## Supplemental Materials for:

When Toughness Begets Respect: Dominant Individuals Gain Prestige and Leadership by Facilitating Intragroup Conflict Resolution FIGURE S1 | Perceived dominance increases linearly from no punish, moderate punish, to harsh punish experimental conditions, indicating that these conditions successfully elicited varying degrees of dominance. Each panel shows the positive stepwise trend linking punishment strength condition to dominance perception. This pattern is consistently obtained in each of the 10 different threat and conflict experimental conditions. Panels labeled with a higher positive value indicates greater degree of threat and conflict, wherein '1' represents condition in which the fewest money units were stolen from victim and '10' represents condition in which the most money units were stolen from victim. C = the focal target.



Panels shown for 10 different threat and conflict experimental conditions (1 to 10 money units stolen from victim, where higher equals greater degree of theft and exploitation )

FIGURE S2 | Under low exposure to threat and conflict, punishing norm violation (compared to not punishing) contributes *negatively* to prestige. This analysis parallels the mediation results reported in Figure 5 of the main text, which examine associations when threat exposure is high. Here we restrict this analysis to participants assigned to the relatively *low* threat and conflict conditions (theft levels equal 1 to 4, rescaled). As expected, punishing violations is *dis*favored when norm violation is modest and does not present a serious internal threat to collective action. Results show that punishing norm violation (compared to not punishing) is *negatively* related to prestige ( $\beta = -.13$ , p = .030), which positively predicts leader endorsement ( $\beta = .76$ , p < .001). Moreover, mediation analyses using 10,000 bootstrapped samples showed that prestige significantly mediated the *negative* relationship between candidate punishment and leader endorsement (indirect effect = -.10, 95% CI [-.181, -.010], p = .030.



Shown are standardized parameter estimates in the mediation model specified. In contrast to Figure 5 in the main text, these results are based *only* on participants assigned to the relatively *low* threat and conflict (i.e., theft levels that equals 1 to 4, rescaled). Punishment behaviors contrasts the effect of a candidate who punishes strongly (coded '1') versus a candidate who does not punish at all (coded '0'). C = the focal target. N = 293; \*\* p < .001; \* p < .05.

TABLE S1 | Linear regression models predicting leader endorsement from punishment (strong punishment vs. no punishment) and threat experimental conditions, as well as control variables. The significant moderation effect (i.e., the effect of punishment on leader endorsement moderated by threat faced) survives across all four specifications, even after the inclusion of controls including gender (dummy coded; 0 = man, 1 = woman), age, and ethnicity (dummy coded; 0 = Caucasian, 1 = non-Caucasian). C = the focal target.

	Model 1	Model 2	Model 3	Model 4
	b/ci95/p	b/ci95/p	b/ci95/p	b/ci95/p
Punishment Condition (0 = No Punish; 1 = Strong Punish)	-0.5361**	-0.5545**	-0.5519**	-0.5524**
In-Group Norm	[-0.86,-0.21] (0.0014) -0.0349 <sup>+</sup>	[-0.89,-0.22] (0.0011) -0.0396*	[-0.89,-0.22] (0.0012) -0.0394*	[-0.89,-0.22] (0.0012) -0.0394*
Violation				
	[-0.07,0.00] (0.0716)	[-0.08, -0.00] (0.0422)	[-0.08,-0.00] (0.0434)	[-0.08,-0.00] (0.0435)
Punishment Condition × In- Group Norm Violation	0.1128***	0.1176***	0.1171***	0.1171***
	[0.06,0.17] (0.0000)	[0.06,0.17] (0.0000)	[0.06,0.17] (0.0000)	[0.06,0.17] (0.0000)
Gender (0 = Man; 1 = Woman)		0.2037*	0.2052*	0.2049*
Age		[0.05,0.36] (0.0110)	[0.05,0.36] (0.0111) 0.0063	[0.05,0.36] (0.0113) 0.0067
(z-score)			[-0.07,0.08] (0.8733)	[-0.07,0.08] (0.8671)
Ethnicity (0 = Caucasian; 1 = non-Caucasian)				-0.0157
				[-0.17,0.14] (0.8452)
Constant	0.1046	0.0103	0.0084	0.0181
	(0.3737)	(0.9343)	(0.9465)	(0.8932)
$R^2$	0.029	0.038	0.038	0.038
Adjusted $R^2$	0.025	0.032	0.031	0.029
AIC	2046.7568	2020.3449	2022.3192	2024.2807
BIC	2064.9669	2043.0428	2049.5567	2056.0578
Observations	701	692	692	692

