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POPULATION AND SAMPLING STRATEGY

Emerging in 2004, the Islamic State (then known as Jamaat al-Tawhid waal-Jihad), originally aimed to expel the United States led coalition forces and overthrow the Iraqi government in order to establish a Sunni Islamic state ruled under Sharia law.[1] By the time IS took control of Mosul, Iraq in 2014 their territorial ambitions had expanded to a global scale. At the height of their power in 2015-2016, the group ruled a large swath of territory roughly the size of Portugal that included parts of Iraq and Syria. The two largest cities under IS control were Raqqa, Syria and Mosul, Iraq. The Battle of

[1] For more information, see the Uppsala Conflict Data Program's profile of the Islamic State. Available at: https://ucdp.uu.se/actor/234.

Mosul took place during 2016-2017. By late 2017 the Islamic State had lost control of most of its territory, including all major Iraqi and Syrian towns and cities it once ruled.

The survey was conducted in West Mosul between 24 October 2018 and 15 November 2018. West Mosul is the name given to the area on the west bank of the Tigris river, where 95 out of Mosul's 251 neighborhoods are located. Harboring a substantial contingent of well-entrenched ISIS forces, West Mosul witnessed intense fighting between ISIS militants and Iraqi Government troops. Across 41 neighborhoods in West Mosul we sampled 20-25 individuals, garnering a total sample size of 1027. This sample size gives us sufficient power to reliably identify effects above a magnitude of ca 0.1. Given the security situation at the time when the survey was conducted, as well as the possibility of coming across individuals wanted by the police, ISIS supporters or members of active ISIS cells, we did not deem door-to-door sampling to be a viable option. We opted for a purposive sampling strategy to recruit participants instead. Drawing on trust networks established in each neighborhood through fieldwork conducted by our field team, we recruited survey participants via these local networks. After arranging appointments via telephone, the surveys were conducted in the homes of local families. After each session, the participants were asked to put members of our team in contact with new people from their social networks living in the same neighborhood, such as neighbors, friends, and members of their extended family. Sessions with the new participants were then arranged via telephone and carried out in the new contacts' homes the following day. Since the typical work day in Mosul ends at 2pm, most sessions were conducted in the afternoon, allowing us to recruit a balanced sample of men and women for the study.

The survey was conducted using the online-survey software Qualtrics, and participants completed the survey using a tablet that was provided to them. Information sheets were given to them before the actual start of the survey, after which they were asked to provide informed consent (also through Qualtrics) granting us permission to use their data for research purposes. After this procedure was completed, the participants navigated through the survey on the tablet on their own. The participants thus completed the survey independently, and their answers were anonymous.

The collected data correspond to a stratified sample of all of West Mosul's populated neighborhoods, based on six relevant characteristics possessing theoretical relevance. The variation in the distribution of variables between our sample and all of West Mosul's populated neighborhoods reflects our effort to include at least one neighborhood to represent each unique combination of relevant characteristics. We expect each of these characteristics to be a likely confounding factor for the study of numerous relationships that may rely on this survey data.

The sampled neighborhoods were selected based on the following variables: Ethnicity, Area, Houses, Highways, Pre-2014 Security, and Sleeper Cell. Data concerning these variables were derived from an ethnographic map of Mosul[2], the UN Habitat City Profile of Mosul, Iraq: Multi-sector Assessment of a City Under Siege[3], and from a recent Mosul neighborhood GIS file.

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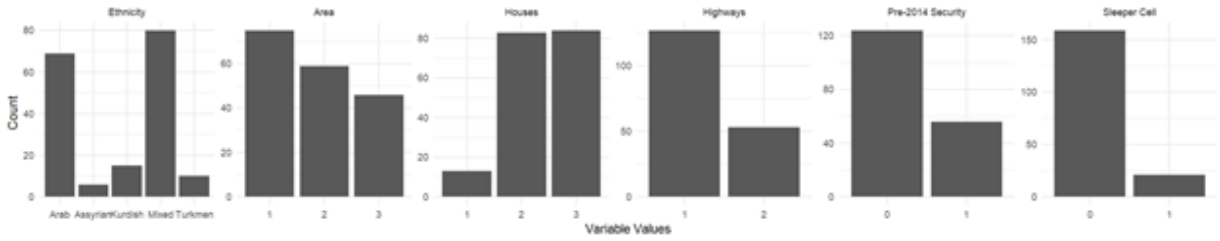
[2] Data is available online at: https://southfront.org/ethnographic-map-of-mosul-city-explains-iraqi-forces-success-in-its-western-outskirts/.

[3] Available online at: https://reliefweb.int/sites/reliefweb.int/files/resources/UN-Habitat_MosulCityProfile_V5.pdf.

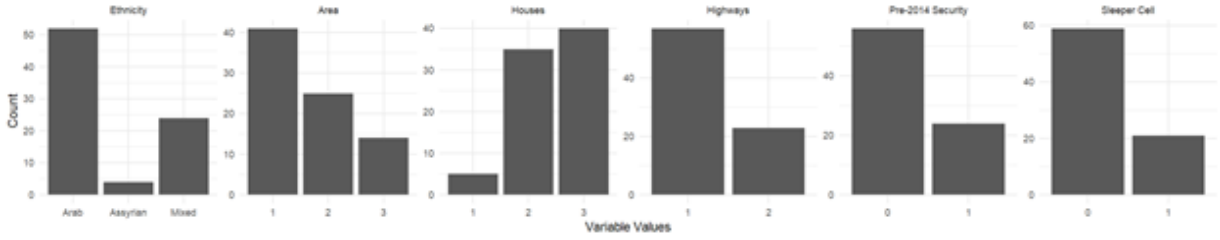
1. The Ethnicity variable measures which ethnic group was predominant in a given neighborhood prior to ISIS's takeover of Mosul in 2014. This variable can adopt one of five values (and "None" if a neighborhood has no houses): Arab, Assyrian, Kurdish, Mixed, and Turkmen. Most of the support enjoyed by ISIS came from Sunnis—both in Iraq and among people in neighboring states, and almost all participants of our study self-identified as Sunni (1,013 out of 1,022).
2. The Area variable records the neighborhood's size. In order to facilitate stratification of the sample, it has been transformed into a categorical variable with three different values distinguishing between neighborhoods in the bottom, mid, and top 33% of neighborhood sizes. Bigger neighborhoods may systematically see more military activity compared to smaller neighborhoods. Neighborhood size and population size are also correlated.
3. The Houses variable captures the number of households that exist in the neighborhood. Like the Area variable, it has been transformed into a categorical variable. Neighborhoods with a larger number of houses may also see systematically different levels of military activity, and may also differ in population density compared to smaller neighborhoods.
4. The Highways variable, which has been made into a categorical variable as well, records the length of major roadways in the neighborhood. Both ISIS and the Iraqi government used highways to travel and transport supplies. Consequently, achieving control over majora roads may have been a high strategic priority, leading to systematic differences in the incidence of military activity, the degree of military attention, and the presence of combatants.

5. The Pre-2014 Security variable records whether any major security incidents took place in a given neighborhood prior to ISIS's takeover in 2014. The level of military activity in a neighborhood may be a proxy for pro-ISIS sympathies and be related to the presence of strategically significant populations or infrastructure.
6. Finally, the Sleeper Cell variable records whether ISIS sleeper cells—insurgent safehouses—existed in a given neighborhood prior to the expulsion of local Iraqi Government forces by ISIS in 2014. As with pre-2014 security, the existence of ISIS safe-houses may indicate areas where pro-ISIS sympathies are common, as well as the possible presence of strategically important populations or infrastructure.

