.00	0.32	0.31	0.00	0.37	0.00
FFFUU	0.00	0.00	0.00	0.00	0.00	0.41	0.41	0.18	0.00	0.00
FFFUF	0.00	0.00	0.00	0.00	0.00	0.41	0.41	0.18	0.00	0.00
FFFFU	0.00	0.00	0.00	0.00	0.00	0.41	0.41	0.18	0.00	0.00
FFFFF	0.00	0.00	0.00	0.00	0.00	0.41	0.41	0.18	0.00	0.00

Table A10: Causal Responsibility for voters in simple variant of Engl Model - Punishment Treatment (Allocation 9,1 vs. 5,5)

	Ex-post Responsibility (U)					Ex-ante Responsibility (U)					Ex-post Responsibility (F)					Ex-ante Responsibility (F)				
Scenario	Voter 1	Voter 2	Voter 3	Voter 4	Voter 5	Voter 1	Voter 2	Voter 3	Voter 4	Voter 5	Voter 1	Voter 2	Voter 3	Voter 4	Voter 5	Voter 1	Voter 2	Voter 3	Voter 4	Voter 5
UUUUU	0.65	0.40	0.16	0.00	0.00	0.54	0.37	0.16	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.06	0.04	0.00	0.00	0.00
UUUUF	0.65	0.40	0.16	0.00	0.00	0.54	0.37	0.16	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.06	0.04	0.00	0.00	0.00
UUUFU	0.65	0.40	0.16	0.00	0.00	0.54	0.37	0.16	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.06	0.04	0.00	0.00	0.00
UUUFF	0.65	0.40	0.16	0.00	0.00	0.54	0.37	0.16	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.06	0.04	0.00	0.00	0.00
UUFUU	0.65	0.40	0.00	0.37	0.00	0.54	0.37	0.00	0.37	0.00	0.00	0.00	0.00	0.00	0.00	0.06	0.04	0.16	0.00	0.00
UUFUF	0.65	0.40	0.00	0.37	0.00	0.54	0.37	0.00	0.37	0.00	0.00	0.00	0.00	0.00	0.00	0.06	0.04	0.16	0.00	0.00
UUFFU	0.65	0.40	0.00	0.00	1.00	0.54	0.37	0.00	0.00	1.00	0.00	0.00	0.00	0.00	0.00	0.06	0.04	0.16	0.37	0.00
UUFFF	0.00	0.00	0.00	0.00	0.00	0.54	0.37	0.00	0.00	0.00	0.35	0.60	1.00	1.00	1.00	0.06	0.04	0.16	0.37	1.00
UFUUU	0.65	0.07	0.81	0.47	0.00	0.54	0.04	0.66	0.47	0.00	0.00	0.00	0.00	0.00	0.00	0.06	0.37	0.03	0.00	0.00
UFUUF	0.65	0.07	0.81	0.47	0.00	0.54	0.04	0.66	0.47	0.00	0.00	0.00	0.00	0.00	0.00	0.06	0.37	0.03	0.00	0.00
UFUFU	0.65	0.07	0.81	0.00	1.00	0.54	0.04	0.66	0.00	1.00	0.00	0.00	0.00	0.00	0.00	0.06	0.37	0.03	0.47	0.00
UFUFF	0.00	0.00	0.00	0.00	0.00	0.54	0.04	0.66	0.00	0.00	0.35	0.93	0.19	1.00	1.00	0.06	0.37	0.03	0.47	1.00
UFFUU	0.65	0.07	0.19	1.00	1.00	0.54	0.04	0.03	0.40	1.00	0.00	0.00	0.00	0.00	0.00	0.06	0.37	0.66	0.00	0.00
UFFUF	0.00	0.00	0.00	0.00	0.00	0.54	0.04	0.03	0.40	0.00	0.35	0.93	0.81	0.00	1.00	0.06	0.37	0.66	0.00	1.00
UFFFU	0.00	0.00	0.00	0.00	0.00	0.54	0.04	0.03	0.00	0.00	0.35	0.93	0.81	0.40	0.00	0.06	0.37	0.66	0.40	0.00
UFFFF	0.00	0.00	0.00	0.00	0.00	0.54	0.04	0.03	0.00	0.00	0.35	0.93	0.81	0.40	0.00	0.06	0.37	0.66	0.40	0.00
FUUUU	0.18	0.91	0.70	0.37	0.00	0.05	0.57	0.58	0.37	0.00	0.00	0.00	0.00	0.00	0.00	0.54	0.03	0.05	0.00	0.00
FUUUF	0.18	0.91	0.70	0.37	0.00	0.05	0.57	0.58	0.37	0.00	0.00	0.00	0.00	0.00	0.00	0.54	0.03	0.05	0.00	0.00
FUUFU	0.18	0.91	0.70	0.00	1.00	0.05	0.57	0.58	0.00	1.00	0.00	0.00	0.00	0.00	0.00	0.54	0.03	0.05	0.37	0.00
FUUFF	0.00	0.00	0.00	0.00	0.00	0.05	0.57	0.58	0.00	0.00	0.82	0.09	0.30	1.00	1.00	0.54	0.03	0.05	0.37	1.00
FUFUU	0.18	0.91	0.17	1.00	1.00	0.05	0.57	0.05	0.63	1.00	0.00	0.00	0.00	0.00	0.00	0.54	0.03	0.58	0.00	0.00
FUFUF	0.00	0.00	0.00	0.00	0.00	0.05	0.57	0.05	0.63	0.00	0.82	0.09	0.83	0.00	1.00	0.54	0.03	0.58	0.00	1.00
FUFFU	0.00	0.00	0.00	0.00	0.00	0.05	0.57	0.05	0.00	0.00	0.82	0.09	0.83	0.63	0.00	0.54	0.03	0.58	0.63	0.00
FUFFF	0.00	0.00	0.00	0.00	0.00	0.05	0.57	0.05	0.00	0.00	0.82	0.09	0.83	0.63	0.00	0.54	0.03	0.58	0.63	0.00
FFUUU	0.18	0.37	1.00	1.00	1.00	0.05	0.03	0.28	0.60	1.00	0.00	0.00	0.00	0.00	0.00	0.54	0.57	0.00	0.00	0.00
FFUUF	0.00	0.00	0.00	0.00	0.00	0.05	0.03	0.28	0.60	0.00	0.82	0.63	0.00	0.00	1.00	0.54	0.57	0.00	0.00	1.00
FFUFU	0.00	0.00	0.00	0.00	0.00	0.05	0.03	0.28	0.00	0.00	0.82	0.63	0.00	0.00	0.00	0.54	0.57	0.00	0.60	0.00
FFUFF	0.00	0.00	0.00	0.00	0.00	0.05	0.03	0.28	0.00	0.00	0.82	0.63	0.00	0.60	0.00	0.54	0.57	0.00	0.60	0.00
FFFUU	0.00	0.00	0.00	0.00	0.00	0.05	0.03	0.00	0.00	0.00	0.82	0.63	0.28	0.00	0.00	0.54	0.57	0.28	0.00	0.00
FFFUF	0.00	0.00	0.00	0.00	0.00	0.05	0.03	0.00	0.00	0.00	0.82	0.63	0.28	0.00	0.00	0.54	0.57	0.28	0.00	0.00
FFFFU	0.00	0.00	0.00	0.00	0.00	0.05	0.03	0.00	0.00	0.00	0.82	0.63	0.28	0.00	0.00	0.54	0.57	0.28	0.00	0.00
FFFFF	0.00	0.00	0.00	0.00	0.00	0.05	0.03	0.00	0.00	0.00	0.82	0.63	0.28	0.00	0.00	0.54	0.57	0.28	0.00	0.00

Table A11: Causal Responsibility for voters in simple variant of Engl Model - Punishment Treatment (Allocation 8,2 vs. 6,4)

	Ex-post Responsibility (U)					Ex-ante Responsibility (U)					Ex-post Responsibility (F)					Ex-ante Responsibility (F)				
Scenario	Voter 1	Voter 2	Voter 3	Voter 4	Voter 5	Voter 1	Voter 2	Voter 3	Voter 4	Voter 5	Voter 1	Voter 2	Voter 3	Voter 4	Voter 5	Voter 1	Voter 2	Voter 3	Voter 4	Voter 5
UUUUU	0.72	0.56	0.23	0.00	0.00	0.50	0.49	0.23	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.08	0.06	0.00	0.00	0.00
UUUUF	0.72	0.56	0.23	0.00	0.00	0.50	0.49	0.23	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.08	0.06	0.00	0.00	0.00
UUUFU	0.72	0.56	0.23	0.00	0.00	0.50	0.49	0.23	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.08	0.06	0.00	0.00	0.00
UUUFF	0.72	0.56	0.23	0.00	0.00	0.50	0.49	0.23	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.08	0.06	0.00	0.00	0.00
UUFUU	0.72	0.56	0.00	0.47	0.00	0.50	0.49	0.00	0.47	0.00	0.00	0.00	0.00	0.00	0.00	0.08	0.06	0.23	0.00	0.00
UUFUF	0.72	0.56	0.00	0.47	0.00	0.50	0.49	0.00	0.47	0.00	0.00	0.00	0.00	0.00	0.00	0.08	0.06	0.23	0.00	0.00
UUFFU	0.72	0.56	0.00	0.00	1.00	0.50	0.49	0.00	0.00	1.00	0.00	0.00	0.00	0.00	0.00	0.08	0.06	0.23	0.47	0.00
UUFFF	0.00	0.00	0.00	0.00	0.00	0.50	0.49	0.00	0.00	0.00	0.28	0.44	1.00	1.00	1.00	0.08	0.06	0.23	0.47	1.00
UFUUU	0.72	0.13	0.84	0.57	0.00	0.50	0.06	0.60	0.57	0.00	0.00	0.00	0.00	0.00	0.00	0.08	0.49	0.05	0.00	0.00
UFUUF	0.72	0.13	0.84	0.57	0.00	0.50	0.06	0.60	0.57	0.00	0.00	0.00	0.00	0.00	0.00	0.08	0.49	0.05	0.00	0.00
UFUFU	0.72	0.13	0.84	0.00	1.00	0.50	0.06	0.60	0.00	1.00	0.00	0.00	0.00	0.00	0.00	0.08	0.49	0.05	0.57	0.00
UFUFF	0.00	0.00	0.00	0.00	0.00	0.50	0.06	0.60	0.00	0.00	0.28	0.87	0.16	1.00	1.00	0.08	0.49	0.05	0.57	1.00
UFFUU	0.72	0.13	0.28	1.00	1.00	0.50	0.06	0.05	0.43	1.00	0.00	0.00	0.00	0.00	0.00	0.08	0.49	0.60	0.00	0.00
UFFUF	0.00	0.00	0.00	0.00	0.00	0.50	0.06	0.05	0.43	0.00	0.28	0.87	0.72	0.00	1.00	0.08	0.49	0.60	0.00	1.00
UFFFU	0.00	0.00	0.00	0.00	0.00	0.50	0.06	0.05	0.00	0.00	0.28	0.87	0.72	0.43	0.00	0.08	0.49	0.60	0.43	0.00
UFFFF	0.00	0.00	0.00	0.00	0.00	0.50	0.06	0.05	0.00	0.00	0.28	0.87	0.72	0.43	0.00	0.08	0.49	0.60	0.43	0.00
FUUUU	0.30	0.94	0.79	0.47	0.00	0.06	0.49	0.58	0.47	0.00	0.00	0.00	0.00	0.00	0.00	0.50	0.03	0.06	0.00	0.00
FUUUF	0.30	0.94	0.79	0.47	0.00	0.06	0.49	0.58	0.47	0.00	0.00	0.00	0.00	0.00	0.00	0.50	0.03	0.06	0.00	0.00
FUUFU	0.30	0.94	0.79	0.00	1.00	0.06	0.49	0.58	0.00	1.00	0.00	0.00	0.00	0.00	0.00	0.50	0.03	0.06	0.47	0.00
FUUFF	0.00	0.00	0.00	0.00	0.00	0.06	0.49	0.58	0.00	0.00	0.70	0.06	0.21	1.00	1.00	0.50	0.03	0.06	0.47	1.00
FUFUU	0.30	0.94	0.26	1.00	1.00	0.06	0.49	0.06	0.53	1.00	0.00	0.00	0.00	0.00	0.00	0.50	0.03	0.58	0.00	0.00
FUFUF	0.00	0.00	0.00	0.00	0.00	0.06	0.49	0.06	0.53	0.00	0.70	0.06	0.74	0.00	1.00	0.50	0.03	0.58	0.00	1.00
FUFFU	0.00	0.00	0.00	0.00	0.00	0.06	0.49	0.06	0.00	0.00	0.70	0.06	0.74	0.53	0.00	0.50	0.03	0.58	0.53	0.00
FUFFF	0.00	0.00	0.00	0.00	0.00	0.06	0.49	0.06	0.00	0.00	0.70	0.06	0.74	0.53	0.00	0.50	0.03	0.58	0.53	0.00
FFUUU	0.30	0.47	1.00	1.00	1.00	0.06	0.03	0.26	0.57	1.00	0.00	0.00	0.00	0.00	0.00	0.50	0.49	0.00	0.00	0.00
FFUUF	0.00	0.00	0.00	0.00	0.00	0.06	0.03	0.26	0.57	0.00	0.70	0.53	0.00	0.00	1.00	0.50	0.49	0.00	0.00	1.00
FFUFU	0.00	0.00	0.00	0.00	0.00	0.06	0.03	0.26	0.00	0.00	0.70	0.53	0.00	0.00	0.00	0.50	0.49	0.00	0.57	0.00
FFUFF	0.00	0.00	0.00	0.00	0.00	0.06	0.03	0.26	0.00	0.00	0.70	0.53	0.00	0.57	0.00	0.50	0.49	0.00	0.57	0.00
FFFUU	0.00	0.00	0.00	0.00	0.00	0.06	0.03	0.00	0.00	0.00	0.70	0.53	0.26	0.00	0.00	0.50	0.49	0.26	0.00	0.00
FFFUF	0.00	0.00	0.00	0.00	0.00	0.06	0.03	0.00	0.00	0.00	0.70	0.53	0.26	0.00	0.00	0.50	0.49	0.26	0.00	0.00
FFFFU	0.00	0.00	0.00	0.00	0.00	0.06	0.03	0.00	0.00	0.00	0.70	0.53	0.26	0.00	0.00	0.50	0.49	0.26	0.00	0.00
FFFFF	0.00	0.00	0.00	0.00	0.00	0.06	0.03	0.00	0.00	0.00	0.70	0.53	0.26	0.00	0.00	0.50	0.49	0.26	0.00	0.00

Table A12: Causal Responsibility for voters in simple variant of Engl Model - Reward Treatment (Allocation 9,1 vs. 5,5)