+ p < 0.10, \* p < 0.05, \*\* p < .01, \*\*\* p < .001

TABLE S2 | Linear regression models predicting leader endorsement from punishment (strong punishment vs. moderate punishment) and threat experimental conditions, as well as control variables. The significant moderation effect (i.e., the effect of punishment strength on leader endorsement moderated by threat faced) survives across all four specifications, even after the inclusion of controls including gender (dummy coded; 0 = man, 1 = woman), age, and ethnicity (dummy coded; 0 = Caucasian, 1 = non-Caucasian). C = the focal target.

-	Model 1	Model 2	Model 3	Model 4
	b/ci95/p	b/ci95/p	b/ci95/p	b/ci95/p
Punishment	-0.4947**	-0.4912**	-0.4996**	-0.5034**
Condition				
(0 = Moderate Punish;				
I – Strong I unish)	[-0.800.19]	[-0.800.18]	[-0.810.19]	[-0.820.19]
	(0.0018)	(0.0022)	(0.0018)	(0.0017)
In-Group Norm	0.0048	0.0041	0.0040	0.0037
Violation	0.0010	010011	010010	
, 101001011	[-0.03.0.04]	[-0.03.0.04]	[-0.03.0.04]	[-0.03.0.04]
	(0.7937)	(0.8234)	(0.8274)	(0.8417)
Punishment	0.0731**	0.0726**	0.0747**	0.0751**
Condition × In-				
Group Norm				
Violation				
	[0.02,0.12]	[0.02,0.12]	[0.03,0.12]	[0.03,0.12]
	(0.0033)	(0.0040)	(0.0031)	(0.0030)
Gender	, , ,	0.0272	0.0160	0.0153
(0 = Man; 1 = Woman)			5010010	5010010
		[-0.11,0.17]	[-0.13,0.16]	[-0.13,0.16]
		(0.7026)	(0.8246)	(0.8323)
Age			-0.0374	-0.0353
(Z-SCOTE)			[-0.11.0.03]	[-0.10.0.03]
			(0.2841)	(0.3130)
Ethnicity			(0.20.1)	-0.0538
(0 = Caucasian;				
1 = non-Caucasian)				[ 0 20 0 00]
				[-0.20, 0.09]
Constant	0.0632	0.0556	0.0608	(0.4340)
Constant	[-0.17, 0.30]	[-0.20, 0.30]	0.0008 [_0 10 0 31]	[_0 17 0 36]
	(0.5931)	(0.6641)	(0.6351)	(0.4823)
$R^2$	0.033	0.032	0.034	0.034
Adjusted $R^2$	0.029	0.032	0.026	0.026
AIC	1802.8367	1781.9658	1782,8074	1784,2419
BIC	1820.9251	1804.5022	1809.8511	1815.7928
Observations	680	670	670	670

+ p < 0.10, \* p < 0.05, \*\* p < .01, \*\*\* p < .001

TABLE S3 | Linear regression models predicting candidate perceived prestige from punishment (strong punishment vs. no punishment) and threat experimental conditions, as well as control variables. The significant moderation effect (i.e., the effect of punishment on prestige conferred moderated by threat faced) survives across all four specifications, even after the inclusion of controls including gender (dummy coded; 0 = man, 1 = woman), age, and ethnicity (dummy coded; 0 = Caucasian, 1 = non-Caucasian). C = the focal target.