Panel 1: Populated Neighborhoods in Mosul



Panel 2: Populated Neighborhoods in <u>West</u> Mosul



Panel 3: Sampled Neighborhoods

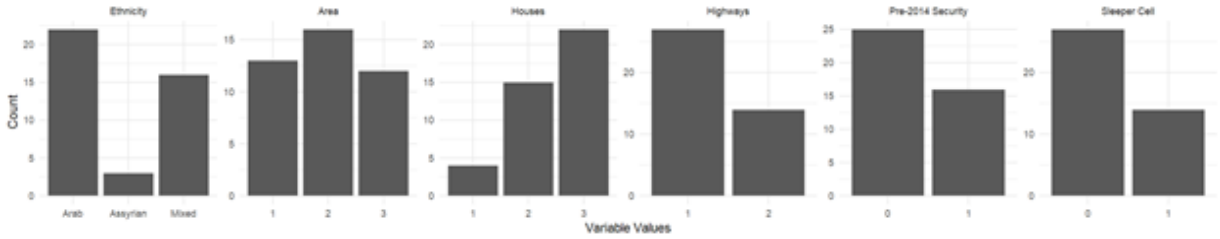


Figure S1.Distribution of Neighborhood Characteristics Across Samples.

Distributions of these variables are shown above in Figure 1. The x-axis shows the values of the variable while the y-axis shows the count of observations that take on identified values. Although the counts vary between samples, what is important to consider is the distribution of counts within a variable. Panel 1 shows the distribution of variables for all neighborhoods in Mosul—both east and west—that had at least one house. This criterion excludes purely industrial areas, empty land, and the Mosul airport. Panel 2 shows the distributions for these variables for all populated neighborhoods in West Mosul. Finally, Panel 3 shows the distribution of these variables for our sample of 41 populated neighborhoods in West Mosul.

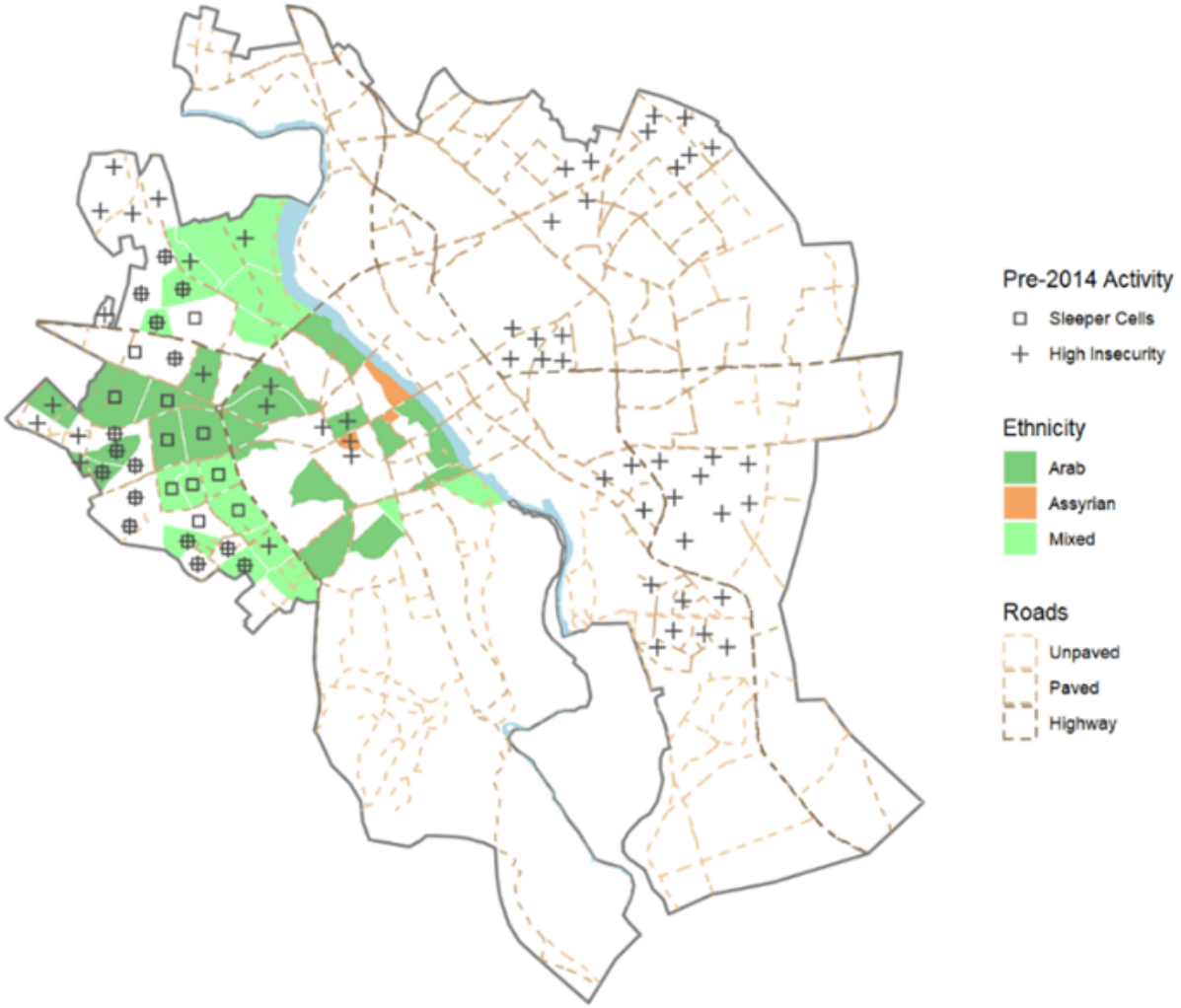


Figure S2. Map of Mosul with Sampled Neighborhood Characteristics Highlighted.

West Mosul looks different from the rest of Mosul primarily along two variables: Ethnicity and Sleeper Cell. West Mosul has no substantial Kurdish or Turkmen population. In fact, most of the neighborhoods in the west are Arab or Mixed Arab. In addition, a larger portion of the neighborhoods in West Mosul had ISIS safe-houses prior to 2014. Both characteristics suggest that West Mosul was likely more supportive of ISIS than East Mosul. Our sample of neighborhoods in West Mosul was designed to over-represent bigger, Assyrian/Mixed neighborhoods (although the vast majority of

respondents turned out to self-identify as Sunni Muslim) and neighborhoods with more pre-2014 security incidents and ISIS safe-houses. A visualization of this data is shown in Figure 2. The characteristics of the neighborhoods in our sample are shown. Only the colored neighborhoods were sampled, and neighborhoods that were not sampled are left blank. Much of the southern part of West Mosul is made up of industrial areas and the Mosul airport. As a result, there are no neighborhoods from this area that are included in our sample.

WELFARE TRADEOFF TASK

In order to examine the effects of social categorization, we employ a 2 x 2 x 2 between-subjects factorial design, combining three binary variables capturing the ethnoreligious group identity, gender and age of the target. All possible combinations of these three binary variables results in eight survey vignettes. Group Identity is operationalized using ethno-religious group (“Sunni Arab” or “Shia Arab”). Because all participants are Sunni Arabs, Shia Arab constitutes the outgroup treatment and Sunni Arab constitutes the ingroup treatment. Gender takes the value of either “Male” or “Female”. Age is operationalized as either “25-year-old” or “65-year-old”.

In the welfare tradeoff task, the participants were given the instruction "Imagine you must allocate money between you and a 65 year-old (25 year-old) Sunni Arab (Shia Arab) male (female). Which option would you choose? There are 13 questions. Please consider each question on its own". They were then given a series of thirteen questions (see table S1 below). Each question was presented on a separate screen.