	Ex-post Responsibility (U)					Ex-ante Responsibility (U)					Ex-post Responsibility (F)					Ex-ante Responsibility (F)				
Scenario	Voter 1	Voter 2	Voter 3	Voter 4	Voter 5	Voter 1	Voter 2	Voter 3	Voter 4	Voter 5	Voter 1	Voter 2	Voter 3	Voter 4	Voter 5	Voter 1	Voter 2	Voter 3	Voter 4	Voter 5
UUUUU	0.61	0.44	0.20	0.00	0.00	0.42	0.40	0.20	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.12	0.06	0.00	0.00	0.00
UUUUF	0.61	0.44	0.20	0.00	0.00	0.42	0.40	0.20	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.12	0.06	0.00	0.00	0.00
UUUFU	0.61	0.44	0.20	0.00	0.00	0.42	0.40	0.20	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.12	0.06	0.00	0.00	0.00
UUUFF	0.61	0.44	0.20	0.00	0.00	0.42	0.40	0.20	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.12	0.06	0.00	0.00	0.00
UUFUU	0.61	0.44	0.00	0.40	0.00	0.42	0.40	0.00	0.40	0.00	0.00	0.00	0.00	0.00	0.00	0.12	0.06	0.20	0.00	0.00
UUFUF	0.61	0.44	0.00	0.40	0.00	0.42	0.40	0.00	0.40	0.00	0.00	0.00	0.00	0.00	0.00	0.12	0.06	0.20	0.00	0.00
UUFFU	0.61	0.44	0.00	0.00	1.00	0.42	0.40	0.00	0.00	1.00	0.00	0.00	0.00	0.00	0.00	0.12	0.06	0.20	0.40	0.00
UUFFF	0.00	0.00	0.00	0.00	0.00	0.42	0.40	0.00	0.00	0.00	0.39	0.56	1.00	1.00	1.00	0.12	0.06	0.20	0.40	1.00
UFUUU	0.61	0.10	0.67	0.40	0.00	0.42	0.06	0.56	0.40	0.00	0.00	0.00	0.00	0.00	0.00	0.12	0.40	0.06	0.00	0.00
UFUUF	0.61	0.10	0.67	0.40	0.00	0.42	0.06	0.56	0.40	0.00	0.00	0.00	0.00	0.00	0.00	0.12	0.40	0.06	0.00	0.00
UFUFU	0.61	0.10	0.67	0.00	1.00	0.42	0.06	0.56	0.00	1.00	0.00	0.00	0.00	0.00	0.00	0.12	0.40	0.06	0.40	0.00
UFUFF	0.00	0.00	0.00	0.00	0.00	0.42	0.06	0.56	0.00	0.00	0.39	0.90	0.33	1.00	1.00	0.12	0.40	0.06	0.40	1.00
UFFUU	0.61	0.10	0.17	1.00	1.00	0.42	0.06	0.06	0.70	1.00	0.00	0.00	0.00	0.00	0.00	0.12	0.40	0.56	0.00	0.00
UFFUF	0.00	0.00	0.00	0.00	0.00	0.42	0.06	0.06	0.70	0.00	0.39	0.90	0.83	0.00	1.00	0.12	0.40	0.56	0.00	1.00
UFFFU	0.00	0.00	0.00	0.00	0.00	0.42	0.06	0.06	0.00	0.00	0.39	0.90	0.83	0.70	0.00	0.12	0.40	0.56	0.70	0.00
UFFFF	0.00	0.00	0.00	0.00	0.00	0.42	0.06	0.06	0.00	0.00	0.39	0.90	0.83	0.70	0.00	0.12	0.40	0.56	0.70	0.00
FUUUU	0.32	0.85	0.58	0.30	0.00	0.10	0.55	0.50	0.30	0.00	0.00	0.00	0.00	0.00	0.00	0.42	0.05	0.06	0.00	0.00
FUUUF	0.32	0.85	0.58	0.30	0.00	0.10	0.55	0.50	0.30	0.00	0.00	0.00	0.00	0.00	0.00	0.42	0.05	0.06	0.00	0.00
FUUFU	0.32	0.85	0.58	0.00	1.00	0.10	0.55	0.50	0.00	1.00	0.00	0.00	0.00	0.00	0.00	0.42	0.05	0.06	0.30	0.00
FUUFF	0.00	0.00	0.00	0.00	0.00	0.10	0.55	0.50	0.00	0.00	0.68	0.15	0.42	1.00	1.00	0.42	0.05	0.06	0.30	1.00
FUFUU	0.32	0.85	0.14	1.00	1.00	0.10	0.55	0.06	0.73	1.00	0.00	0.00	0.00	0.00	0.00	0.42	0.05	0.50	0.00	0.00
FUFUF	0.00	0.00	0.00	0.00	0.00	0.10	0.55	0.06	0.73	0.00	0.68	0.15	0.86	0.00	1.00	0.42	0.05	0.50	0.00	1.00
FUFFU	0.00	0.00	0.00	0.00	0.00	0.10	0.55	0.06	0.00	0.00	0.68	0.15	0.86	0.73	0.00	0.42	0.05	0.50	0.73	0.00
FUFFF	0.00	0.00	0.00	0.00	0.00	0.10	0.55	0.06	0.00	0.00	0.68	0.15	0.86	0.73	0.00	0.42	0.05	0.50	0.73	0.00
FFUUU	0.32	0.35	1.00	1.00	1.00	0.10	0.05	0.36	0.67	1.00	0.00	0.00	0.00	0.00	0.00	0.42	0.55	0.00	0.00	0.00
FFUUF	0.00	0.00	0.00	0.00	0.00	0.10	0.05	0.36	0.67	0.00	0.68	0.65	0.00	0.00	1.00	0.42	0.55	0.00	0.00	1.00
FFUFU	0.00	0.00	0.00	0.00	0.00	0.10	0.05	0.36	0.00	0.00	0.68	0.65	0.00	0.00	0.00	0.42	0.55	0.00	0.60	0.00
FFUFF	0.00	0.00	0.00	0.00	0.00	0.10	0.05	0.36	0.00	0.00	0.68	0.65	0.00	0.67	0.00	0.42	0.55	0.00	0.60	0.00
FFFUU	0.00	0.00	0.00	0.00	0.00	0.10	0.05	0.00	0.00	0.00	0.68	0.65	0.36	0.00	0.00	0.42	0.55	0.36	0.00	0.00
FFFUF	0.00	0.00	0.00	0.00	0.00	0.10	0.05	0.00	0.00	0.00	0.68	0.65	0.36	0.00	0.00	0.42	0.55	0.36	0.00	0.00
FFFFU	0.00	0.00	0.00	0.00	0.00	0.10	0.05	0.00	0.00	0.00	0.68	0.65	0.36	0.00	0.00	0.42	0.55	0.36	0.00	0.00
FFFFF	0.00	0.00	0.00	0.00	0.00	0.10	0.05	0.00	0.00	0.00	0.68	0.65	0.36	0.00	0.00	0.42	0.55	0.36	0.00	0.00

Table A13: Causal Responsibility for voters in simple variant of Engl Model - Reward Treatment (Allocation 8,2 vs. 6,4)

	Ex-post Responsibility (U)					Ex-ante Responsibility (U)					Ex-post Responsibility (F)					Ex-ante Responsibility (F)				
Scenario	Voter 1	Voter 2	Voter 3	Voter 4	Voter 5	Voter 1	Voter 2	Voter 3	Voter 4	Voter 5	Voter 1	Voter 2	Voter 3	Voter 4	Voter 5	Voter 1	Voter 2	Voter 3	Voter 4	Voter 5
UUUUU	0.72	0.54	0.20	0.00	0.00	0.47	0.48	0.20	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.10	0.05	0.00	0.00	0.00
UUUUF	0.72	0.54	0.20	0.00	0.00	0.47	0.48	0.20	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.10	0.05	0.00	0.00	0.00
UUUFU	0.72	0.54	0.20	0.00	0.00	0.47	0.48	0.20	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.10	0.05	0.00	0.00	0.00
UUUFF	0.72	0.54	0.20	0.00	0.00	0.47	0.48	0.20	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.10	0.05	0.00	0.00	0.00
UUFUU	0.72	0.54	0.00	0.47	0.00	0.47	0.48	0.00	0.47	0.00	0.00	0.00	0.00	0.00	0.00	0.10	0.05	0.20	0.00	0.00
UUFUF	0.72	0.54	0.00	0.47	0.00	0.47	0.48	0.00	0.47	0.00	0.00	0.00	0.00	0.00	0.00	0.10	0.05	0.20	0.00	0.00
UUFFU	0.72	0.54	0.00	0.00	1.00	0.47	0.48	0.00	0.00	1.00	0.00	0.00	0.00	0.00	0.00	0.10	0.05	0.20	0.47	0.00
UUFFF	0.00	0.00	0.00	0.00	0.00	0.47	0.48	0.00	0.00	0.00	0.28	0.46	1.00	1.00	1.00	0.10	0.05	0.20	0.47	1.00
UFUUU	0.72	0.11	0.72	0.57	0.00	0.47	0.05	0.47	0.57	0.00	0.00	0.00	0.00	0.00	0.00	0.10	0.48	0.10	0.00	0.00
UFUUF	0.72	0.11	0.72	0.57	0.00	0.47	0.05	0.47	0.57	0.00	0.00	0.00	0.00	0.00	0.00	0.10	0.48	0.10	0.00	0.00
UFUFU	0.72	0.11	0.72	0.00	1.00	0.47	0.05	0.47	0.00	1.00	0.00	0.00	0.00	0.00	0.00	0.10	0.48	0.10	0.57	0.00
UFUFF	0.00	0.00	0.00	0.00	0.00	0.47	0.05	0.47	0.00	0.00	0.28	0.89	0.28	1.00	1.00	0.10	0.48	0.10	0.57	1.00
UFFUU	0.72	0.11	0.34	1.00	1.00	0.47	0.05	0.10	0.57	1.00	0.00	0.00	0.00	0.00	0.00	0.10	0.48	0.47	0.00	0.00
UFFUF	0.00	0.00	0.00	0.00	0.00	0.47	0.05	0.10	0.57	0.00	0.28	0.89	0.66	0.00	1.00	0.10	0.48	0.47	0.00	1.00
UFFFU	0.00	0.00	0.00	0.00	0.00	0.47	0.05	0.10	0.00	0.00	0.28	0.89	0.66	0.57	0.00	0.10	0.48	0.47	0.57	0.00
UFFFF	0.00	0.00	0.00	0.00	0.00	0.47	0.05	0.10	0.00	0.00	0.28	0.89	0.66	0.57	0.00	0.10	0.48	0.47	0.57	0.00
FUUUU	0.35	0.89	0.72	0.40	0.00	0.08	0.51	0.61	0.40	0.00	0.00	0.00	0.00	0.00	0.00	0.47	0.05	0.04	0.00	0.00
FUUUF	0.35	0.89	0.72	0.40	0.00	0.08	0.51	0.61	0.40	0.00	0.00	0.00	0.00	0.00	0.00	0.47	0.05	0.04	0.00	0.00
FUUFU	0.35	0.89	0.72	0.00	1.00	0.08	0.51	0.61	0.00	1.00	0.00	0.00	0.00	0.00	0.00	0.47	0.05	0.04	0.40	0.00
FUUFF	0.00	0.00	0.00	0.00	0.00	0.08	0.51	0.61	0.00	0.00	0.65	0.11	0.28	1.00	1.00	0.47	0.05	0.04	0.40	1.00
FUFUU	0.35	0.89	0.15	1.00	1.00	0.08	0.51	0.04	0.57	1.00	0.00	0.00	0.00	0.00	0.00	0.47	0.05	0.61	0.00	0.00
FUFUF	0.00	0.00	0.00	0.00	0.00	0.08	0.51	0.04	0.57	0.00	0.65	0.11	0.85	0.00	1.00	0.47	0.05	0.61	0.00	1.00
FUFFU	0.00	0.00	0.00	0.00	0.00	0.08	0.51	0.04	0.00	0.00	0.65	0.11	0.85	0.57	0.00	0.47	0.05	0.61	0.57	0.00
FUFFF	0.00	0.00	0.00	0.00	0.00	0.08	0.51	0.04	0.00	0.00	0.65	0.11	0.85	0.57	0.00	0.47	0.05	0.61	0.57	0.00
FFUUU	0.35	0.43	1.00	1.00	1.00	0.08	0.05	0.30	0.57	1.00	0.00	0.00	0.00	0.00	0.00	0.47	0.51	0.00	0.00	0.00
FFUUF	0.00	0.00	0.00	0.00	0.00	0.08	0.05	0.30	0.57	0.00	0.65	0.57	0.00	0.00	1.00	0.47	0.51	0.00	0.00	1.00
FFUFU	0.00	0.00	0.00	0.00	0.00	0.08	0.05	0.30	0.00	0.00	0.65	0.57	0.00	0.00	0.00	0.47	0.51	0.00	0.49	0.00
FFUFF	0.00	0.00	0.00	0.00	0.00	0.08	0.05	0.30	0.00	0.00	0.65	0.57	0.00	0.57	0.00	0.47	0.51	0.00	0.49	0.00
FFFUU	0.00	0.00	0.00	0.00	0.00	0.08	0.05	0.00	0.00	0.00	0.65	0.57	0.30	0.00	0.00	0.47	0.51	0.30	0.00	0.00
FFFUF	0.00	0.00	0.00	0.00	0.00	0.08	0.05	0.00	0.00	0.00	0.65	0.57	0.30	0.00	0.00	0.47	0.51	0.30	0.00	0.00
FFFFU	0.00	0.00	0.00	0.00	0.00	0.08	0.05	0.00	0.00	0.00	0.65	0.57	0.30	0.00	0.00	0.47	0.51	0.30	0.00	0.00
FFFFF	0.00	0.00	0.00	0.00	0.00	0.08	0.05	0.00	0.00	0.00	0.65	0.57	0.30	0.00	0.00	0.47	0.51	0.30	0.00	0.00

Table A14: Causal Responsibility for voters in simple variant of Engl Model - Both Treatment (Allocation 9,1 vs. 5,5)