	Model 1	Model 2	Model 3	Model 4
	b/ci95/p	b/ci95/p	b/ci95/p	b/ci95/p
Punishment	-0.5621***	-0.5817***	-0.5914***	-0.5917***
Condition (0 = No Punish; 1 = Strong Punish)				
e ,	[-0.89,-0.23]	[-0.91,-0.25]	[-0.92,-0.26]	[-0.92,-0.26]
	(0.0008)	(0.0006)	(0.0005)	(0.0005)
In-Group Norm Violation	-0.0394*	-0.0432*	-0.0437*	-0.0437*
	[-0.08, -0.00]	[-0.08, -0.01]	[-0.08, -0.01]	[-0.08, -0.01]
Punishment Condition × In- Group Norm Violation	0.1093***	0.1137***	0.1155***	0.1155***
	[0.06, 0.16] (0.0001)	[0.06,0.17] (0.0000)	[0.06, 0.17] (0.0000)	[0.06,0.17] (0.0000)
Gender (0 = Man; 1 = Woman)		0.0944	0.0887	0.0885
Age		[-0.06,0.25] (0.2373)	[-0.07,0.25] (0.2709) -0.0235	[-0.07,0.25] (0.2724) -0.0233
(z-score)			[-0.10,0.05] (0.5547)	[-0.10,0.05] (0.5583)
Ethnicity (0 = Caucasian; 1 = non-Caucasian)				-0.0087
				[-0.17,0.15]
				(0.9139)
Constant	0.1935+	0.1605	0.1674	0.1728
	[-0.04,0.42]	[-0.08,0.40]	[-0.08,0.41]	[-0.09,0.44]
	(0.0996)	(0.1973)	(0.1808)	(0.1995)
$R^2$	0.025	0.027	0.028	0.028
Adjusted $R^2$	0.020	0.022	0.021	0.019
AIC	2045.2721	2018.9166	2020.5643	2022.5525
BIC	2063.4822	2041.6145	2047.8018	2054.3296
Observations	701	692	692	692

+ p < 0.10, \* p < 0.05, \*\* p < .01, \*\*\* p < .001

TABLE S4 | Linear regression models predicting candidate perceived prestige from punishment (strong punishment vs. moderate punishment) and threat experimental conditions, as well as control variables. The significant moderation effect (i.e., the effect of punishment on prestige conferred moderated by threat faced) survives across all four specifications, even after the inclusion of controls including gender (dummy coded; 0 = man, 1 = woman), age, and ethnicity (dummy coded; 0 = Caucasian, 1 = non-Caucasian). C = the focal target.

	Model 1	Model 2	Model 3	Model 4
	b/ci95/p	b/ci95/p	b/ci95/p	b/ci95/p
Punishment	-0.3986*	-0.4109*	-0.4220**	-0.4213**
Condition (0 = Moderate Punish; 1 = Strong Punish)		011105	0.1220	011210
I – Subig I ullish)	[-0 71 -0 08]	[-0 73 -0 09]	[-0 74 -0 10]	[-0 74 -0 10]
	(0.0130)	(0.0113)	(0.0093)	(0,0096)
In-Group Norm Violation	-0.0048	-0.0066	-0.0067	-0.0066
	[-0.04.0.03]	[-0.04.0.03]	[-0.04.0.03]	[-0.04.0.03]
	(0.7964)	(0.7241)	(0.7190)	(0.7219)
Punishment Condition × In- Group Norm Violation	0.0746**	0.0766**	0.0794**	0.0793**
	[0.03,0.12]	[0.03,0.13]	[0.03,0.13]	[0.03,0.13]
	(0.0032)	(0.0027)	(0.0019)	(0.0020)
Gender $(0 = Man; 1 = Woman)$	, , , , , , , , , , , , , , , , , , ,	0.0335	0.0186	0.0187
Age		[-0.11,0.18] (0.6432)	[-0.12,0.16] (0.7990) -0.0495	[-0.12,0.16] (0.7978) -0.0499
(z-score)			[-0.12,0.02] (0.1617)	[-0.12, 0.02] (0.1600)
Ethnicity (0 = Caucasian; 1 = non-Caucasian)				0.0102
				[-0.13, 0.15]
Constant	0.0299	0.0271	0.0340	0.0000
Constant	[-0.21, 0.27]	[-0.23, 0.28]	[_0 22 0 29]	[-0.24, 0.30]
	(0.8035)	(0.8342)	(0.7031)	(0.8430)
<b>p</b> <sup>2</sup>	0.024	0.024	0.027	0.0430)
A divisted $R^2$	0.024	0.024	0.027	0.027
AUJUSICU A	1873 8006	1800 0280	1800.0611	1802 0414
RIC	18/1 8080	1877 5752	1877 1048	1833 5073
Observations	680	670	670	670
Augusted K AIC BIC Observations	1823.8096 1841.8980 680	1800.0389 1822.5753 670	1800.0611 1827.1048 670	1802.0414 1833.5923 670

+ p < 0.10, \* p < 0.05, \*\* p < .01, \*\*\* p < .001