Table S1: The Welfare Tradeoff Task (WTT)

Option 1		**Option**
Get		*Give*
15	or	6
13	or	6
11	or	6
9	or	6
7	or	6
5	or	6
3	or	6
1	or	6
lose		*Give*
-1	or	6
-3	or	6
-5	or	6
-7	or	6
-9	or	6

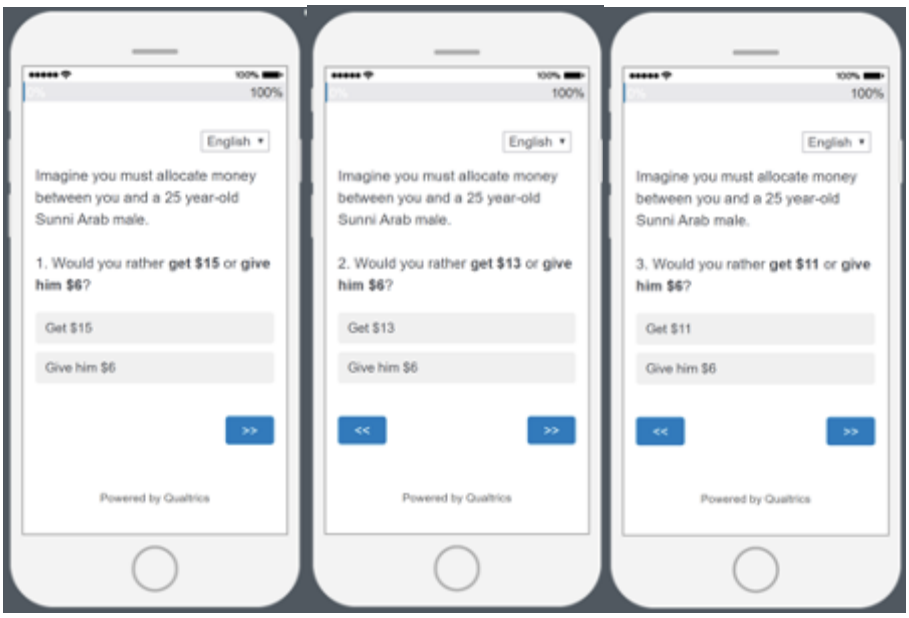


Figure S3. The Welfare Tradeoff Task on a mobile phone

The welfare tradeoff ratio was calculated using a Java applet provided by Andrew Delton, one of the originators of the welfare tradeoff task used in the study. The welfare tradeoff task identifies the switchpoint at which the participants start to prefer to give to the other rather than receive a monetary reward for themselves.

Table S2: Switchpoints in the WTT

*Switch point		Give		Ratio
**16	÷	6	=	2.67
14	÷	6	=	2.33
12	÷	6	=	2.00
10	÷	6	=	1.67
8	÷	6	=	1.33
6	÷	6	=	1.00
4	÷	6	=	0.67
2	÷	6	=	0.33
0	÷	6	=	0.00
-2	÷	6	=	-0.33
-4	÷	6	=	-0.67
-6	÷	6	=	-1.00
-8	÷	6	=	-1.33
**-10	=	6	=	-1.67

Notes: *Located between two neighboring levels of the Welfare Tradeoff Task. **Extensions at top and bottom of WTT representing complete generosity (top end) and complete spitefulness (bottom-end).

To calculate the Welfare Tradeoff Ratio (WTR), we first determine the participants "switchpoint". The switchpoint is defined as the average of the last sum of money the participant chose to allocate to themselves and the first sum of money they chose to allocate to the other person. For example, if a participant chose to get 15, 13,

11, 9 and 7 but then chose to give the hypothetical person 5, 3, 1, …, their switchpoint would be 6. The WTR is calculated by dividing the switchpoint by the sum allocated to the other person in the welfare tradeoff task, which was always set to 6. In our hypothetical example, the WTR = 6/6 = 1. If the participant does not have a clear switchpoint as in the hypothetical example, we consider each possible switchpoint and count - for each one - how many of their decisions are consistent with that particular switchpoint. The switchpoint that receives the highest score is then selected. As shown in the table, the last four questions involve choosing between losing resources and allocating resources to the other person. This allows for the WTR to take on a negative value. The WTR thus ranges between 2.67 and -1.67.

BALANCE TESTS FOR THE VIOLENCE TYPES

We run basic balance tests for the four violence types (house severely damaged or destroyed, injury, family member injured and family member killed), to investigate if they are affected by any of the background factors for which we have data.

Using the violence type measures as outcome variables, we run neighborhood fixed-effects logistical regressions using the variables included in the full model (Female, Age, Education SES 2003 and SES 2014) as independent variables.

The Results are shown in tables S3-6 below. The only variable to consistently have some explanatory power is socioeconomic status in 2003. However, education also matters for injury and marginally for having one's house severely damaged or destroyed. This suggests that all the violence types are largely independent of the background variables for which we have data, and generally supports the contention that exposure to violence was fairly indiscriminate in Mosul during the battle for the city.

Table S3. Balance test for house damaged/ destruction

VARIABLES	(1) House damaged/destroyed
Female	0.070
	(0.149)
Age	0.036
	(0.069)
Education	-0.132*
	(0.075)
SES 2003	-0.735***
	(0.088)
SES 2014	-0.114
	(0.073)
Observations	1,005
Number of neighborhood	42

Standard errors in parentheses
*** p<0.01, ** p<0.05, * p<0.1

Table S4. Balance test for injury

VARIABLES	(1) Injured
Female	0.002
	(0.144)
Age	-0.093
	(0.066)
Education	0.256***
	(0.076)
SES 2003	0.234***
	(0.077)
SES_2014	0.014
	(0.071)
Observations	1,007
Number of neighborhoods	43

Standard errors in parentheses
*** p<0.01, ** p<0.05, * p<0.1

Table S5. Balance test for family member injured

VARIABLES	(1) Family injured
Female	0.152
	(0.130)
Age	-0.035
	(0.059)
Education	0.049
	(0.064)
SES 2003	0.181***
	(0.070)
SES_2014	0.072
	(0.064)
Observations	1,007
Number of neighborhoods	43

Standard errors in parentheses
*** p<0.01, ** p<0.05, * p<0.1

Table S6. Balance test for Family member killed

VARIABLES	(1) Family killed
Female	-0.020
	(0.132)
Age	-0.027
	(0.060)
Education	-0.080
	(0.065)
SES 2003	0.276***
	(0.072)
SES 2014	0.049
	(0.065)
Observations	1,005
Number of neighborhoods	42

Standard errors in parentheses
*** p<0.01, ** p<0.05, * p<0.1

ROBUSTNESS CHECKS: FIXED-EFFECTS MODELS FOR INDIVIDUALIZING AND BINDING FOUNDATIONS

Below are shown tables for the main results from our analyses. Tables S7 and S8 show the analyses for the individualizing and binding moral foundations, including all the different model specifications for robustness (the results reported in the main text are from model 3). As can be seen the results are generally robust to these specifications, although when looking at only the subsample of individuals who reported they had been deliberately targeted, the results differ slightly. While the coefficients for the effects of the severe damage or destruction of one's home on moral foundations are generally larger for this subsample, they are also not statistically significant across most models. Given the small size of this group, this is perhaps not surprising. Tables S9 and S10 also show the basic and interaction models for the analysis of the altruism measure (WTR).

Table S7. Individualizing foundations.

VARIABLES	(1) Naïve model	(2) Violence types	(3) Full model	(4) Exposed by chance	(5) Deliberately targeted
House damaged/destroyed	0.478***	0.477***	0.420***	0.393***	0.546*
	(0.039)	(0.043)	(0.045)	(0.047)	(0.293)
Injured personally		-0.022	0.009	0.008	-0.086
		(0.043)	(0.043)	(0.044)	(0.228)
Injured family		0.022	0.043	0.041	-0.046
		(0.040)	(0.041)	(0.042)	(0.180)
Killed family		-0.013	0.014	0.014	-0.220
		(0.040)	(0.041)	(0.042)	(0.189)
Female			-0.023	-0.017	-0.022
			(0.037)	(0.038)	(0.152)
Age			0.036**	0.036**	-0.008
			(0.017)	(0.017)	(0.056)
Education			-0.029	-0.029	-0.043
			(0.018)	(0.019)	(0.063)
SES 2003			-0.063***	-0.076***	0.017
			(0.020)	(0.022)	(0.072)
SES 2014			0.019	0.021	-0.092
			(0.018)	(0.018)	(0.093)
Constant	3.422***	3.424***	3.658***	3.708***	3.903***
	(0.026)	(0.050)	(0.123)	(0.132)	(0.525)
Observations	1,021	1,021	1,013	911	102
R-squared	0.134	0.135	0.154	0.156	0.169
Number of neighborhoods	50	50	50	48	38

Standard errors in parentheses
*** p<0.01, ** p<0.05, * p<0.1

Table S8. Binding foundations.