	Ex-post Responsibility (U)					Ex-ante Responsibility (U)					Ex-post Responsibility (F)					Ex-ante Responsibility (F)				
Scenario	Voter 1	Voter 2	Voter 3	Voter 4	Voter 5	Voter 1	Voter 2	Voter 3	Voter 4	Voter 5	Voter 1	Voter 2	Voter 3	Voter 4	Voter 5	Voter 1	Voter 2	Voter 3	Voter 4	Voter 5
UUUUU	0.72	0.57	0.30	0.00	0.00	0.45	0.47	0.30	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.11	0.08	0.00	0.00	0.00
UUUUF	0.72	0.57	0.30	0.00	0.00	0.45	0.47	0.30	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.11	0.08	0.00	0.00	0.00
UUUFU	0.72	0.57	0.30	0.00	0.00	0.45	0.47	0.30	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.11	0.08	0.00	0.00	0.00
UUUFF	0.72	0.57	0.30	0.00	0.00	0.45	0.47	0.30	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.11	0.08	0.00	0.00	0.00
UUFUU	0.72	0.57	0.00	0.47	0.00	0.45	0.47	0.00	0.47	0.00	0.00	0.00	0.00	0.00	0.00	0.11	0.08	0.30	0.00	0.00
UUFUF	0.72	0.57	0.00	0.47	0.00	0.45	0.47	0.00	0.47	0.00	0.00	0.00	0.00	0.00	0.00	0.11	0.08	0.30	0.00	0.00
UUFFU	0.72	0.57	0.00	0.00	1.00	0.45	0.47	0.00	0.00	1.00	0.00	0.00	0.00	0.00	0.00	0.11	0.08	0.30	0.47	0.00
UUFFF	0.00	0.00	0.00	0.00	0.00	0.45	0.47	0.00	0.00	0.00	0.28	0.43	1.00	1.00	1.00	0.11	0.08	0.30	0.47	1.00
UFUUU	0.72	0.18	0.81	0.47	0.00	0.45	0.08	0.61	0.47	0.00	0.00	0.00	0.00	0.00	0.00	0.11	0.47	0.05	0.00	0.00
UFUUF	0.72	0.18	0.81	0.47	0.00	0.45	0.08	0.61	0.47	0.00	0.00	0.00	0.00	0.00	0.00	0.11	0.47	0.05	0.00	0.00
UFUFU	0.72	0.18	0.81	0.00	1.00	0.45	0.08	0.61	0.00	1.00	0.00	0.00	0.00	0.00	0.00	0.11	0.47	0.05	0.47	0.00
UFUFF	0.00	0.00	0.00	0.00	0.00	0.45	0.08	0.61	0.00	0.00	0.28	0.82	0.19	1.00	1.00	0.11	0.47	0.05	0.47	1.00
UFFUU	0.72	0.18	0.25	1.00	1.00	0.45	0.08	0.05	0.43	1.00	0.00	0.00	0.00	0.00	0.00	0.11	0.47	0.61	0.00	0.00
UFFUF	0.00	0.00	0.00	0.00	0.00	0.45	0.08	0.05	0.43	0.00	0.28	0.82	0.75	0.00	1.00	0.11	0.47	0.61	0.00	1.00
UFFFU	0.00	0.00	0.00	0.00	0.00	0.45	0.08	0.05	0.00	0.00	0.28	0.82	0.75	0.43	0.00	0.11	0.47	0.61	0.43	0.00
UFFFF	0.00	0.00	0.00	0.00	0.00	0.45	0.08	0.05	0.00	0.00	0.28	0.82	0.75	0.43	0.00	0.11	0.47	0.61	0.43	0.00
FUUUU	0.37	0.93	0.72	0.43	0.00	0.07	0.49	0.53	0.43	0.00	0.00	0.00	0.00	0.00	0.00	0.45	0.03	0.07	0.00	0.00
FUUUF	0.37	0.93	0.72	0.43	0.00	0.07	0.49	0.53	0.43	0.00	0.00	0.00	0.00	0.00	0.00	0.45	0.03	0.07	0.00	0.00
FUUFU	0.37	0.93	0.72	0.00	1.00	0.07	0.49	0.53	0.00	1.00	0.00	0.00	0.00	0.00	0.00	0.45	0.03	0.07	0.43	0.00
FUUFF	0.00	0.00	0.00	0.00	0.00	0.07	0.49	0.53	0.00	0.00	0.63	0.07	0.28	1.00	1.00	0.45	0.03	0.07	0.43	1.00
FUFUU	0.37	0.93	0.26	1.00	1.00	0.07	0.49	0.07	0.50	1.00	0.00	0.00	0.00	0.00	0.00	0.45	0.03	0.53	0.00	0.00
FUFUF	0.00	0.00	0.00	0.00	0.00	0.07	0.49	0.07	0.50	0.00	0.63	0.07	0.74	0.00	1.00	0.45	0.03	0.53	0.00	1.00
FUFFU	0.00	0.00	0.00	0.00	0.00	0.07	0.49	0.07	0.00	0.00	0.63	0.07	0.74	0.50	0.00	0.45	0.03	0.53	0.50	0.00
FUFFF	0.00	0.00	0.00	0.00	0.00	0.07	0.49	0.07	0.00	0.00	0.63	0.07	0.74	0.50	0.00	0.45	0.03	0.53	0.50	0.00
FFUUU	0.37	0.47	1.00	1.00	1.00	0.07	0.03	0.21	0.53	1.00	0.00	0.00	0.00	0.00	0.00	0.45	0.49	0.00	0.00	0.00
FFUUF	0.00	0.00	0.00	0.00	0.00	0.07	0.03	0.21	0.53	0.00	0.63	0.53	0.00	0.00	1.00	0.45	0.49	0.00	0.00	1.00
FFUFU	0.00	0.00	0.00	0.00	0.00	0.07	0.03	0.21	0.00	0.00	0.63	0.53	0.00	0.00	0.00	0.45	0.49	0.00	0.52	0.00
FFUFF	0.00	0.00	0.00	0.00	0.00	0.07	0.03	0.21	0.00	0.00	0.63	0.53	0.00	0.53	0.00	0.45	0.49	0.00	0.52	0.00
FFFUU	0.00	0.00	0.00	0.00	0.00	0.07	0.03	0.00	0.00	0.00	0.63	0.53	0.21	0.00	0.00	0.45	0.49	0.21	0.00	0.00
FFFUF	0.00	0.00	0.00	0.00	0.00	0.07	0.03	0.00	0.00	0.00	0.63	0.53	0.21	0.00	0.00	0.45	0.49	0.21	0.00	0.00
FFFFU	0.00	0.00	0.00	0.00	0.00	0.07	0.03	0.00	0.00	0.00	0.63	0.53	0.21	0.00	0.00	0.45	0.49	0.21	0.00	0.00
FFFFF	0.00	0.00	0.00	0.00	0.00	0.07	0.03	0.00	0.00	0.00	0.63	0.53	0.21	0.00	0.00	0.45	0.49	0.21	0.00	0.00

Table A15: Causal Responsibility for voters in simple variant of Engl Model - Both Treatment (Allocation 8,2 vs. 6,4)

	Ex-post Responsibility (U)					Ex-ante Responsibility (U)					Ex-post Responsibility (F)					Ex-ante Responsibility (F)				
Scenario	Voter 1	Voter 2	Voter 3	Voter 4	Voter 5	Voter 1	Voter 2	Voter 3	Voter 4	Voter 5	Voter 1	Voter 2	Voter 3	Voter 4	Voter 5	Voter 1	Voter 2	Voter 3	Voter 4	Voter 5
UUUUU	0.74	0.58	0.40	0.00	0.00	0.46	0.44	0.40	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.10	0.10	0.00	0.00	0.00
UUUUF	0.74	0.58	0.40	0.00	0.00	0.46	0.44	0.40	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.10	0.10	0.00	0.00	0.00
UUUFU	0.74	0.58	0.40	0.00	0.00	0.46	0.44	0.40	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.10	0.10	0.00	0.00	0.00
UUUFF	0.74	0.58	0.40	0.00	0.00	0.46	0.44	0.40	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.10	0.10	0.00	0.00	0.00
UUFUU	0.74	0.58	0.00	0.63	0.00	0.46	0.44	0.00	0.63	0.00	0.00	0.00	0.00	0.00	0.00	0.10	0.10	0.40	0.00	0.00
UUFUF	0.74	0.58	0.00	0.63	0.00	0.46	0.44	0.00	0.63	0.00	0.00	0.00	0.00	0.00	0.00	0.10	0.10	0.40	0.00	0.00
UUFFU	0.74	0.58	0.00	0.00	1.00	0.46	0.44	0.00	0.00	1.00	0.00	0.00	0.00	0.00	0.00	0.10	0.10	0.40	0.63	0.00
UUFFF	0.00	0.00	0.00	0.00	0.00	0.46	0.44	0.00	0.00	0.00	0.26	0.42	1.00	1.00	1.00	0.10	0.10	0.40	0.63	1.00
UFUUU	0.74	0.24	0.80	0.57	0.00	0.46	0.10	0.54	0.57	0.00	0.00	0.00	0.00	0.00	0.00	0.10	0.44	0.06	0.00	0.00
UFUUF	0.74	0.24	0.80	0.57	0.00	0.46	0.10	0.54	0.57	0.00	0.00	0.00	0.00	0.00	0.00	0.10	0.44	0.06	0.00	0.00
UFUFU	0.74	0.24	0.80	0.00	1.00	0.46	0.10	0.54	0.00	1.00	0.00	0.00	0.00	0.00	0.00	0.10	0.44	0.06	0.57	0.00
UFUFF	0.00	0.00	0.00	0.00	0.00	0.46	0.10	0.54	0.00	0.00	0.26	0.76	0.20	1.00	1.00	0.10	0.44	0.06	0.57	1.00
UFFUU	0.74	0.24	0.32	1.00	1.00	0.46	0.10	0.06	0.43	1.00	0.00	0.00	0.00	0.00	0.00	0.10	0.44	0.54	0.00	0.00
UFFUF	0.00	0.00	0.00	0.00	0.00	0.46	0.10	0.06	0.43	0.00	0.26	0.76	0.68	0.00	1.00	0.10	0.44	0.54	0.00	1.00
UFFFU	0.00	0.00	0.00	0.00	0.00	0.46	0.10	0.06	0.00	0.00	0.26	0.76	0.68	0.43	0.00	0.10	0.44	0.54	0.43	0.00
UFFFF	0.00	0.00	0.00	0.00	0.00	0.46	0.10	0.06	0.00	0.00	0.26	0.76	0.68	0.43	0.00	0.10	0.44	0.54	0.43	0.00
FUUUU	0.37	0.92	0.80	0.53	0.00	0.08	0.41	0.57	0.53	0.00	0.00	0.00	0.00	0.00	0.00	0.46	0.04	0.06	0.00	0.00
FUUUF	0.37	0.92	0.80	0.53	0.00	0.08	0.41	0.57	0.53	0.00	0.00	0.00	0.00	0.00	0.00	0.46	0.04	0.06	0.00	0.00
FUUFU	0.37	0.92	0.80	0.00	1.00	0.08	0.41	0.57	0.00	1.00	0.00	0.00	0.00	0.00	0.00	0.46	0.04	0.06	0.53	0.00
FUUFF	0.00	0.00	0.00	0.00	0.00	0.08	0.41	0.57	0.00	0.00	0.63	0.08	0.20	1.00	1.00	0.46	0.04	0.06	0.53	1.00
FUFUU	0.37	0.92	0.28	1.00	1.00	0.08	0.41	0.06	0.40	1.00	0.00	0.00	0.00	0.00	0.00	0.46	0.04	0.57	0.00	0.00
FUFUF	0.00	0.00	0.00	0.00	0.00	0.08	0.41	0.06	0.40	0.00	0.63	0.08	0.72	0.00	1.00	0.46	0.04	0.57	0.00	1.00
FUFFU	0.00	0.00	0.00	0.00	0.00	0.08	0.41	0.06	0.00	0.00	0.63	0.08	0.72	0.40	0.00	0.46	0.04	0.57	0.40	0.00
FUFFF	0.00	0.00	0.00	0.00	0.00	0.08	0.41	0.06	0.00	0.00	0.63	0.08	0.72	0.40	0.00	0.46	0.04	0.57	0.40	0.00
FFUUU	0.37	0.56	1.00	1.00	1.00	0.08	0.04	0.22	0.50	1.00	0.00	0.00	0.00	0.00	0.00	0.46	0.41	0.00	0.00	0.00
FFUUF	0.00	0.00	0.00	0.00	0.00	0.08	0.04	0.22	0.50	0.00	0.63	0.44	0.00	0.00	1.00	0.46	0.41	0.00	0.00	1.00
FFUFU	0.00	0.00	0.00	0.00	0.00	0.08	0.04	0.22	0.00	0.00	0.63	0.44	0.00	0.00	0.00	0.46	0.41	0.00	0.48	0.00
FFUFF	0.00	0.00	0.00	0.00	0.00	0.08	0.04	0.22	0.00	0.00	0.63	0.44	0.00	0.50	0.00	0.46	0.41	0.00	0.48	0.00
FFFUU	0.00	0.00	0.00	0.00	0.00	0.08	0.04	0.00	0.00	0.00	0.63	0.44	0.22	0.00	0.00	0.46	0.41	0.22	0.00	0.00
FFFUF	0.00	0.00	0.00	0.00	0.00	0.08	0.04	0.00	0.00	0.00	0.63	0.44	0.22	0.00	0.00	0.46	0.41	0.22	0.00	0.00
FFFFU	0.00	0.00	0.00	0.00	0.00	0.08	0.04	0.00	0.00	0.00	0.63	0.44	0.22	0.00	0.00	0.46	0.41	0.22	0.00	0.00
FFFFF	0.00	0.00	0.00	0.00	0.00	0.08	0.04	0.00	0.00	0.00	0.63	0.44	0.22	0.00	0.00	0.46	0.41	0.22	0.00	0.00

A.4 Correlation Matrix - Sanction Motives

Table A16: Punishment Treatment

Punishment	Choice Unfair	Outcome Unfair	Intention Unkind	Initiator Unfair	Pivotal Unfair	BF Responsibility(U)	Ex-ante Engl Resp(U)	Ex-post Engl Resp(U)
Choice Unfair	1							
Outcome Unfair	0.375	1						
Intention Unkind	0.838	0.381	1					
Initiator Unfair	0.333	0.333	0.398	1				
Pivotal Unfair	0.333	0.333	0.398	-0.111	1			
BF Responsibility(U)	0.616	0.616	0.735	0.502	0.549	1		
Ex-ante Engl Resp(U)	0.739	0.369	0.897	0.337	0.439	0.789	1	
Ex-post Engl Resp(U)	0.561	0.653	0.686	0.538	0.367	0.905	0.773	1

Table A17: Reward Treatment

Reward	Choice Fair	Outcome Fair	Intention Kind	Initiator Fair	Pivotal Fair	BF Responsibility(F)	Ex-ante Engl Resp(F)	Ex-post Engl Resp(F)
Choice Fair	1							
Outcome Fair	0.375	1						
Intention Kind	0.838	0.381	1					
Initiator Fair	0.333	0.333	0.398	1				
Pivotal Fair	0.333	0.333	0.398	-0.111	1			
BF Responsibility(F)	0.576	0.576	0.687	0.210	0.729	1		
Ex-ante Engl Resp(F)	0.717	0.409	0.882	0.251	0.577	0.850	1	
Ex-post Engl Resp(F)	0.561	0.682	0.691	0.488	0.403	0.824	0.765	1

Table A18: Both Treatment - Unfair Variables

Both	Choice Unfair	Outcome Unfair	Intention Unkind	Initiator Unfair	Pivotal Unfair	BF Responsibility(U)	Ex-ante Engl Resp(U)	Ex-post Engl Resp(U)
Choice Unfair	1							
Outcome Unfair	0.375	1						
Intention Unkind	0.838	0.381	1					
Initiator Unfair	0.333	0.333	0.398	1				
Pivotal Unfair	0.333	0.333	0.398	-0.111	1			
BF Responsibility(U)	0.605	0.605	0.722	0.329	0.711	1		
Ex-ante Resp(U)	0.728	0.403	0.892	0.274	0.551	0.828	1	
Ex-post Resp(U)	0.560	0.696	0.692	0.530	0.397	0.862	0.765	1

Table A19: Both Treatment - Fair Variables

Both	Choice Fair	Outcome Fair	Intention Kind	Initiator Fair	Pivotal Fair	BF Responsibility(F)	Ex-ante Engl Resp(F)	Ex-post Engl Resp(F)
Choice Fair	1							
Outcome Fair	0.375	1						
Intention Kind	0.838	0.381	1					
Initiator Fair	0.333	0.333	0.398	1				
Pivotal Fair	0.333	0.333	0.398	-0.111	1			
BF Responsibility(F)	0.601	0.601	0.717	0.344	0.565	1		
Ex-ante Engl Resp(F)	0.722	0.366	0.888	0.285	0.481	0.804	1	
Ex-post Engl Resp(F)	0.552	0.650	0.676	0.500	0.376	0.869	0.772	1

A.5 Individual Regressions - Theoretical Framework

Table A20: Punishment Treatment

Punishment Points	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6	Model 7	Model 8	Model 9	Model 10	Model 11	Model 12	Model 13	Model 14	Model 15	Model 16	Model 17	Model 18	Model 19	Model 20
Choice Unfair	1.013***													0.770***				0.759***	0.799***	0.772***
	(0.123)													(0.177)				(0.161)	(0.176)	(0.154)
Outcome Unfair		0.529***												0.0336				-0.115	-0.0902	-0.112
		(0.111)												(0.099)				(0.107)	(0.061)	(0.110)
Intention Unkind			0.947***											0.051				0.075	0.073	-0.008
			(0.124)											(0.130)				(0.151)	(0.152)	(0.135)
Initiator Unfair				0.705**										0.296				0.146	0.145	0.183
				(0.244)										(0.233)				(0.230)	(0.230)	(0.228)
Pivotal Unfair					1.090***									0.643**				0.603**	0.603**	0.565**
					(0.240)									(0.211)				(0.209)	(0.208)	(0.204)
BF Responsibility(U)						2.698***									1.950**	1.594**	1.327*	0.084	0.067	0.464
						(0.431)									(0.538)	(0.553)	(0.523)	(0.358)	(0.416)	(0.446)
Ex-ante Engl Resp(U)							1.561***								0.871*	0.525		-0.384	-0.374	
							(0.214)								(0.329)	(0.297)		(0.208)	(0.215)	
Ex-ante Engl Resp(F)								-1.380***								-0.739***		-0.075		
								(0.168)								(0.108)		(0.053)		
Ex-ante Engl Resp(U-F)									0.971***								0.655**			-0.109
									(0.123)								(0.189)			(0.055)
Ex-post Engl Resp(U)										1.175***					-0.225	-0.080		0.484**	0.467**	
										(0.194)					(0.237)	(0.241)		(0.156)	(0.152)	
Ex-post Engl Resp(F)											-0.867***					0.008		-0.029		
											(0.102)					(0.030)		(0.112)		
Ex-post Engl Resp(U-F)												0.709***					-0.001			0.175*
												(0.096)					(0.071)			(0.078)
Engl Resp Combined(U)													1.513***							
													(0.219)							
Constant	0.038	0.279***	0.153**	0.474***	0.435***	0.274***	0.188***	0.862***	0.546***	0.285***	0.745***	0.552***	0.205***	0.027	0.200***	0.451***	0.413***	0.113	0.060	0.098
	(0.062)	(0.056)	(0.051)	(0.024)	(0.024)	(0.043)	(0.049)	(0.039)	(0.000)	(0.043)	(0.024)	(0.001)	(0.049)	(0.059)	(0.047)	(0.049)	(0.052)	(0.064)	(0.057)	(0.068)
Observations	9,600	9,600	9,600	9,600	9,600	9,600	9,600	9,600	9,600	9,600	9,600	9,600	9,600	9,600	9,600	9,600	9,600	9,600	9,600	9,600
R-squared	0.181	0.050	0.154	0.032	0.076	0.136	0.132	0.102	0.154	0.111	0.065	0.120	0.136	0.207	0.151	0.171	0.171	0.211	0.211	0.210
Number of Subjects	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30

Note: Fixed effects regression with punishment points as dependent variable (ranges from 0 to 7). *BF Responsibility Unfair* represents a voters' share in the probability increase of an unfair outcome. *Ex-ante and Ex-post Engl Responsibility (Un)fair* represents a voters' causal responsibility for a (un)fair event. We report within R-squared in the table. Robust standard errors in parentheses clustered at the subject level. * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

Table A21: Reward Treatment

Reward Points	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6	Model 7	Model 8	Model 9	Model 10	Model 11	Model 12	Model 13	Model 14	Model 15	Model 16	Model 17	Model 18	Model 19	Model 20
Choice Fair	0.758***													0.451**				0.462***	0.481***	0.448***
	(0.134)													(0.123)				(0.115)	(0.123)	(0.110)
Outcome Fair		0.408***												0.080				-0.012	-0.011	-0.037
		(0.079)												(0.061)				(0.076)	(0.041)	(0.070)
Intention Kind			0.750***											0.261**				0.175*	0.176*	0.207*
			(0.135)											(0.094)				(0.082)	(0.082)	(0.091)
Initiator Fair				0.459***										0.025				-0.054	-0.055	-0.003
				(0.090)										(0.064)				(0.058)	(0.063)	(0.066)
Pivotal Fair					0.744***									0.281*				0.275**	0.276**	0.216**
					(0.153)									(0.115)				(0.082)	(0.082)	(0.077)
BF Responsibility(F)						1.833***									0.092	0.079	0.546	-0.127	-0.119	0.269
						(0.348)									(0.412)	(0.411)	(0.385)	(0.312)	(0.357)	(0.352)
Ex-ante Engl Resp(U)							-1.046***									-0.531***		-0.055		
							(0.185)									(0.105)		(0.074)		
Ex-ante Engl Resp(F)								1.328***							1.016**	0.762*		-0.045	-0.048	
								(0.244)							(0.344)	(0.304)		(0.165)	(0.165)	
Ex-ante Engl Resp(F-U)									0.794***								0.562**			-0.068
									(0.140)								(0.173)			(0.036)
Ex-post Engl Resp(U)										-0.691***						0.011		0.010		
										(0.120)						(0.068)		(0.126)		
Ex-post Engl Resp(F)											0.890***				0.259*	0.261*		0.349**	0.343**	
											(0.163)				(0.097)	(0.104)		(0.102)	(0.100)	
Ex-post Engl Resp(F-U)												0.550***					0.083			0.144
												(0.093)					(0.048)			(0.071)
Engl Resp Combined(F)													1.209***							
													(0.218)							
Constant	0.144*	0.318***	0.213***	0.476***	0.448***	0.339***	0.760***	0.219***	0.521***	0.671***	0.312***	0.511***	0.241***	0.119	0.220***	0.397***	0.465***	0.154*	0.134	0.180**
	(0.067)	(0.040)	(0.056)	(0.009)	(0.015)	(0.035)	(0.042)	(0.056)	(0.000)	(0.026)	(0.039)	(0.002)	(0.051)	(0.065)	(0.057)	(0.045)	(0.039)	(0.064)	(0.068)	(0.058)
Observations	9,280	9,280	9,280	9,280	9,280	9,280	9,280	9,280	9,280	9,280	9,280	9,280	9,280	9,280	9,280	9,280	9,280	9,280	9,280	9,280
R-squared	0.143	0.042	0.136	0.019	0.050	0.101	0.078	0.123	0.133	0.051	0.095	0.099	0.121	0.161	0.127	0.142	0.139	0.164	0.164	0.163
Number of Subjects	29	29	29	29	29	29	29	29	29	29	29	29	29	29	29	29	29	29	29	29

Note: Fixed effects regression with reward points as dependent variable (ranges from 0 to 7). *BF Responsibility Fair* represents a voters' share in the probability increase of a fair outcome. *Ex-ante and Ex-post Engl Responsibility (Un)fair* represent a voters causal responsibility for a (un)fair event. We report within R-squared in the table. Robust standard errors in parentheses clustered at the subject level. * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

Table A22: Both Treatment - Punishment Points

Punishment Points	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6	Model 7	Model 8	Model 9	Model 10	Model 11	Model 12	Model 13	Model 14	Model 15	Model 16	Model 17	Model 18	Model 19	Model 20
Choice Unfair	0.729***													0.481***				0.488***	0.519***	0.452***
	(0.120)													(0.103)				(0.099)	(0.102)	(0.102)
Outcome Unfair		0.353***												0.008				-0.110*	-0.072*	-0.126*
		(0.074)												(0.049)				(0.053)	(0.033)	(0.052)
Intention Unkind			0.709***											0.177*				0.036	0.039	0.114
			(0.124)											(0.077)				(0.111)	(0.111)	(0.083)
Initiator Unfair				0.714**										0.344				0.283	0.277	0.298
				(0.246)										(0.240)				(0.242)	(0.243)	(0.242)
Pivotal Unfair					0.498**									0.149				0.183*	0.191*	0.109
					(0.142)									(0.117)				(0.085)	(0.087)	(0.090)
BF Responsibility(U)						1.733***									-0.242	-0.405	0.334	-0.394	-0.461	0.140
						(0.322)									(0.408)	(0.436)	(0.315)	(0.254)	(0.283)	(0.300)
Ex-ante Engl Resp(U)							1.233***								0.945***	0.686**		0.147	0.146	
							(0.208)								(0.242)	(0.210)		(0.184)	(0.183)	
Ex-ante Engl Resp(F)								-1.010***								-0.614***		-0.009		
								(0.162)								(0.138)		(0.052)		
Ex-ante Engl Resp(U-F)									0.750***								0.532***			-0.023
									(0.122)								(0.142)			(0.060)
Ex-post Engl Resp(U)										0.852***					0.408	0.485		0.379***	0.380***	
										(0.161)					(0.226)	(0.254)		(0.083)	(0.080)	
Ex-post Engl Resp(F)											-0.671***					0.079		-0.088		
											(0.103)					(0.063)		(0.066)		
Ex-post Engl Resp(U-F)												0.530***					0.131			0.185***
												(0.090)					(0.079)			(0.045)
Engl Resp Combined(U)													1.141***							
													(0.200)							
Constant	0.027	0.215***	0.099	0.320***	0.342***	0.218***	0.115*	0.620***	0.393***	0.185***	0.532***	0.374***	0.126*	0.025	0.105*	0.283***	0.355***	0.076	0.027	0.120
	(0.060)	(0.037)	(0.051)	(0.025)	(0.014)	(0.032)	(0.047)	(0.037)	(0.000)	(0.039)	(0.022)	(0.003)	(0.047)	(0.058)	(0.048)	(0.036)	(0.032)	(0.055)	(0.056)	(0.060)
Observations	9,600	9,600	9,600	9,600	9,600	9,600	9,600	9,600	9,600	9,600	9,600	9,600	9,600	9,600	9,600	9,600	9,600	9,600	9,600	9,600
R-squared	0.133	0.031	0.122	0.046	0.022	0.082	0.104	0.069	0.115	0.088	0.047	0.092	0.107	0.148	0.110	0.125	0.120	0.152	0.151	0.151
Number of Subjects	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30

Note: Fixed effects regression with punishment points as dependent variable (ranges from 0 to 7). *BF Responsibility Unfair* represents a voters' share in the probability increase of an unfair outcome. *Ex-ante and Ex-post Engl Responsibility (Un)fair* represents a voters' causal responsibility for a (un)fair event. We report within R-squared in the table. Robust standard errors in parentheses clustered at the subject level. * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

Table A23: Both Treatment - Reward Points

Reward Points	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6	Model 7	Model 8	Model 9	Model 10	Model 11	Model 12	Model 13	Model 14	Model 15	Model 16	Model 17	Model 18	Model 19	Model 20
Choice Fair	0.309***													0.374***				0.353***	0.378***	0.339***
	(0.061)													(0.090)				(0.082)	(0.088)	(0.085)
Outcome Fair		0.015												-0.112*				-0.165**	-0.090**	-0.169**
		(0.051)												(0.044)				(0.049)	(0.026)	(0.048)
Intention Kind			0.247***											-0.022				-0.066	-0.073	-0.010
			(0.055)											(0.043)				(0.053)	(0.055)	(0.038)
Initiator Fair				0.090										-0.040				-0.012	-0.021	-0.041
				(0.051)										(0.034)				(0.025)	(0.026)	(0.028)
Pivotal Fair					0.150									0.015				0.045	0.036	0.052
					(0.082)									(0.068)				(0.050)	(0.052)	(0.046)
BF Responsibility(F)						0.379									-0.192	-0.280	-0.275	-0.190	-0.276	-0.226
						(0.188)									(0.201)	(0.209)	(0.231)	(0.134)	(0.153)	(0.167)
Ex-ante Engl Resp(U)							-0.430***									-0.283***		0.093*		
							(0.085)									(0.072)		(0.037)		
Ex-ante Engl Resp(F)								0.416***							0.665***	0.539***		0.177	0.191	
								(0.101)							(0.139)	(0.118)		(0.108)	(0.110)	
Ex-ante Engl Resp(F-U)									0.283***								0.408***			-0.002
									(0.060)								(0.090)			(0.027)
Ex-post Engl Resp(U)										-0.223***						-0.022		-0.175**		
										(0.049)						(0.018)		(0.056)		
Ex-post Engl Resp(F)											0.172				-0.156*	-0.137*		0.011	0.017	
											(0.092)				(0.065)	(0.064)		(0.072)	(0.070)	
Ex-post Engl Resp(F-U)												0.137**					-0.054*			0.116**
												(0.044)					(0.022)			(0.034)
Engl Resp Combined(F)													0.306**							
													(0.106)							
Constant	0.020	0.166***	0.072**	0.165***	0.159***	0.136***	0.270***	0.080**	0.173***	0.228***	0.138***	0.179***	0.107***	0.055	0.075**	0.177***	0.199***	0.101**	0.040	0.118**
	(0.031)	(0.025)	(0.023)	(0.005)	(0.008)	(0.019)	(0.019)	(0.023)	(0.000)	(0.012)	(0.019)	(0.001)	(0.023)	(0.030)	(0.021)	(0.025)	(0.023)	(0.032)	(0.027)	(0.037)
Observations	9,600	9,600	9,600	9,600	9,600	9,600	9,600	9,600	9,600	9,600	9,600	9,600	9,600	9,600	9,600	9,600	9,600	9,600	9,600	9,600
R-squared	0.062	0.000	0.038	0.002	0.005	0.010	0.033	0.030	0.042	0.015	0.008	0.016	0.018	0.070	0.036	0.048	0.047	0.073	0.071	0.072
Number of Subjects	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30