VARIABLES	(1) Naïve model	(2) Violence types	(3) Full model	(4) Exposed by chance	(5) Deliberately targeted
House damaged/destroyed	0.239***	0.236***	0.242***	0.225***	0.514
	(0.037)	(0.041)	(0.043)	(0.044)	(0.310)
Injured personally		0.014	0.015	0.006	0.072
		(0.041)	(0.041)	(0.042)	(0.242)
Injured family		-0.022	-0.015	-0.038	-0.029
		(0.038)	(0.039)	(0.040)	(0.191)
Killed family		-0.003	-0.005	-0.033	0.142
		(0.038)	(0.039)	(0.040)	(0.200)
Female			-0.094***	-0.065*	-0.334**
			(0.035)	(0.036)	(0.160)
Age			-0.002	0.001	-0.039
			(0.016)	(0.017)	(0.060)
Education			-0.025	-0.029	0.032
			(0.017)	(0.018)	(0.067)
SES 2003			0.002	-0.004	0.079
			(0.019)	(0.021)	(0.076)
SES 2014			0.018	0.022	-0.123
			(0.017)	(0.018)	(0.099)
Constant	3.714***	3.723***	3.792***	3.838***	3.536***
	(0.024)	(0.047)	(0.117)	(0.126)	(0.556)
Observations	1,021	1,021	1,013	911	102
R-squared	0.041	0.042	0.052	0.053	0.158
Number of neighborhoods	50	50	50	48	38

Standard errors in parentheses
*** p<0.01, ** p<0.05, * p<0.1

Table S9. Altruism (WTR) analysis - basic model.

VARIABLES	(1) Altruism (WTR)
Sunni Target	0.134**
	(0.0543)
MFQ_Ind	0.0242
	(0.0558)
MFQ_Bin	-0.0228
	(0.0602)
Female	0.0801
	(0.0551)
Age	0.0195
	(0.0249)
Education	0.0712***
	(0.0269)
SES 2003	-0.0641**
	(0.0300)
SES 2014	-0.0522*
	(0.0270)
Female Target	0.0688
	(0.0558)
Old Target	-0.0319
	(0.0554)
Constant	0.448
	(0.283)
Observations	991
R-squared	0.035
Number of neighborhoods	50

Standard errors in parentheses
*** p<0.01, ** p<0.05, * p<0.1

Table S10. Altruism (WTR) analysis - interaction model.

VARIABLES	(1) WTR
Sunni Target	-0.274
	(0.393)
MFQ_Ind	-0.070
	(0.072)
Sunni Target*MFQ_Ind	0.197**
	(0.097)
MFQ_Bin	0.013
	(0.078)
Sunni Target*MFQ_Bin	-0.081
	(0.116)
Female	0.080
	(0.055)
Age	0.019
	(0.025)
Education	0.074***
	(0.027)
SES 2003	-0.065**
	(0.030)
SES 2014	-0.051*
	(0.027)
Female Target	0.068
	(0.056)
Old Target	-0.035
	(0.055)
Constant	0.651*
	(0.333)
Observations	991
R-squared	0.040
Number of neighborhoods	50

Standard errors in parentheses
*** p<0.01, ** p<0.05, * p<0.1

ROBUSTNESS CHECKS: IMPACT OF SEVERE HOUSING DAMAGE/DESTRUCTION ON EACH OF THE FIVE MORAL FOUNDATIONS

While our analysis suggests that violence can also drive endorsement of the individualizing foundations, it does not tell us whether this is a general tendency, or driven by an increased endorsement of any particular moral foundation. We therefore run separate regressions with neighborhood fixed effects for each of the five Moral Foundations. As before, the main model includes individual-level controls, and we also run a model with only the different types of exposure, and the "naïve" model. The models are shown in tables S9-13 in the appendix.

Our measures of the five moral foundations are created by taking the average over the items to which there were responses, again resulting in a measure ranging from 1 to 6 for each foundation; Care/Harm (N=1021, M=3.51, SD=0.84, α=.58), Fairness/Cheating (N=1021, M=3.79, SD=0.73, α=.47), Loyalty/Betrayal (N=1020, M=3.80, SD=0.73, α=.34), Authority/Subversion (N=1021, M=3.89, SD=0.71, α=.34) and Sanctity/Degradation (N=1020, M=3.79, SD=0.74, α=.41). The Cronbach's alphas for these latter measures are fairly low, especially compared to the more general binding and individualizing morality scales. However, comparatively low reliability coefficients are to be expected when employing the shorter MFQ-20 scale, since it aims to measure a wide range of moral concerns using only a small number of items (Graham et al., 2011).

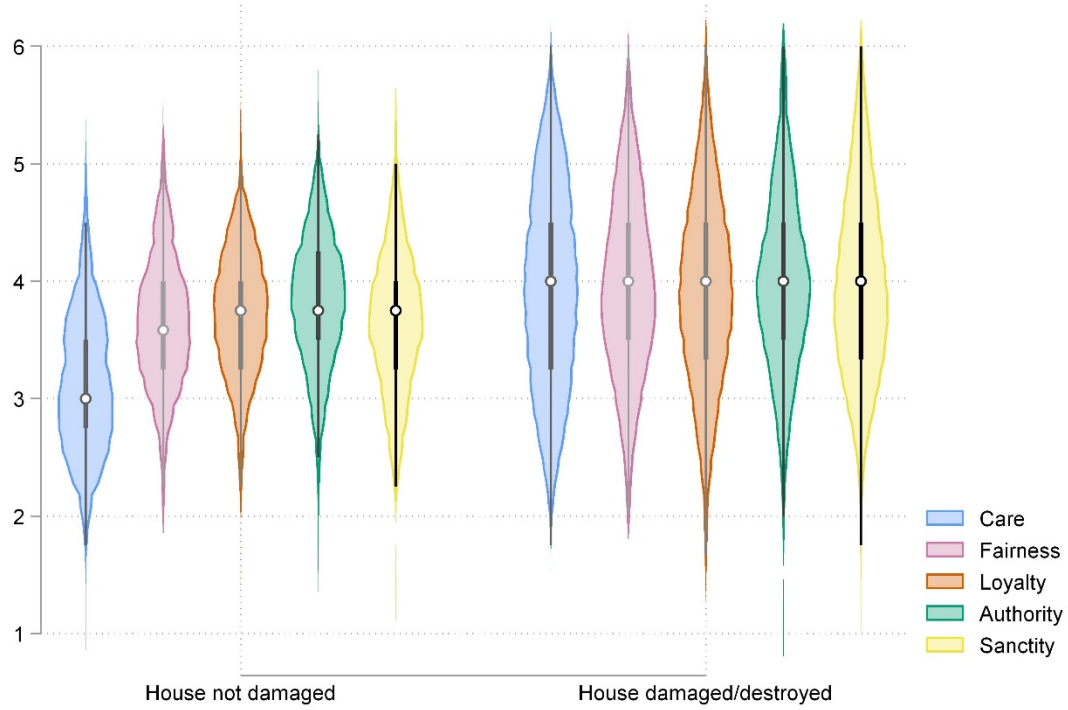


Figure S4. Violin plots of each of the five moral foundations by housing damage/destruction.