Note: Fixed effects regression with reward points as dependent variable (ranges from 0 to 7). *BF Responsibility Fair* represents a voters' share in the probability increase of a fair outcome. *Ex-ante and Ex-Post Engl Responsibility (Un)fair* represents a voters causal responsibility for a (un)fair event. We report within R-squared in the table. Robust standard errors in parentheses clustered at the subject level. * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

A.6 Econometric Comparison of Sanctioning Motives Variants

Table A24: Joint OLS regressions to compare the impact of the criteria on the usage of punishment and reward points

	Punishment Points			Reward Points	
	Punishment	Both		Reward	Both
Choice Unfair	0.760***	0.486***	Choice Fair	0.460***	0.354***
	(0.161)	(0.099)		(0.115)	(0.082)
Outcome Unfair	-0.119	-0.116*	Outcome Fair	-0.015	-0.159**
	(0.109)	(0.053)		(0.077)	(0.049)
Intention Unkind	0.074	0.034	Intention Kind	0.176*	-0.066
	(0.152)	(0.111)		(0.082)	(0.053)
Initiator Unfair	0.145	0.288	Initiator Fair	-0.047	-0.015
	(0.230)	(0.242)		(0.057)	(0.025)
Pivotal Unfair	0.598**	0.161	Pivotal Fair	0.267**	0.045
	(0.208)	(0.082)		(0.080)	(0.050)
BF Responsibility (U)	0.159	-0.232	BF Responsibility (F)	-0.042	-0.244
	(0.331)	(0.235)		(0.268)	(0.128)
Ex-ante Engl Resp (U)	-0.411	0.092	Ex-ante Engl Resp (F)	-0.089	0.208*
	(0.202)	(0.178)		(0.146)	(0.100)
Ex-ante Engl Resp (F)	-0.087	-0.037	Ex-ante Engl Resp (U)	-0.079	0.107**
	(0.049)	(0.053)		(0.072)	(0.039)
Ex-post Engl Resp (U)	0.465**	0.339***	Ex-post Engl Resp (F)	0.331**	0.023
	(0.152)	(0.075)		(0.096)	(0.071)
Ex-post Engl Resp (F)	-0.033	-0.095	Ex-post Engl Resp (U)	0.009	-0.171**
	(0.114)	(0.067)		(0.127)	(0.057)
Size of Majority	-0.022	-0.043*	Size of Majority	-0.029	0.021
	(0.026)	(0.019)		(0.030)	(0.013)
Constant	0.196	0.245**	Constant	0.267*	0.0184
	(0.130)	(0.076)		(0.123)	(0.066)
Observations	9,600	9,600	Observations	9,280	9,600
R-squared	0.211	0.152	R-squared	0.164	0.074
Number of Subjects	30	30	Number of Subjects	29	30

Note: OLS fixed effects regressions with punishment points and reward points as dependent variables. Punishment points (left side of the table) can take values from 0 to 7 and are used in the treatments *Punishment* and *Both*. Reward points (right side of the table) can take values from 0 to 7 and are used in the treatments *Reward* and *Both*. *Choice (Un)fair* equals 1 if the (un)fair allocation is chosen. *Outcome (Un)fair* is a dummy that equals 1 if the (un)fair outcome is implemented. *Intention (Un)kind* equals 1 if a voter votes for the (un)fair allocation while no majority was reached before. *Initiator (Un)fair* equals 1 if a voter is the initiator for the (un)fair outcome. *Pivotal (Un)fair* is an indicator that equals 1 if a voter is pivotal for the (un)fair outcome. *BF Responsibility (Un)fair* and *Ex-ante and Ex-post Engl Responsibility (Un)fair* correspond to the responsibility measures explained in Section **??**. *Size of Majority* indicates the number of majority voters and can take values from 3 to 5. Robust standard errors in parentheses clustered at the subject level.
* $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

Table A25: Joint OLS regressions to compare the impact of the criteria on the usage of punishment and reward points

	Punishment Points			Reward Points	
	Punishment	Both		Reward	Both
Choice Unfair	0.803***	0.527***	Choice Fair	0.487***	0.371***
	(0.178)	(0.104)		(0.125)	(0.087)
Outcome Unfair	-0.090	-0.071*	Outcome Fair	-0.011	-0.088**
	(0.061)	(0.033)		(0.042)	(0.026)
Intention Unkind	0.073	0.038	Intention Kind	0.177*	-0.073
	(0.152)	(0.111)		(0.082)	(0.055)
Initiator Unfair	0.144	0.280	Initiator Fair	-0.051	-0.024
	(0.231)	(0.242)		(0.062)	(0.025)
Pivotal Unfair	0.600**	0.175*	Pivotal Fair	0.270**	0.037
	(0.208)	(0.085)		(0.080)	(0.052)
BF Responsibility (U)	0.111	-0.340	BF Responsibility (F)	-0.051	-0.339*
	(0.399)	(0.265)		(0.326)	(0.151)
Ex-ante Engl Resp (U)	-0.389	0.103	Ex-ante Engl Resp (F)	-0.084	0.228*
	(0.212)	(0.180)		(0.150)	(0.105)
Ex-post Engl Resp (U)	0.454**	0.346***	Ex-post Engl Resp (F)	0.327**	0.034
	(0.148)	(0.072)		(0.093)	(0.068)
Size of Majority	-0.013	-0.033*	Size of Majority	-0.023	0.026*
	(0.023)	(0.016)		(0.026)	(0.011)
Constant	0.106	0.143*	Constant	0.215*	-0.052
	(0.093)	(0.055)		(0.094)	(0.051)
Observations	9,600	9,600	Observations	9,280	9,600
R^2	0.211	0.152	R^2	0.164	0.072
Number of Subjects	30	30	Number of Subjects	29	30

Note: OLS fixed effects regressions with punishment points and reward points as dependent variables. Punishment points (left side of the table) can take values from 0 to 7 and are used in the treatments *Punishment* and *Both*. Reward points (right side of the table) can take values from 0 to 7 and are used in the treatments *Reward* and *Both*. *Choice (Un)fair* equals 1 if the (un)fair allocation is chosen. *Outcome (Un)fair* is a dummy that equals 1 if the (un)fair outcome is implemented. *Intention (Un)kind* equals 1 if a voter votes for the (un)fair allocation while no majority was reached before. *Initiator (Un)fair* equals 1 if a voter is the initiator for the (un)fair outcome. *Pivotal (Un)fair* is an indicator that equals 1 if a voter is pivotal for the (un)fair outcome. *BF Responsibility (Un)fair* and *Ex-ante and Ex-post Engl Responsibility (Un)fair* correspond to the responsibility measures explained in Section **??**. *Size of Majority* indicates the number of majority voters and can take values from 3 to 5. Robust standard errors in parentheses clustered at the subject level.
* $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

A.7 Econometric Comparison of Sanctioning Motives Conditional on Choice

Table A26: Econometric Comparison of Sanctioning Motives Conditional on Choice

	Choice Unfair				Choice Fair		
	Punishment	Both	Reward		Reward	Both	Punishment
	Punishment Points		Reward Points		Reward Points		Punishment Points
Outcome Unfair	0.112	0.0104	-0.076	Outcome Fair	0.145	-0.325*	-0.001
	(0.239)	(0.122)	(0.065)		(0.170)	(0.120)	(0.015)
Intention Unkind	0.0216	0.126	-0.033	Intention Kind	0.216*	0.016	0.008
	(0.132)	(0.069)	(0.020)		(0.084)	(0.043)	(0.012)
Initiator Unfair	0.264	0.357	0.016	Initiator Fair	0.004	0.060	-0.011
	(0.227)	(0.241)	(0.019)		(0.051)	(0.035)	(0.014)
Pivotal Unfair	0.611**	0.162	0.022	Pivotal Fair	0.260**	0.115*	-0.003
	(0.205)	(0.112)	(0.017)		(0.084)	(0.043)	(0.010)
Size of Majority	-0.064	-0.106*	0.011	Size of Majority	-0.095	0.089*	0.011
	(0.052)	(0.041)	(0.031)		(0.064)	(0.040)	(0.019)
Constant	1.002***	0.904***	0.178*	Constant	0.898***	0.196	-0.003
	(0.254)	(0.137)	(0.081)		(0.234)	(0.127)	(0.066)
Observations	4,800	4,800	4,640	Observations	4,640	4,800	4,800
R-squared	0.038	0.023	0.004	R-squared	0.031	0.026	0.001
Number of Subjects	30	30	29	Number of Subjects	29	30	30

Note: OLS fixed effects regression with punishment points and reward points as dependent variables (ranges from 0 to 7) conditional on unfair and fair choice. Robust standard errors in parentheses clustered at the subject level. * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

A.8 Hurdle Model

In this section, we present the results of a hurdle model. The model consists of two stages through which we estimate the intensive and extensive margin of each predictor. In the first stage, we estimate which predictors explain the decision to sanction and in the second stage we analyze which variables impact the amount of sanctioning. Note that we use a slightly modified hurdle model. In the second stage, we consider all the sanctioning decisions where at least one voter received sanction points and not only the decision in which the sanction is positive. Therefore, the second stage measures how sanctions are allocated between the different voters in the situation in which at least one voter is sanctioned. We use this procedure because in our experiment the number of total sanctioning points was restricted.

Table A27: Punishment Treatment - Marginal Effects Probit Regression (Hurdle Model)

Prob. Sanction	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6	Model 7
Choice Unfair	0.400***						0.327***
	(0.046)						(0.049)
Outcome Unfair		0.262***					0.098**
		(0.044)					(0.036)
Intention Unkind			0.365***				0.022
			(0.044)				(0.020)
Initiator Unfair				0.311***			0.022
				(0.054)			(0.018)
Pivotal Unfair					0.341***		0.038*
					(0.054)		(0.018)
Size of Majority						0.038**	0.029
						(0.012)	(0.015)
Observations	9,600	9,600	9,600	9,600	9,600	9,600	9,600
Pseudo R-squared	0.261	0.100	0.183	0.041	0.049	0.003	0.290

Note: Marginal effects from probit regression with probability to sanction as dependent variable. Robust standard errors in parentheses clustered at the subject level. * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

Table A28: Reward Treatment - Marginal Effects Probit Regression (Hurdle Model)

Prob. Sanction	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6	Model 7
Choice Fair	0.402***						0.294***
	(0.063)						(0.063)
Outcome Fair		0.268***					0.116**
		(0.044)					(0.036)
Intention Kind			0.384***				0.069*
			(0.060)				(0.029)
Initiator Fair				0.33***			0.045*
				(0.049)			(0.018)
Pivotal Fair					0.331***		0.043*
					(0.052)		(0.019)
Size of Majority						0.016	0.017
						(0.018)	(0.019)
Observations	9,280	9,280	9,280	9,280	9,280	9,280	9,280
Pseudo R-squared	0.192	0.081	0.157	0.039	0.038	0.001	0.215

Note: Marginal effects from probit regression with probability to sanction as dependent variable. Robust standard errors in parentheses clustered at the subject level. * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

Table A29: Both Treatment Unfair Variables - Marginal Effects Probit Regression (Hurdle Model)

Prob. Sanction	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6	Model 7
Choice Unfair	0.322***						0.266***
	(0.049)						(0.045)
Outcome Unfair		0.187***					0.054**
		(0.029)					(0.017)
Intention Unkind			0.301***				0.022
			(0.046)				(0.013)
Initiator Unfair				0.269***			0.022
				(0.047)			(0.018)
Pivotal Unfair					0.231***		0.007
					(0.039)		(0.009)
Size of Majority						0.002	-0.002
						(0.009)	(0.009)
Observations	9,600	9,600	9,600	9,600	9,600	9,600	9,600
Pseudo R-squared	0.236	0.070	0.171	0.040	0.030	0.00	0.250

Note: Marginal effects from probit regression with probability to sanction as dependent variable. Robust standard errors in parentheses clustered at the subject level. * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

Table A30: Both Treatment Fair Variables - Marginal Effects Probit Regression (Hurdle Model)

Prob. Sanction	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6	Model 7
Choice Fair	0.175***						0.170***
	(0.031)						(0.031)
Outcome Fair		0.046					-0.022
		(0.024)					(0.015)
Intention Kind			0.153***				0.014*
			(0.028)				(0.007)
Initiator Fair				0.091**			0.003
				(0.030)			(0.006)
Pivotal Fair					0.083**		-0.001
					(0.027)		(0.005)
Size of Majority						0.008	0.011*
						(0.008)	(0.006)
Observations	9,600	9,600	9,600	9,600	9,600	9,600	9,600
Pseudo R-squared	0.160	0.010	0.100	0.011	0.010	0.001	0.163

Note: Marginal effects from probit regression with probability to sanction as dependent variable. Robust standard errors in parentheses clustered at the subject level. * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

Table A31: Punishment Treatment - Linear Regression Conditional on Punishment Points (Hurdle Model)

Punishment Points	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6	Model 7
Choice Unfair	1.872***						1.805***
	(0.135)						(0.273)
Outcome Unfair		0.225**					-0.620***
		(0.069)					(0.114)
Intention Unkind			1.649***				0.148
			(0.124)				(0.215)
Initiator Unfair				0.747*			0.116
				(0.342)			(0.340)
Pivotal Unfair					1.377***		0.656*
					(0.299)		(0.280)
Size of Majority						-0.027	-0.245***
						(0.017)	(0.036)
Constant	0.0996**	1.036***	0.387***	1.089***	1***	1.286***	1.235***
	(0.031)	(0.091)	(0.044)	(0.071)	(0.059)	(0.075)	(0.130)
Observations	4,375	4,375	4,375	4,375	4,375	4,375	4,375
R-squared	0.333	0.004	0.266	0.026	0.090	0.000	0.382

Note: Linear regression with punishment points as dependent variable (ranges from 0 to 7). Robust standard errors in parentheses clustered at the subject level. * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