Figure S4 displays the distribution and kernel density plots for each of the five moral foundations. Starting with the Care/Harm foundation, the regression revealed a significant effect of having one's house severely damaged or destroyed, with those exposed to indiscriminate violence reporting higher endorsement of the Care/Harm foundation (M=3.81, SE=.03), than those not exposed (M=3.24, SE=.03), b=0.574, p<0.001. There was a marginally significant positive effect of age (b=0.045, p=0.020), and a significant negative effect of socioeconomic status in 2003 (b=-0.119, p<0.001). Likewise, there was a smaller but significant effect of exposure on endorsement of the Fairness/Cheating foundation, with exposed individuals manifesting higher endorsements (M=3.93, SE=.04) than non-exposed individuals (M=3.67, SE=.03),

b=0.260, p<0.001. None of the other types of exposure had any significant effect, although there were marginally significant effects of education (b=-0.038, p=0.080) and socioeconomic status in 2014 (0.041, p=0.061).

For the Loyalty/Betrayal foundation, there was also a significant effect, with exposed individuals expressing stronger endorsements (M=3.91, SE=.04) than those not exposed (M=3.69, SE=.03), b=0.0221, p<0.001. None of the other exposure types had a significant effect, and among the controls, there were marginally significant effects of education (b=-0.042, p=0.059) and socioeconomic status in 2014 (b=0.038, p=0.090).. The Authority/Subversion foundation had the smallest effect, although there was still a significant effect with stronger endorsement among exposed individuals (M=3.98, SE=.04) than among non-exposed (M=3.80, SE=.03), b=0.182, p=0.001. None of the other exposure types, nor any of the individual background variables had an effect reaching standard significance, except the variable "female" had a significant negative effect on endorsement (b=-0.101, p=0.020). Finally, for the Sanctity/Degradation foundation, there was again a significant effect, with higher endorsement among exposed individuals (M=3.96, SE=.04), than among non-exposed individuals (M=3.64, SE=.03), b=0.321, p<0.001. Once again, none of the other exposure types had any significant effect, and the only background variable with a significant effect was female, which had a small negative effect (b=-0.110, p=0.015).

Figure S5 shows the difference in predicted effects of housing damage/destruction for the full model, for each of the five moral foundations, as well as the combined measures for binding and individualizing morality. This coefficient plot makes clear that the effect was most sizable for the Care/Harm foundation. However,

this foundation had clearly lower overall endorsement than the other foundations, particularly in the non-exposed group. However, a clear positive effect of indiscriminate violence on endorsement can be seen for all five foundations. The results are shown in tables S11-S15.

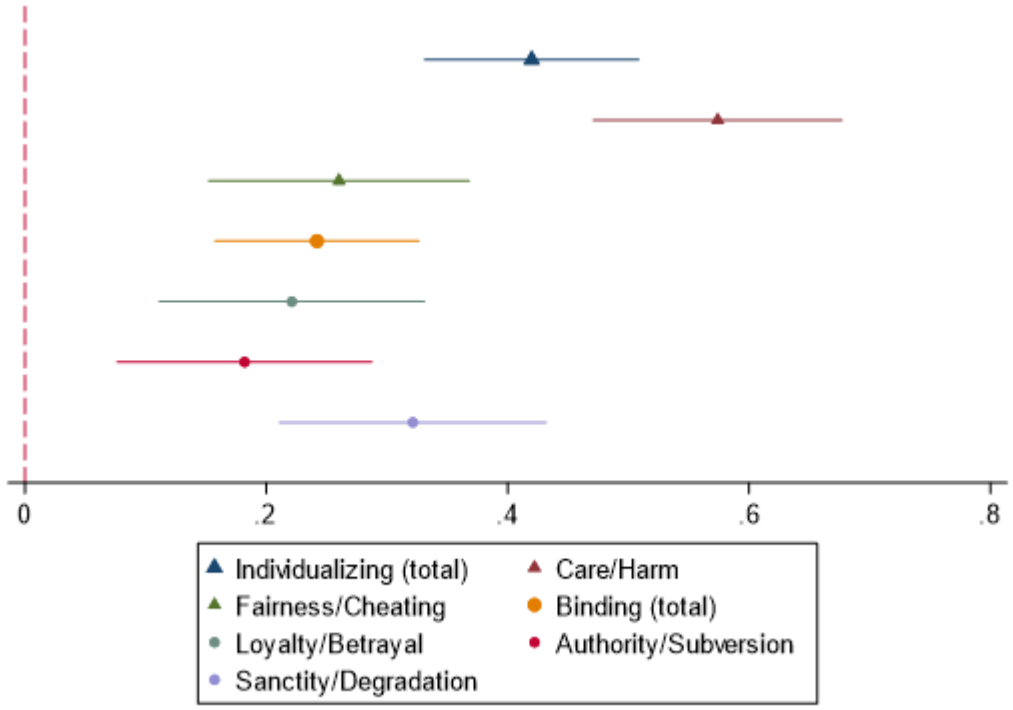


Figure S5: Effect sizes of having one's house severely damaged or destroyed for all moral foundations.

Table S11. Care/Harm.

VARIABLES	(1) Naïve model	(2) Violence types	(3) Full model	(4) Exposed by chance	(5) Deliberately targeted
House damaged/destroyed	0.706***	0.689***	0.574***	0.540***	0.698**
	(0.046)	(0.051)	(0.053)	(0.055)	(0.298)
Injured personally		-0.069	-0.023	-0.022	0.017
		(0.051)	(0.050)	(0.052)	(0.232)
Injured family		0.002	0.044	0.037	0.118
		(0.047)	(0.047)	(0.049)	(0.183)
Killed family		-0.018	0.035	0.032	-0.318
		(0.047)	(0.047)	(0.050)	(0.193)
Female			-0.047	-0.040	-0.057
			(0.042)	(0.044)	(0.154)
Age			0.045**	0.042**	0.004
			(0.019)	(0.020)	(0.057)
Education			-0.019	-0.014	-0.076
			(0.021)	(0.022)	(0.065)
SES 2003			-0.119***	-0.138***	0.031
			(0.024)	(0.025)	(0.073)
SES 2014			-0.004	0.006	-0.063
			(0.021)	(0.022)	(0.095)
Constant	3.176***	3.212***	3.724***	3.768***	3.703***
	(0.030)	(0.059)	(0.142)	(0.154)	(0.535)
Observations	1,021	1,021	1,013	911	102
R-squared	0.196	0.197	0.238	0.233	0.208
Number of neighborhoods	50	50	50	48	38

Standard errors in parentheses
*** p<0.01, ** p<0.05, * p<0.1

Table S12. Fairness/Cheating.

VARIABLES	(1) Naïve model	(2) Violence types	(3) Full model	(4) Exposed by chance	(5) Deliberately targeted
House damaged/destroyed	0.248***	0.263***	0.260***	0.242***	0.392
	(0.047)	(0.052)	(0.055)	(0.057)	(0.367)
Injured personally		0.025	0.040	0.040	-0.190
		(0.052)	(0.053)	(0.054)	(0.286)
Injured family		0.038	0.037	0.042	-0.229
		(0.049)	(0.049)	(0.051)	(0.226)
Killed family		-0.006	-0.004	0.000	-0.140
		(0.048)	(0.049)	(0.051)	(0.237)
Female			0.007	0.009	0.020
			(0.044)	(0.046)	(0.190)
Age			0.026	0.029	-0.022
			(0.020)	(0.021)	(0.071)
Education			-0.038*	-0.041*	-0.006
			(0.022)	(0.023)	(0.080)
SES 2003			-0.010	-0.020	0.005
			(0.025)	(0.026)	(0.090)
SES 2014			0.041*	0.036	-0.122
			(0.022)	(0.022)	(0.117)
Constant	3.671***	3.641***	3.609***	3.672***	4.095***
	(0.031)	(0.060)	(0.149)	(0.161)	(0.658)
Observations	1,021	1,021	1,013	911	102
R-squared	0.028	0.029	0.036	0.037	0.112
Number of neighborhoods	50	50	50	48	38

Standard errors in parentheses
*** p<0.01, ** p<0.05, * p<0.1

Table S13. Loyalty/Betrayal.

VARIABLES	(1) Naïve model	(2) Violence types	(3) Full model	(4) Exposed by chance	(5) Deliberately targeted
House damaged/destroyed	0.211***	0.209***	0.221***	0.207***	0.447
	(0.048)	(0.053)	(0.056)	(0.059)	(0.373)
Injured personally		0.067	0.067	0.057	0.147
		(0.053)	(0.054)	(0.056)	(0.291)
Injured family		-0.072	-0.076	-0.098*	-0.109
		(0.050)	(0.050)	(0.053)	(0.229)
Killed family		0.014	-0.001	-0.018	0.146
		(0.049)	(0.050)	(0.053)	(0.241)
Female			-0.055	-0.017	-0.321
			(0.045)	(0.047)	(0.193)
Age			-0.009	-0.001	-0.086
			(0.020)	(0.022)	(0.072)
Education			-0.042*	-0.052**	0.047
			(0.022)	(0.024)	(0.081)
SES 2003			0.004	0.002	0.028
			(0.025)	(0.027)	(0.092)
SES 2014			0.038*	0.042*	-0.151
			(0.022)	(0.023)	(0.118)
Constant	3.698***	3.707***	3.763***	3.788***	3.874***
	(0.032)	(0.061)	(0.152)	(0.166)	(0.668)
Observations	1,020	1,020	1,012	910	102
R-squared	0.019	0.024	0.032	0.035	0.143
Number of neighborhoods	49	49	49	47	38

Standard errors in parentheses
*** p<0.01, ** p<0.05, * p<0.1

Table S14. Authority/Subversion.

VARIABLES	(1) Naïve model	(2) Violence types	(3) Full model	(4) Exposed by chance	(5) Deliberately targeted
House damaged/destroyed	0.197***	0.173***	0.182***	0.172***	0.523
	(0.046)	(0.051)	(0.054)	(0.056)	(0.386)
Injured personally		-0.069	-0.069	-0.079	-0.101
		(0.051)	(0.052)	(0.053)	(0.301)
Injured family		-0.021	-0.010	-0.013	-0.320
		(0.048)	(0.048)	(0.050)	(0.237)
Killed family		-0.023	-0.021	-0.045	0.085
		(0.047)	(0.048)	(0.050)	(0.249)
Female			-0.101**	-0.075*	-0.393*
			(0.043)	(0.045)	(0.200)
Age			0.007	0.022	-0.091
			(0.020)	(0.021)	(0.074)
Education			-0.025	-0.024	0.040
			(0.021)	(0.023)	(0.084)
SES 2003			0.006	0.007	0.083
			(0.024)	(0.026)	(0.095)
SES 2014			0.016	0.017	-0.149
			(0.021)	(0.022)	(0.123)
Constant	3.795***	3.847***	3.880***	3.851***	3.915***
	(0.030)	(0.059)	(0.146)	(0.158)	(0.692)
Observations	1,021	1,021	1,013	911	102
R-squared	0.019	0.020	0.029	0.030	0.183
Number of neighborhoods	50	50	50	48	38

Standard errors in parentheses
*** p<0.01, ** p<0.05, * p<0.1

Table S15. Sanctity/Degradation.

VARIABLES	(1) Naïve model	(2) Violence types	(3) Full model	(4) Exposed by chance	(5) Deliberately targeted
House damaged/destroyed	0.307***	0.320***	0.321***	0.294***	0.498
	(0.048)	(0.053)	(0.056)	(0.058)	(0.392)
Injured personally		0.033	0.040	0.035	0.065
		(0.053)	(0.054)	(0.056)	(0.305)
Injured family		0.020	0.034	-0.008	0.228
		(0.050)	(0.050)	(0.053)	(0.241)
Killed family		0.002	0.008	-0.034	0.072
		(0.049)	(0.051)	(0.052)	(0.253)
Female			-0.110**	-0.092*	-0.258
			(0.045)	(0.047)	(0.203)
Age			0.006	-0.008	0.083
			(0.021)	(0.022)	(0.075)
Education			-0.017	-0.020	0.007
			(0.022)	(0.024)	(0.085)
SES 2003			0.003	-0.011	0.149
			(0.025)	(0.027)	(0.096)
SES 2014			0.001	0.008	-0.095
			(0.022)	(0.023)	(0.124)
Constant	3.646***	3.619***	3.694***	3.825***	2.925***
	(0.032)	(0.061)	(0.153)	(0.165)	(0.702)
Observations	1,020	1,020	1,012	910	102
R-squared	0.040	0.041	0.047	0.047	0.114
Number of neighborhoods	49	49	49	47	38

Standard errors in parentheses
*** p<0.01, ** p<0.05, * p<0.1

ROBUSTNESS CHECKS: IMPACT OF MORAL FOUNDATIONS ON EACH OF THE FOUR THREAT PERCEPTIONS

We run the same analysis for the individual threat types as for the combined threat measure. That is, we first investigate the main effects in a model without interactions, and in a second step add the relevant product terms to evaluate the interaction effects. There were main effects of group identity for threats to values (b=-0.603, p<0.001), physical safety (b=-0.404, p=0.001), jobs and economic opportunities (b=-0.373, p=0.004), and spread of disease (b=-0.522, p<0.001). There were no significant main effects of the individualizing morality for any of the models, and a significant main effect of the binding morality only for threats to jobs and economic opportunities (b=-0.404, p=0.005). See table S16 for these analyses.

The main effects of ethnoreligious group identity on threat perceptions were qualified by ethnoreligious group X individualizing morality interactions, however, for all threat types; values (b=-1.018, p<0.001), physical safety (b=-0.746, p=0.001), jobs and economics opportunities (b=-0.799, p=0.001), and spread of disease (b=-0.734, p=0.001). There were also significant group X binding morality interactions for threats to values (b=-0.808, p=0.004), but none of the other threat types. See figure S6 and table S17 for these analyses.

In summary, these results also follow the main analyses, with a general tendency towards an ingroup bias, which is enhanced by individualizing morality. Individuals who more strongly endorse individualizing morality are more likely to find ingroup members less threatening in all treat types. In addition, we here do find an effect of binding morality in reducing threat perceptions towards ingroups. It can also be noted that

endorsement of individualizing morality also increased threat perceptions towards outgroups for all threat types, while endorsement of binding morality only did so for value threats and threats to jobs and economic opportunities. Thus, also for the threats, it seems as though individualizing morality is the main driver of parochialism.