Table A32: Reward Treatment - Linear Regression Conditional on Reward Points (Hurdle Model)

Reward Points	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6	Model 7
Choice Fair	1.248***						0.999***
	(0.228)						(0.251)
Outcome Fair		0.229**					-0.292**
		(0.076)					(0.085)
Intention Kind			1.171***				0.395**
			(0.207)				(0.136)
Initiator Fair				0.454***			-0.134
				(0.100)			(0.102)
Pivotal Fair					0.896***		0.251
					(0.185)		(0.167)
Size of Majority						-0.0316	-0.105**
						(0.026)	(0.036)
Constant	0.313*	0.861***	0.457***	0.950***	0.893***	1.116***	0.797***
	(0.130)	(0.092)	(0.102)	(0.069)	(0.064)	(0.140)	(0.137)
Observations	4,805	4,805	4,805	4,805	4,805	4,805	4,805
R-squared	0.233	0.007	0.207	0.014	0.055	0.000	0.259

Note: Linear regression with reward points as dependent variable (ranges from 0 to 7). Robust standard errors in parentheses clustered at the subject level. * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

Table A33: Both Treatment - Linear Regression Conditional on Punishment Points (Hurdle Model)

Punishment Points	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6	Model 7
Choice Unfair	1.730***						1.512***
	(0.104)						(0.172)
Outcome Unfair		0.252***					-0.476***
		(0.055)					(0.074)
Intention Unkind			1.576***				0.347*
			(0.114)				(0.144)
Initiator Unfair				1.178**			0.388
				(0.413)			(0.450)
Pivotal Unfair					0.726*		-0.00313
					(0.263)		(0.231)
Size of Majority						-0.009	-0.150***
						(0.030)	(0.038)
Constant	0.0833**	0.889***	0.302***	0.900***	0.961***	1.090***	0.816***
	(0.029)	(0.058)	(0.031)	(0.061)	(0.061)	(0.124)	(0.143)
Observations	3,550	3,550	3,550	3,550	3,550	3,550	3,550
R-squared	0.324	0.006	0.273	0.071	0.027	0.000	0.356

Note: Linear regression with punishment points as dependent variable (ranges from 0 to 7). Robust standard errors in parentheses clustered at the subject level. * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

Table A34: Both Treatment - Linear Regression Conditional on Reward Points (Hurdle Model)

Reward Points	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6	Model 7
Choice Fair	1.313***						1.489***
	(0.117)						(0.212)
Outcome Fair		0.157					-0.390***
		(0.084)					(0.083)
Intention Kind			1.075***				-0.034
			(0.105)				(0.151)
Initiator Fair				0.451**			-0.126
				(0.127)			(0.102)
Pivotal Fair					0.715**		0.113
					(0.247)		(0.230)
Size of Majority						0.050	0.024
						(0.041)	(0.042)
Constant	0.079	0.647***	0.292***	0.678***	0.653***	0.548**	0.108
	(0.039)	(0.059)	(0.041)	(0.055)	(0.056)	(0.159)	(0.164)
Observations	2,320	2,320	2,320	2,320	2,320	2,320	2,320
R-squared	0.322	0.005	0.207	0.013	0.032	0.001	0.349

Note: Linear regression with reward points as dependent variable (ranges from 0 to 7). Robust standard errors in parentheses clustered at the subject level. * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

A.9 Time Trends: Econometric Comparison of Sanctioning Motives

Table A35: Time Trends - Econometric Comparison of Punishing Motives

	Decision No. 1 - 21		Decision No. 22 - 42		Decision No. 43 - 64	
Punishment Points	Punishment	Both	Punishment	Both	Punishment	Both
Choice Unfair	0.641***	0.570***	0.868***	0.500**	0.823***	0.411**
	(0.148)	(0.120)	(0.223)	(0.140)	(0.224)	(0.136)
Outcome Unfair	-0.013	-0.004	0.068	-0.010	0.054	0.013
	(0.102)	(0.063)	(0.107)	(0.0721)	(0.109)	(0.075)
Intention Unkind	0.281*	0.087	-0.078	0.244*	-0.075	0.144
	(0.133)	(0.101)	(0.179)	(0.095)	(0.192)	(0.090)
Initiator Unfair	0.220	0.403	0.233	0.342	0.434	0.316
	(0.194)	(0.205)	(0.225)	(0.285)	(0.316)	(0.256)
Pivotal Unfair	0.560*	0.300	0.628**	-0.059	0.742**	0.226
	(0.228)	(0.163)	(0.227)	(0.163)	(0.247)	(0.113)
Size of Majority	0.021	-0.092**	-0.023	-0.007	-0.032	-0.058
	(0.031)	(0.029)	(0.040)	(0.045)	(0.047)	(0.035)
Constant	-0.019	0.351**	0.095	0.0444	0.117	0.231
	(0.121)	(0.104)	(0.156)	(0.149)	(0.171)	(0.128)
Observations	3,150	3,150	3150	3150	3,300	3,300
R-squared	0.207	0.177	0.203	0.147	0.217	0.132
Number of Subjects	30	30	30	30	30	30

Note: OLS fixed effects regression with punishment points as dependent variable (ranges from 0 to 7). Robust standard errors in parentheses clustered at the subject level.
* $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

Table A36: Time Trends - Econometric Comparison of Rewarding Motives

	Decision No. 1 - 21		Decision No. 22 - 42		Decision No. 43 - 64	
Reward Points	Reward	Both	Reward	Both	Reward	Both
Choice Fair	0.597***	0.373***	0.340*	0.353**	0.453**	0.376**
	(0.155)	(0.088)	(0.133)	(0.121)	(0.155)	(0.126)
Outcome Fair	0.098	-0.111**	0.115	-0.112*	0.041	-0.103
	(0.073)	(0.038)	(0.080)	(0.046)	(0.075)	(0.058)
Intention Kind	0.118	-0.006	0.405**	-0.041	0.209	0.0118
	(0.120)	(0.056)	(0.116)	(0.101)	(0.110)	(0.068)
Initiator Fair	0.043	-0.0215	0.007	0.002	0.042	-0.110*
	(0.079)	(0.052)	(0.084)	(0.054)	(0.065)	(0.042)
Pivotal Fair	0.235	-0.046	0.213	0.053	0.395*	0.030
	(0.120)	(0.059)	(0.125)	(0.086)	(0.173)	(0.091)
Size of Majority	0.008	0.018	-0.040	0.022	-0.046	-3.00e-05
	(0.040)	(0.027)	(0.038)	(0.022)	(0.042)	(0.022)
Constant	0.109	0.007	0.253	-0.014	0.263	0.027
	(0.125)	(0.110)	(0.146)	(0.098)	(0.145)	(0.076)
Observations	3,045	3,150	3,045	3,150	3,190	3,300
R-squared	0.151	0.079	0.173	0.061	0.171	0.078
Number of Subjects	29	30	29	30	29	30

Note: OLS fixed effects regression with reward points as dependent variable (ranges from 0 to 7). Robust standard errors in parentheses clustered at the subject level.
* $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

A.10 Finite Mixture Model Analysis

Table A37: Parameter Sets for each Component of Finite Mixture Models

	Punishment			Both (Punishment Points)		
	Cluster 1 Little	Cluster 2 Pivotal	Cluster 3 Choice	Cluster 1 No	Cluster 2 Little	Cluster 3 Choice / Intention
Choice Unfair	0.111	0.505	1.961	0.020	0.457	0.767
Outcome Unfair	0.092	0.409	-0.642	0.010	0.032	-0.010
Intention Unkind	0.122	0.285	-0.436	0.014	-0.121	0.396
Initiator Unfair	-0.080	0.244	0.812	0.022	0.001	0.741
Pivotal Unfair	-0.021	1.355	0.242	-0.000	0.088	0.278
Size of Majority	0.063	0.000	-0.126	-0.004	0.024	-0.125
Constant	-0.174	-0.115	0.670	0.011	-0.054	0.468
σ	0.634	0.895	1.406	0.216	0.635	1.178
Number of Subjects	9	13	8	7	9	14

	Reward			Both (Reward Points)		
	Cluster 1 Little	Cluster 2 Pivotal	Cluster 3 Choice	Cluster 1 No	Cluster 2 Little	Cluster 3 Choice /Intention
Choice Fair	0.351	0.435	0.758	0.000	0.290	0.844
Outcome Fair	0.087	0.194	-0.254	-0.000	-0.088	-0.253
Intention Kind	-0.025	0.433	0.266	0.000	-0.003	-0.055
Initiator Fair	0.121	0.086	-0.312	0.000	-0.052	-0.056
Pivotal Fair	0.080	0.584	-0.137	0 .000	0.002	0.045
Size of Majority	0.051	-0.036	-0.177	0.000	0.018	0.010
Constant	-0.179	0.131	1.281	-0.000	-0.031	0.113
σ	0.476	0.899	1.458	0.006	0.481	0.936
Number of Subjects	10	14	5	7	15	8

Note: The table reports the parameter sets for each component resulting from the finite mixture models across treatments including the estimated variance σ and the number of subjects classified into the respective component. The finite mixture models are estimated via a general linear regression using an EM-algorithm and the number of components was determined by the best goodness of fit.

A.11 Eye–Tracking Results

We collected the data for 90 participants. Three subjects had to be excluded due to poor gaze data quality. The recipients made choices on two decision screens. On the first screen, the recipients made the decision whether to sanction or not. In addition to the votes being displayed, the decision screen had two large bars at the bottom indicating the willingness to sanction or not (see Figure A2 in Appendix A.1). On the second screen, the recipients decided on how many sanction points they wanted to allocate to the voters.[1] The second decision screen showed the votes as well as additional buttons for allocating punishment and reward points (see Figure **??**). Since on the second decision screen, subjects could allot the sanction points to each voter, it involved a lot of clicking and focus on the buttons. Therefore, we briefly discuss the results for the first decision screen.

To examine whether the gaze data of the recipients is in line with their sanctioning behavior, we use the average number of fixations and the dwell time. Generally, the fixations on different pieces of information are related to the processing of the inspected information (**?**) and indicate the relative importance of specific information for the decision making process (**??**).

It is important to note that certain voter positions can attract relatively more fixations merely due to being at the center of the screen. Also, scenarios in which a voter is salient might attract more attention. For instance, in situations where one voter votes differently than the other four voters, saliency is strong and might influence the gaze pattern of the recipients. In order to understand the importance of positioning and saliency, we conduct a fixed effects regression with the share of fixations as a dependent variable fixing on Voter Position 1. We control for voter position and saliency in this regression and the results are shown in Table A38.

Compared to the share of fixations on Voter 1, voters on position 2 and 3 receive a higher share of fixations while voters on position 5 receive a lower share of fixations. This can be due to the natural reading habit of reading from left to right in Western culture. Also, voters who are part of the minority group receive more fixations due to their saliency. This effect is even stronger when there is only one minority voter. The regression output shows that both saliency and voter position highly influence the gaze data.

[1] Only the recipients who decided to sanction moved on to the second screen.

Table A38: Share of Fixations - Importance of Position and Saliency

	Punishment	Reward	Both
Voter Position 2	0.036**	0.047**	0.024
	(0.012)	(0.014)	(0.017)
Voter Position 3	0.130***	0.141***	0.123***
	(0.023)	(0.031)	(0.029)
Voter Position 4	-0.003	-0.002	-0.023
	(0.014)	(0.014)	(0.017)
Voter Position 5	-0.039*	-0.054***	-0.083***
	(0.018)	(0.014)	(0.017)
Only One Salient	0.053***	0.068***	0.071***
	(0.009)	(0.012)	(0.009)
Neighbor of Only One Salient	0.005	0.009	-0.003
	(0.003)	(0.005)	(0.004)
Minority	0.010*	0.017*	0.008
	(0.004)	(0.006)	(0.004)
Constant	0.168***	0.163***	0.185***
	(0.012)	(0.013)	(0.015)
Observations	9,295	8,695	8,925
R-squared	0.151	0.169	0.179
Number of Subjects	30	28	29

Note: Fixed effects regression with share of fixations as dependent variable fixing on Voter Position 1. *Voter Position 2-5* indicate the position of the voter in the decision scenario. *Only One Salient* is a dummy variable indicating if the voter is the only salient voter. *Neighbor of Only One Salient* is a dummy variable that takes the value 1 if the voter is next to the only salient voter. *Minority* is a dummy variable indicating if the voter is part of the minority.
Robust standard errors in parentheses clustered at the subject level.
* $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

We will now discuss how the individual sanction motives (discussed in Section **??**) impact the fixations. We regress the share of fixations of the recipients on the different individual sanction motives incorporated in each decision screen. In addition, we control for the position and saliency measures mentioned above. The regression output is shown in Table A39 and suggests that voters are focused more when being the initiator. The pivotal voter does not receive a special focus. The result is against our expectations, as the pivotal voter is punished and rewarded the most. A potential reason could be that it is much more difficult to assess the responsibility of the initiator compared to the pivotal voter and, thus, the recipients look longer at the initiator.

Table A39: Share of Fixations - Impact of Sanction Motives

	Punishment	Both		Reward	Both
Choice Unfair	-0.001	0.005	Choice Fair	0.010	-0.005
	(0.006)	(0.005)		(0.006)	(0.004)
Intention Unkind	0.004	-0.0002	Intention Kind	-0.007	-0.007
	(0.007)	(0.006)		(0.007)	(0.006)
Initiator Unfair	0.017*	0.021*	Initiator Fair	0.024**	0.016*
	(0.007)	(0.008)		(0.009)	(0.006)
Pivotal Unfair	-0.005	-0.005	Pivotal Fair	0.006	0.001
	(0.007)	(0.006)		(0.011)	(0.009)
Controls	Yes	Yes	Controls	Yes	Yes
Constant	0.160***	0.175***	Constant	0.152***	0.185***
	(0.011)	(0.015)		(0.012)	(0.015)
Observations	9,295	8,925	Observations	8,695	8,925
R-squared	0.152	0.181	R-squared	0.171	0.180
Number of Subjects	30	29	Number of Subjects	28	29

Note: OLS fixed effects regression with share of fixation of the first screen as the dependent variable fixing on Voter Position 1. The controls include variables for *voter position 2-5, saliency and minority.*
Robust standard errors in parentheses clustered at the subject level. * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

As the recipients allocate sanction points to individual voters on the second decision screen, it is also possible that they might fixate more on the different voters while sanctioning. However, on the second screen, the measures for share of fixations and dwell time show a similar trend as on the first screen. Voter position and saliency strongly influence the gaze pattern of the recipients even on the second decision screen. With respect to the sanction motives, choosing an unfair allocation as well as initiating an unfair outcome leads to receiving a higher share of fixations as compared to the other sanction motives in the *Punishment* and *Both* treatments. In the *Reward* treatment, initiating a fair outcome and intentionally voting for a fair outcome attracts a higher share of fixations. Overall, the gaze pattern on the first and second screen exhibited similar trends.

A.12 Instructions for Participants

The following pages display a translated version of the instructions used in the experiment for the recipients.

General explanations for participants B

We warmly welcome you to this economic study.

If you read the following explanations carefully, then - depending on your decisions and the decisions of the other participants - you can earn money in addition to the **5 euros** that you receive as a show-up fee. It is therefore very important that you read these explanations carefully. If you have any questions, please address them to us.

During the study, you are not allowed to talk to the other participants in the study. Failure to comply with this rule will result in exclusion from the study and all payments.

The study consists of 2 parts. The instructions for both parts can be found on the following pages. Part 1 consists of 62 decisions and part 2 of 2 decisions. At the end, a draw is made to determine whether a decision from Part 1 or Part 2 is payout relevant. The probability that a decision of part 1 is relevant for payment is 96% and the probability that a decision from part 2 is relevant for payment is 4%.

During the study, we do not speak of euros, but of points. So, your total income is first calculated in points. The total number of points you earn during the study will then be converted into euros at the end, where the following conversion rate applies

1 point = 3 euros.

At the end of today's study, we will pay you the number of points earned during the study plus €5 in **cash** for showing up. The people who use an eye tracker will receive another €5 extra as compensation for the inconvenience. You will not find out which people use an eye tracker.

On the following pages we explain the exact procedure of the study.

The study

At the beginning, you will be randomly and anonymously assigned to nine other people who are also participating in this study. Neither before nor after the study will you learn the identity of the nine people assigned to you. The nine people assigned to you will also not learn anything about your identity.

In this study, there are two types of participants: Participant A and Participant B.

You are a participant B.

Each group consists of five participants A and five participants B. Thus, five participants A and four additional participants B are assigned to you.

The study consists of 64 scenarios spread over two parts. This means that each participant makes 64decisions. At the end of the experiment, one scenario is randomly drawn to be realized for the payout.

Part 1

In Part 1, the five Participants A decide by majority vote how 50 points will be divided between the five Participants A and the five Participants B.

Here, there are two different situations in which Participant A can choose from two different allocations.

<u>Situation 1:</u>

Participants A must choose between the following two possible allocations:

- **Allocation 1:** Participants A get 9 points each and participants B get 1 point each.
- **Allocation 2:** Participants A and Participants B get 5 points each.

The following table gives you an overview of the two allocations that Participants A must decide between.

	A	**A**	**A**	**A**	**A**	**B**	**B**	**B**	**B**	**B**
Allocation 1	9	9	9	9	9	1	1	1	1	1
Allocation 2	5	5	5	5	5	5	5	5	5	5

Situation 2:

Participants A must choose between the following two possible allocations:

- **Allocation 1:** Participants A get 8 points each and participants B get 2 points each.
- **Allocation 2:** Participants A get 6 points each and participants B get 4 points each.

The following table gives you an overview of the two allocations that Participants A must decide between.

	A	**A**	**A**	**A**	**A**	**B**	**B**	**B**	**B**	**B**
Division 1	8	8	8	8	8	2	2	2	2	2
Division 2	6	6	6	6	6	4	4	4	4	4

Regardless of the situation, the distribution that receives the majority of votes by participants A will be implemented. So, if three or more of the participants A decide for Allocation 1, then Allocation 1 is implemented. If three or more of the participants A decide for Allocation 2, then Allocation 2 is implemented.

Abstentions are not possible. Each participant A must vote either for Allocation 1 or for Allocation 2.

The voting procedure:

Participants A vote on the allocations **one after the other.**

1. The participant A who decides first is participant **A1**.

2. Participant A, who decides second, is participant **A2**. Participant A2 observes how participant A1 has decided before making his own decision.

3. Participant A, who is the third to decide, is participant **A3.** Participant A3 observes how participants A1 and A2 have decided before making his own decision.

4. Participant A, who decides fourth, is participant **A4. Participant** A4 observes how participants A1, A2 and A3 have decided before making his own decision.

5. The participant A who decides last is participant **A5**. Participant A5 observes how participants A1, A2, A3 and A4 have decided before making his own decision.

The allocation that at least three of the five Participants A opt for will be implemented.

The voting result is therefore fixed as soon as three participants A have decided on the same allocation.

The decisions of the participants B:

Participants B learn not only the result of the vote, but also how each individual participant A decided. Participants B therefore learn how first participant A1, then participant A2, A3, A4 and finally participant A5 decided.

After the voting outcome of participants A is determined, a participant B is drawn, who receives an extra point.

This participant B then has the option to give or deduct points from each participant A by giving up the extra point. The selected participant B can give and/or deduct up to 7 points in total from the participants A.

Any (whole) number of points between 0 and 7 points can be given or taken away. As soon as at least 1 point is given or taken away from participants A, the extra point is deducted from participant B. **So, the costs to give or deduct points is always equal to the extra point, regardless of the number of given or deducted points.**

For example, if the drawn participant B wants to deduct 7 points from participant A3, the payout of participant A3 will be reduced by **7 points**. The payoff of participant B is equal to the payoff after the voting by participant A before getting the extra point.

For example, if the drawn participant B wants to give 5 points to participant A1 and deducts 1 point from participant A4, participant A1's payout will increase by **5 points** and participant A4's payout will decrease by **1 point,** but participant B will not receive any extra point because he used it to deduct or give points.

The only restrictions on giving or deducting points are that no more than a total of 7 points can ever be deducted or given, and that no more points can ever be deducted from a participant A than he or she received in the distribution chosen by the majority.

If in situation 1 the distribution 2 (5/5) is realized, because four participants A decided in favor and one participant A decided against, the participant B, who is drawn and uses his extra point, can deduct a **maximum of 5 points from** a participant A, because they did not get more by the voting outcome.

As soon as participant B has decided to give/take points from participant A, the extra point is used. It does not matter whether or not points are actually given or taken away in the end, since the extra point is used directly with the decision to give/take points.

Participants A will only find out at the end whether and how many points Participant B has given them/subtracted.

Part 2

After all Participants A have played through the possible scenarios of majority decisions, two more decisions follow for Participants A. In these two rounds, both situations (Situation 1: Allocations (9/1; 5/5) or Situation 2: Allocations (8/2; 6/4)) **are** played out again, **with no majority decision and no reward or punishment.** This means that although all participants A decide to allocate in both situations, only one participant A is randomly selected, whose decision is realized for all participants A and participants B in his group. Participants B do not get an extra point afterwards and therefore cannot give/take any points.

The course of the experiment

In this study, a total of 64 scenarios are possible for you as participant B, depending on which situation (situation 1: Allocations (9/1; 5/5) or situation 2: Allocations (8/2; 6/4)) you are in and which allocations participants A1-A5 have chosen. The 64 scenarios correspond to all possible decision combinations of participants A, regardless of whether the participants are in part 1 or part 2.

Before you find out if you are by random decision the participant B who can give or subtract points from the participants A, we ask you to **indicate for each possible scenario how you would decide.**

You have the option of taking a break after 17 scenarios and removing your head from the chin rest. If you want to continue, you must position the head on the chin rest again and click on "Next". Please do not take longer than 1 minute for this break.

At the end of the experiment, it is first randomly determined whether a scenario of the majority decisions from part 1 or the decisions from part 2 is played out. Then, the situation (situation 1: Allocations (9/1; 5/5) or situation 2: Allocations (8/2; 6/4)) is determined by a dice roll. Then, Participants A are randomly assigned their role (A1-A5) and a Participant B is randomly selected to give/take points. If you get the role of this participant B, the corresponding scenario, which you already faced, is payoff-relevant and thus your choice for this scenario. Thus, only one scenario will be paid out in the end.

Below you will find a numerical example to illustrate one scenario of this study. Afterwards you will find the control questions, which also serve for your understanding. The information on these questions is not relevant for your payout.

Please complete the comprehension questions and raise your hand afterwards so we can review them.

A numerical example

Part 1 and Situation 1 were determined randomly.

Participant A1 chooses Allocation 1 (9/1).

Participant A2 observes A1's decision and then chooses Allocation 2 (5/5).

Participant A3 observes the decisions of A1 and A2 and then chooses Allocation 1 (9/1).

Participant A4 observes A1's, A2's, and A3's decisions and then chooses Allocation 1 (9/1).

The outcome of the vote has now already been determined. The result is Allocation 1 (9/1).

Participant 5 observes the decisions of his predecessors and then chooses Allocation 2 (5/5).

All participants B are informed about the chosen allocation of each participant A.

Participant B1 is drawn by lot and can give and subtract points from participant A.

B1 gives **3 points to** participant A2 and draws **4 points** from participant A4.

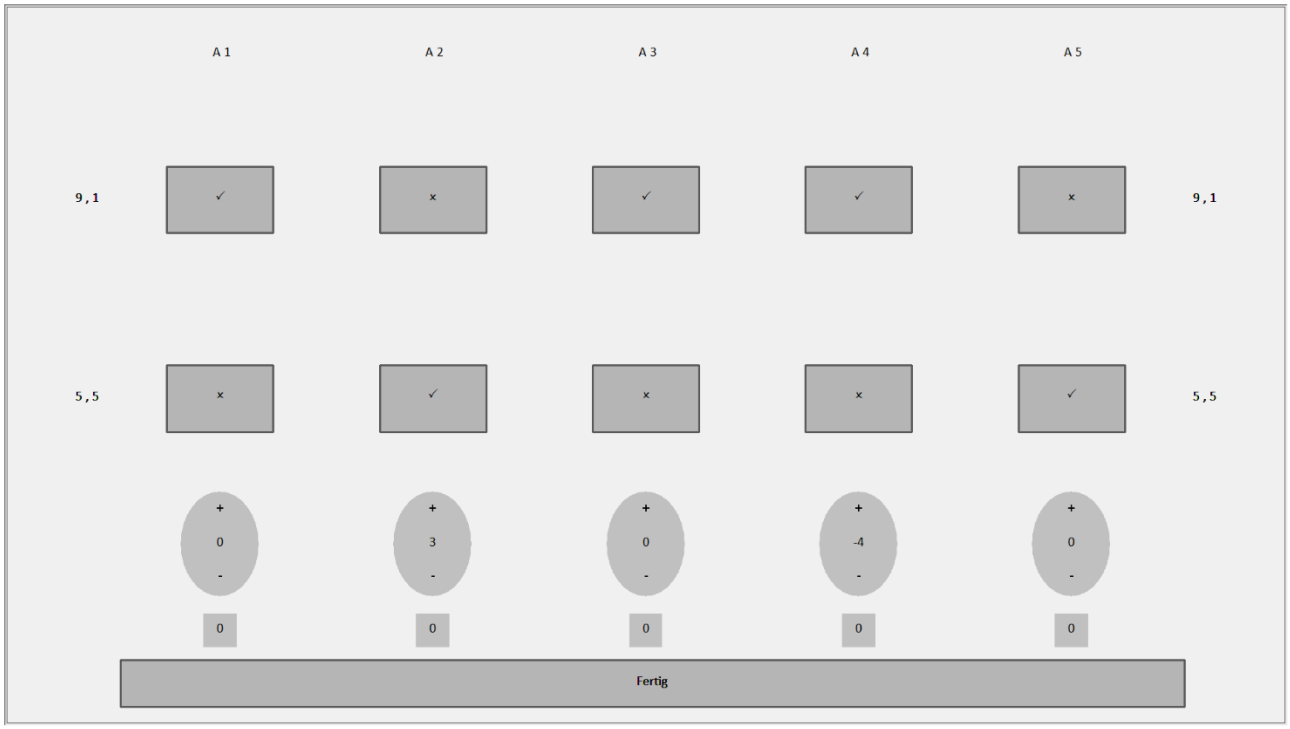
This results in the following payments:

	Decisions of the participants A	Points from the distribution	Points by participant B	Extra point?	Final points
A1	Allocation 1	9	0	-	9
A2	Allocation 2	9	3	-	12
A3	Allocation 1	9	0	-	9
A4	Allocation 1	9	-4	-	5
A5	Allocation 2	9	0	-	9
B1	-	1	-	used	1
B2	-	1	-	-	1
B3	-	1	-	-	1
B4	-	1	-	-	1
B5	-	1	-	-	1

Your process on the computer

The numerical example just shown on page 7 will look like this on your screen. Note that you have to make a decision for each scenario, but in the end only one participant B will be selected from your group whose decision will be implemented.

First of all, for each scenario you can see how all participants A have decided. Now you can decide whether to use your extra point to give or deduct points from participants A, or leave the scenario without action.



If you decided to use your extra point, you can give/take away up to 7 points to the participants A.

Control questions

Question 1:

A scenario from **Part 1 - Situation 1** (9/1; 5/5) has been determined. Fill in the gray fields.

	Decisions of the participants A	Resulting points?	Bonus points through B	Extra point?	Payouts?
A1	Allocation 1		-2	-	
A2	Allocation 1		0	-	
A3	Allocation 2		2	-	
A4	Allocation 2		2	-	
A5	Allocation 1		-1	-	
B1	-		-	used	
B2	-		-	-	
B3	-		-	-	
B4	-		-	-	
B5	-		-	-	

Question 2:

Related to question 1: What would be the maximum number of points that participant B1 could deduct participant A5?

Response:

Question 3:

A scenario from **part 2 - situation 1** (9/1; 5/5) was determined. At the end, a participant A was drawn, who chose Allocation 1.

How many points will each participant A receive? Answer:

How many points will each participant B receive? Answer:

Can a participant B give/take points in part 2? Answer:

Question 4:

Does participant B have to use his extra point in every scenario from part 1?

Response:

Question 5:

What is the probability that a scenario from Part 2 will be determined for payout?

Response:

General explanations for the participants A

We warmly welcome you to this economic study.

If you read the following explanations carefully, then - depending on your decisions and the decisions of the other participants - you can earn money in addition to the **5 euros** that you receive as a show-up fee. It is therefore very important that you read these explanations carefully. If you have any questions, then please direct them to us.

During the study you are not allowed to talk to the other participants from the study. Failure to comply with this rule will result in exclusion from the study and all payments.

The study consists of 2 parts. The instructions for both parts can be found on the following pages. Part 1 consists of 62 decisions and part 2 of 2 decisions. At the end, a draw is made to determine whether a decision from Part 1 or Part 2 is relevant for payout. The probability that a decision of part 1 is relevant for payment is 96% and the probability that a decision from part 2 is relevant for payment is 4%.

During the study, we do not speak of euros, but of points. So, your total income is first calculated in points. The total number of points you earn during the study will then be converted into euros at the end, where the following conversion rate applies

1 point = 3 euros.

At the end of today's study, we will pay you the number of points earned during the study plus €5 in **cash** for showing up. The people who use an eye tracker will receive another €5 extra as compensation for the inconvenience. You will not find out which people use an eye tracker.