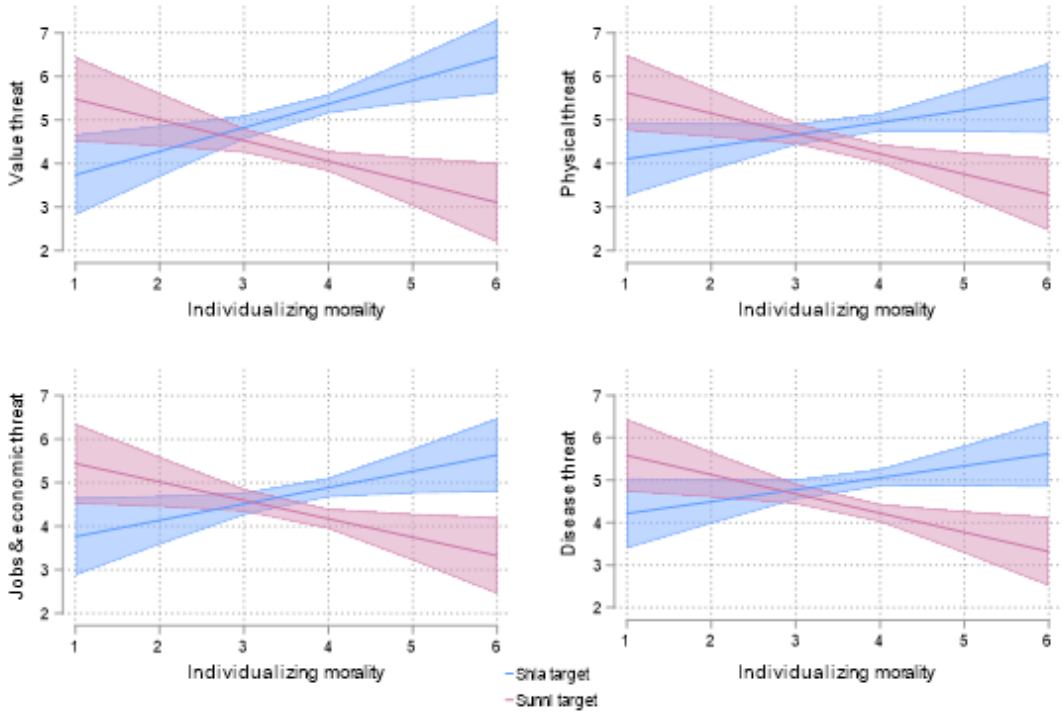


Figure S6: Linear predictions for each of the types of threat over individualizing morality.

Table S16. Impact of morality on discrete threat perceptions - basic model

VARIABLES	(1) Total threat perception	(2) Value threat	(3) Physical threat	(4) Job and economic threat	(5) Disease threat
Sunni Target	-0.603***	-0.918***	-0.404***	-0.373***	-0.522***
	(0.097)	(0.135)	(0.121)	(0.128)	(0.119)
MFQ_Ind	0.054	0.087	-0.089	-0.014	-0.075
	(0.101)	(0.143)	(0.128)	(0.135)	(0.126)
MFQ_Bin	-0.127	0.096	-0.154	-0.404***	-0.197
	(0.107)	(0.151)	(0.136)	(0.144)	(0.133)
Female	-0.134	-0.101	-0.094	-0.159	-0.120
	(0.098)	(0.137)	(0.122)	(0.129)	(0.120)
Age	-0.022	-0.036	0.0192	0.010	0.028
	(0.044)	(0.062)	(0.056)	(0.059)	(0.055)
Education	-0.028	0.002	-0.031	-0.027	-0.035
	(0.049)	(0.068)	(0.061)	(0.064)	(0.060)
SES 2003	0.116**	0.133*	0.134**	0.141**	0.119*
	(0.053)	(0.075)	(0.067)	(0.071)	(0.065)
SES 2014	0.097**	0.137**	0.008	0.088	0.023
	(0.049)	(0.069)	(0.062)	(0.066)	(0.061)
Female Target	-0.029	-0.112	0.057	-0.140	0.045
	(0.099)	(0.138)	(0.124)	(0.131)	(0.121)
Old Target	0.112	-0.048	0.291**	0.081	0.278**
	(0.099)	(0.138)	(0.123)	(0.130)	(0.121)
Constant	4.602***	3.660***	5.046***	5.584***	5.308***
	(0.516)	(0.728)	(0.662)	(0.701)	(0.652)
Observations	929	909	904	899	896
R-squared	0.070	0.074	0.034	0.044	0.045
Number of neighborhoods	50	50	50	49	50

Standard errors in parentheses
*** p<0.01, ** p<0.05, * p<0.1

Table S17. Impact of morality on discrete threat perceptions - interaction model

VARIABLES	(1) Total perceived threat	(2) Value threat	(3) Physical threat	(4) Job and economic threat	(5) Disease threat
Sunni Target	3.668***	5.823***	2.056**	2.046**	1.727*
	(0.710)	(0.996)	(0.945)	(0.998)	(0.923)
MFQ_Ind	0.477***	0.543***	0.279*	0.376**	0.281*
	(0.126)	(0.178)	(0.166)	(0.175)	(0.162)
Sunni Target*MFQ_Ind	-0.932***	-1.018***	-0.746***	-0.799***	-0.734***
	(0.172)	(0.240)	(0.222)	(0.233)	(0.216)
MFQ_Bin	-0.022	0.437**	-0.154	-0.429**	-0.221
	(0.135)	(0.191)	(0.176)	(0.186)	(0.173)
Sunni Target*MFQ_Bin	-0.242	-0.808***	0.054	0.115	0.100
	(0.201)	(0.281)	(0.258)	(0.273)	(0.254)
Female	-0.118	-0.083	-0.081	-0.149	-0.113
	(0.095)	(0.133)	(0.121)	(0.128)	(0.119)
Age	-0.020	-0.029	0.017	0.006	0.025
	(0.043)	(0.061)	(0.055)	(0.058)	(0.054)
Education	-0.034	-0.001	-0.038	-0.034	-0.041
	(0.047)	(0.066)	(0.061)	(0.064)	(0.060)
SES 2003	0.118**	0.139*	0.133**	0.140**	0.119*
	(0.052)	(0.073)	(0.066)	(0.070)	(0.065)
SES 2014	0.088*	0.117*	0.014	0.092	0.026
	(0.048)	(0.067)	(0.062)	(0.065)	(0.061)
Female Target	-0.039	-0.133	0.066	-0.132	0.049
	(0.096)	(0.135)	(0.123)	(0.130)	(0.121)
Old Target	0.129	-0.034	0.296**	0.088	0.285**
	(0.096)	(0.134)	(0.122)	(0.129)	(0.120)
Constant	2.703***	0.751	3.740***	4.301***	4.138***
	(0.588)	(0.823)	(0.804)	(0.850)	(0.784)
Observations	929	909	904	899	896
R-squared	0.120	0.126	0.049	0.059	0.060
Number of neighborhoods	50	50	50	49	50

Standard errors in parentheses
*** p<0.01, ** p<0.05, * p<0.1

ROBUSTNESS CHECKS: ANALYSIS OF EACH OF THE FIVE EMOTIONS

There are main effects of group identity for empathy (b=0.396, p=0.001), anger (b=-0.376, p=0.003) and disgust (b=-0.455, p=0.001). However, there is only a borderline significant main effect for respect (b=0.198, p=0.068), and no significant main effects for fear (b=0.056, p=0.637). There are further main effects of individualizing morality for the emotions of empathy (b=0.525, p<0.001), respect (b=0.541, p<0.001), fear (b=-0.357, p=0.004), and anger (b=-0.415, p=0.002), but not for disgust (b=-0.191, p=0.160). There are no significant main effects for binding morality for any of the emotions. These analyses are shown in table S18.

The main effects of ethnoreligious group identity and individualizing morality on emotions are qualified by ethnoreligious group X individualizing morality interactions for empathy (b=0.605, p=0.004), respect (b=0.556, p=0.004), anger (b=-0.823, p<0.001), and disgust (b=-0.883, p<0.001), but not for fear (b=-0.246, p=0.251). None of the group X binding morality interactions are significant. See figure S7 and table S19 for these analyses.

In summary, this result largely follows the results of the main analysis, suggesting that endorsement of individualizing morality in this setting is associated with parochialism[4]. While the main effects suggest a general tendency towards parochialism in all emotions except fear, the interaction effects indicate that this parochial tendency is more prevalent for those individuals that more strongly endorse individualizing morality.

[4] Note that while for the negative emotions (anger, fear and disgust), a negative effect implies parochialism, the opposite is true for the positive emotions. In the composite positive emotions measure used in the main analysis, the measures for anger, fear and disgust were reverse coded.

Meanwhile, binding morality does not appear to drive any of the emotions, or to enhance parochialism.