On the following pages we explain the exact procedure of the study.

The study

At the beginning, you will be randomly and anonymously assigned to nine other people who are also participating in this study. Neither before nor after the study will you learn the identity of the nine people assigned to you. The nine people assigned to you will also not learn anything about your identity.

In this study, there are two types of participants: Participant A and Participant B.

You are a participant A.

Each group consists of five participants A and five participants B. Thus, four other participants A and five participants B are assigned to you.

Part 1

Part 1 consists of 62 scenarios. This means that each participant makes 62 decisions.

In Part 1, the five Participants A decide by majority vote how 50 points will be divided between the five Participants A and the five Participants B.

Here, there are two different situations in which Participant A can choose from two different Allocations.

<u>Situation 1:</u>

Participant A must choose between the following two possible allocations:

- **Allocation 1:** Participants A get 9 points each and participants B get 1 point each.
- **Allocation 2:** Participants A and Participants B get 5 points each.

The following table gives you an overview of the two Allocations that Participant A must decide between.

	A	**A**	**A**	**A**	**A**	**B**	**B**	**B**	**B**	**B**
Allocation 1	9	9	9	9	9	1	1	1	1	1
Allocation 2	5	5	5	5	5	5	5	5	5	5

Situation 2:

Participant A must choose between the following two possible allocations:

- **Allocation 1:** Participants A get 8 points each and participants B get 2 points each.
- **Allocation 2:** Participants A get 6 points each and participants B get 4 points each.

The following table gives you an overview of the two allocations that Participant A must decide between.

	A	**A**	**A**	**A**	**A**	**B**	**B**	**B**	**B**	**B**
Allocation 1	8	8	8	8	8	2	2	2	2	2
Allocation 2	6	6	6	6	6	4	4	4	4	4

Regardless of the situation, the allocation that receives the majority of votes by participants A will be implemented. So, if three or more of the participants A decide for Allocation 1, then Allocation 1 is implemented. If three or more of the participants A decide for Allocation 2, then Allocation 2 is implemented.

Abstentions are not possible. Each participant A must vote either for Allocation 1 or for Allocation 2.

The voting procedure:

Participants A vote on the allocations **one after the other**.

1. The participant A who decides first is participant **A1**.
2. Participant A, who decides second, is participant **A2**. Participant A2 observes how participant A1 has decided before making his own decision.
3. Participant A, who is the third to decide, is participant **A3.** Participant A3 observes how participants A1 and A2 have decided before making his own decision.
4. Participant A, who decides fourth, is participant **A4.** Participant A4 observes how participants A1, A2 and A3 have decided before making his own decision.
5. The participant A who decides last is participant **A5**. Participant A5 observes how participants A1, A2, A3 and A4 have decided before making his own decision.

The allocation that at least three of the five Participants A opt for will be implemented.

The voting result is therefore fixed as soon as three participants A have decided on the same allocation.

The decisions of the participants B:

Participants B learn not only the result of the vote, but also how each individual participant A decided. Participants B therefore learn how first participant A1, then participant A2, A3, A4 and finally participant A5 decided.

After the voting outcome by participants A is determined, a participant B is drawn, who receives an extra point.

This participant B then has the option to give or deduct points from each participant A by giving up the extra point. The selected participant B can give and/or deduct up to 7 points in total from the participants A.

Any (whole) number of points between 0 and 7 points can be given or taken away. As soon as at least 1 point is given or taken away from a participant A, the extra point is deducted from participant B. **So, the costs to give or deduct points is always equal to the extra point, regardless of the number of given or deducted points.**

For example, if the drawn participant B wants to deduct 7 points from participant A3, the payout of participant A3 will be reduced by **7 points**. The payoff of participant B is equal to the payoff after the voting by participant A before getting the extra point.

For example, if the drawn participant B wants to give 5 points to participant A1 and deducts 1 point from participant A4, participant A1's payout will increase by **5 points** and participant A4's payout will decrease by **1 point,** but participant B will not receive any extra point because he used it to deduct or give points.

The only restrictions on giving or deducting points are that no more than a total of 7 points can ever be deducted or given, and that no more points can ever be deducted from a participant A than he or she received in the distribution chosen by the majority.

If in situation 1 the distribution 2 (5/5) is realized, because four participants A decided in favor and one participant A decided against, the participant B, who is drawn and uses his extra point, can deduct a **maximum of 5 points from** a participant A, because they did not get more by the voting outcome.

As soon as participant B has decided to give/take points from participant A, the extra point is used. It does not matter whether points are actually given or deducted in the end, since the extra point is used directly with the decision to give or take points.

Participants A will only find out at the end whether and how many points Participant B has given them/subtracted.

Part 2

After all participants have played through the possible scenarios of majority decisions, two more decisions follow. In these two rounds, both situations (Situation 1: Allocations (9/1; 5/5) or Situation 2: Allocations (8/2; 6/4)) **are** played out again, **with no majority decision and no reward/punishment.** This means that although all Participants A decide to allocate in both situations, only one Participant A is randomly selected, whose decision is realized for all Participants A and Participants B in his group. Participants B do not get an extra point afterwards and thus cannot redistribute any points.

The course of the experiment

In this study, a total of 64 scenarios (62 majority votes in part 1 + 2 decisions in part 2) are possible, depending on which situation (situation 1: Allocations (9/1; 5/5) or situation 2: Allocations (8/2; 6/4)) you are, which role (A1-A5) you are assigned and how the other participants A have decided.

We ask you to make a decision for each of the possible scenarios. You thus play through each possible scenario in each possible role (A1-A5).

You have the option to pause every 17 scenarios. If you want to continue, you must click on "Next". Please do not take more than 1 minute for this break.

At the end of the experiment, it is first randomly determined whether a scenario of the majority decisions from Part 1 or the decisions from Part 2 is played out. Then, a dice roll is used to determine the situation (Situation 1: Allocations (9/1; 5/5) or Situation 2: Allocations (8/2; 6/4)). Afterwards, participants A are randomly assigned their roles (A1-A5). Based on this, the corresponding decision in the respective voter position is payoff relevant. Thus, only one scenario is paid out in the end.

Below you will find a numerical example to illustrate one scenario of this study. Afterwards you will find the control questions, which also serve for your understanding. The information on these questions is not relevant for your payout.

Please complete the comprehension questions and raise your hand afterwards so we can review them.

A numerical example

Part 1 and Situation 1 were determined randomly.

Participant A1 chooses Allocation 1 (9/1).

Participant A2 observes A1's decision and then chooses Allocation 2 (5/5).

Participant A3 observes the decisions of A1 and A2 and then chooses Allocation 1 (9/1).

Participant A4 observes A1's, A2's, and A3's decisions and then chooses Allocation 1 (9/1).

The outcome of the vote has now already been determined. The result is Allocation 1 (9/1).

Participant 5 observes the decisions of his predecessors and then chooses Allocation 2 (5/5).

All participants B are informed about the chosen allocation of each participant A.

Participant B1 is drawn and can give /deduct points to/from participants A.

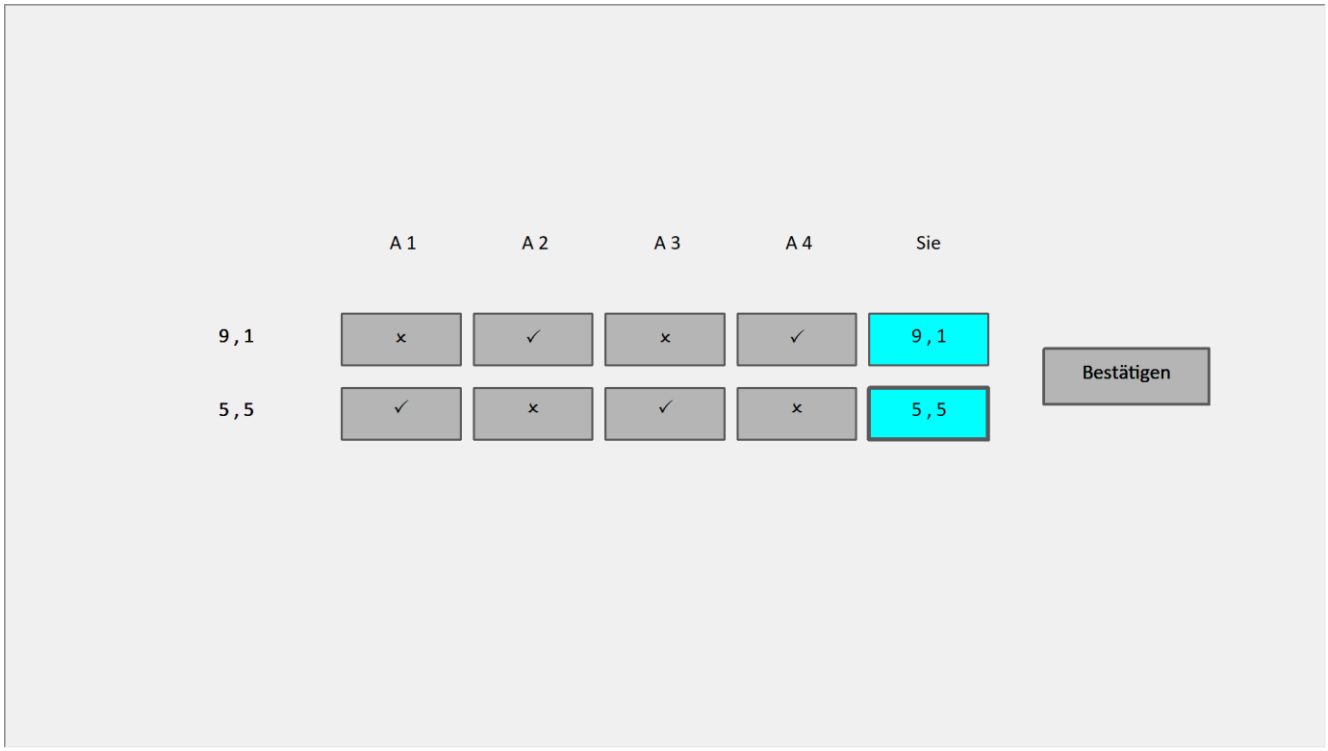
B1 gives **3 points** to participant A2 and deducts **4 points** from participant A4.

This results in the following payments:

	Decisions of the participants A	Points from the distribution	Points by participant B	Extra point?	Final points
A1	Allocation 1	9	0	-	9
A2	Allocation 2	9	3	-	12
A3	Allocation 1	9	0	-	9
A4	Allocation 1	9	-4	-	5
A5	Allocation 2	9	0	-	9
B1	-	1	-	used	1
B2	-	1	-	-	1
B3	-	1	-	-	1
B4	-	1	-	-	1
B5	-	1	-	-	1

Your process on the computer

All 62 scenarios from Part 1 will look like this on your screen. Note that in this example scenario you play the role of participant A5.



You see your role highlighted and can see the decisions of the previous voters (A1 to A4 in this example). Now you select an allocation and submit your decision by clicking "Bestätigen".

The different scenarios vary depending on the role you are in, the situation you are in, and the decisions previous voters made.

The scenarios from part 2 will look similar to the picture, but no other participant A will be displayed.

Control questions

Question 1:

A scenario from **Part 1 - Situation 1** (9/1; 5/5) has been determined. Fill in the gray fields.

	Decisions of the participants A	Resulting points?	Points through B	Extra point?	Payouts?
A1	Allocation 1		-2	-	
A2	Allocation 1		0	-	
A3	Allocation 2		2	-	
A4	Allocation 2		2	-	
A5	Allocation 1		-1	-	
B1	-		-	used	
B2	-		-	-	
B3	-		-	-	
B4	-		-	-	
B5	-		-	-	

Question 2:

Related to question 1: What would be the maximum number of points that participant B1 could deduct from participant A5?

Response:

Question 3:

A scenario from **part 2 - situation 1** (9/1; 5/5) was determined. At the end, a participant A was drawn by lot, who chose Allocation 1.

How many points will each participant A receive? Answer:

How many points do each of the participants B receive? Answer:

Can a participant B give/take points in part 2? Answer:

Question 4:

Does participant B have to use his extra point in every scenario from part 1?

Response:

Question 5:

What is the probability that a scenario from Part 2 will be determined for payout?

Response:

A.13 Statements and Declarations

Ethics statement for manuscript:

Blame and Praise:
Responsibility Attribution Patterns in Decision Chains

By Deepti Bhatia, Urs Fischbacher, Jan Hausfeld and Regina Stumpf

IRB:

The experiment was conducted at the Lakelab at the University of Konstanz.[2] The responsible Institutional Review Board is the Ethics Committee of the University of Konstanz.[3]

As usual in Germany, the Ethics Board gives a blanket approval for all "non-invasive" studies. We quote from their website:

"When does the Ethics Committee (not) get involved

The Ethics Committee does not address questions of ethical animal treatment, dual-use issues or general research ethics questions, which do not affect the health, dignity or personal rights of human test subjects. It is very important that those performing scientific studies take responsibility for their actions and abide by the respective ethical norms for their field of study (politics, educational sciences, etc.) For example, research in the field of sports science that is non-invasive and mainly addresses sport-scientific questions is not supervised by the Ethics Committee. However, we still ask researchers of such projects to take particular care to provide test subjects with ample information, to explain the experiment in everyday language, to inform about the corresponding risks and benefits and to address privacy requirements."

The experiment that we conducted is a non-invasive study and was hence indirectly approved by the Ethics Committee under the conditions quoted above. To fulfill these conditions all experiments that are conducted at Lakelab have to be approved internally by the experimental economics group before the first session and before any pretest. The lab thus implements a strict no-deception policy and abides by the EU and German regulations on data privacy. Subjects are informed about this at the time of registration and the rules also appear on the Lakelab website (under "Datenschutz").

[2] https://www.wiwi.uni-konstanz.de/lakelab/

[3] https://www.uni-konstanz.de/en/university/administration-and-organisation/university-bodies-and-committees/university-bodies-for-scientific-integrity/ethics-committee/

Disclosure statement for manuscript:

Blame and Praise:
Responsibility Attribution Patterns in Decision Chains

By Deepti Bhatia, Urs Fischbacher, Jan Hausfeld and Regina Stumpf

We received financial support from the German Research Foundation (DFG) through research unit FOR 1882 “Psychoeconomics”.
All authors have nothing to disclose.

Deepti Bhatia declares that she has no relevant or material financial interests that relate to the research described in this paper.

Urs Fischbacher declares that he has no relevant or material financial interests that relate to the research described in this paper.

Jan Hausfeld declares that he has no relevant or material financial interests that relate to the research described in this paper.

Regina Stumpf declares that she has no relevant or material financial interests that relate to the research described in this paper.