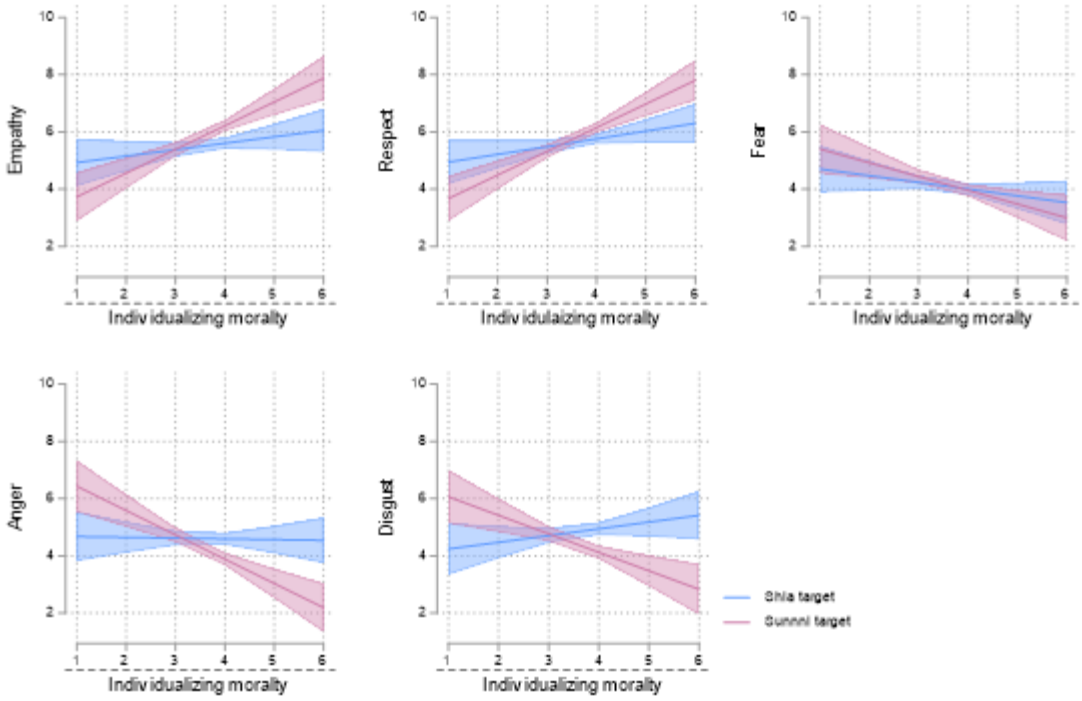


Figure S7: Linear predictions for each of the individual emotions over individualizing morality

Table S18. Impact of morality on discrete emotions - basic model

VARIABLES	(1) Total emotional regard	(2) Empathy	(3) Respect	(4) Fear	(5) Anger	(6) Disgust
Sunni Target	0.311***	0.396***	0.198*	0.056	-0.376***	-0.455***
	(0.080)	(0.118)	(0.109)	(0.118)	(0.125)	(0.130)
MFQ_Ind	0.467***	0.525***	0.541***	-0.357***	-0.415***	-0.191
	(0.082)	(0.122)	(0.112)	(0.124)	(0.131)	(0.136)
MFQ_Bin	0.000	-0.191	-0.007	-0.192	0.102	0.020
	(0.089)	(0.130)	(0.121)	(0.132)	(0.139)	(0.146)
Female	0.187**	0.357***	0.248**	-0.195	-0.236*	-0.057
	(0.081)	(0.120)	(0.110)	(0.120)	(0.126)	(0.131)
Age	-0.004	0.041	-0.035	0.041	0.002	0.070
	(0.037)	(0.054)	(0.050)	(0.055)	(0.057)	(0.060)
Education	-0.042	-0.003	-0.075	0.089	0.059	0.018
	(0.040)	(0.058)	(0.054)	(0.060)	(0.063)	(0.066)
SES 2003	-0.248***	-0.326***	-0.273***	0.302***	0.324***	0.171**
	(0.044)	(0.065)	(0.060)	(0.065)	(0.068)	(0.072)
SES 2014	-0.126***	-0.091	-0.036	0.357***	0.099	0.182***
	(0.040)	(0.059)	(0.054)	(0.059)	(0.062)	(0.066)
Female Target	-0.088	-0.217*	-0.136	0.109	0.051	0.056
	(0.082)	(0.121)	(0.111)	(0.121)	(0.127)	(0.133)
Old Target	0.111	0.052	0.144	-0.064	-0.218*	0.026
	(0.082)	(0.120)	(0.110)	(0.120)	(0.127)	(0.132)
Constant	5.417***	5.872***	5.249***	3.267***	3.971***	3.853***
	(0.419)	(0.625)	(0.573)	(0.637)	(0.670)	(0.706)
Observations	988	954	970	913	921	903
R-squared	0.184	0.123	0.110	0.180	0.107	0.058
Number of neighborhoods	50	50	50	49	50	50

Standard errors in parentheses
*** p<0.01, ** p<0.05, * p<0.1

Table S19. Impact of morality on discrete emotions - interaction model

VARIABLES	(1) Total emotional regard	(2) Empathy	(3) Respect	(4) Fear	(5) Anger	(6) Disgust
Sunni Target	-1.460**	-1.390	-0.462	1.630*	2.405**	2.521**
	(0.575)	(0.867)	(0.792)	(0.907)	(0.939)	(1.009)
MFQ_Ind	0.181*	0.224	0.271*	-0.235	-0.027	0.236
	(0.106)	(0.158)	(0.146)	(0.159)	(0.167)	(0.174)
Sunni Target*MFQ_Ind	0.588***	0.605***	0.556***	-0.246	-0.823***	-0.883***
	(0.142)	(0.210)	(0.194)	(0.214)	(0.225)	(0.235)
MFQ_Bin	0.0422	-0.148	0.148	-0.106	0.090	0.026
	(0.114)	(0.169)	(0.157)	(0.171)	(0.179)	(0.188)
Sunni Target*MFQ_Bin	-0.099	-0.109	-0.358	-0.182	0.046	0.050
	(0.169)	(0.249)	(0.231)	(0.253)	(0.265)	(0.277)
Female	0.183**	0.353***	0.250**	-0.189	-0.224*	-0.052
	(0.080)	(0.119)	(0.109)	(0.120)	(0.125)	(0.130)
Age	-0.005	0.040	-0.035	0.040	0.000	0.066
	(0.036)	(0.054)	(0.050)	(0.055)	(0.056)	(0.059)
Education	-0.034	0.005	-0.069	0.089	0.056	0.014
	(0.039)	(0.058)	(0.054)	(0.060)	(0.062)	(0.065)
SES 2003	-0.252***	-0.331***	-0.274***	0.304***	0.328***	0.168**
	(0.044)	(0.065)	(0.060)	(0.065)	(0.068)	(0.071)
SES 2014	-0.123***	-0.090	-0.035	0.355***	0.095	0.184***
	(0.040)	(0.059)	(0.054)	(0.059)	(0.061)	(0.065)
Female Target	-0.086	-0.215*	-0.139	0.106	0.050	0.058
	(0.081)	(0.121)	(0.111)	(0.121)	(0.126)	(0.132)
Old Target	0.106	0.049	0.134	-0.065	-0.210*	0.030
	(0.081)	(0.119)	(0.110)	(0.120)	(0.126)	(0.131)
Constant	6.282***	6.796***	5.626***	2.505***	2.622***	2.332***
	(0.490)	(0.748)	(0.680)	(0.766)	(0.791)	(0.848)
Observations	988	954	970	913	921	903
R-squared	0.202	0.133	0.118	0.183	0.124	0.077
Number of neighborhoods	50	50	50	49	50	50

Standard errors in parentheses
*** p<0.01, ** p<0.05, * p<0.1

ROBUSTNESS CHECKS: MODERATED MEDIATION ANALYSIS OF THE EFFECT OF VIOLENCE ON ALTRUISM, THREAT AND EMOTIONS

In this section, we perform a mediation analysis, investigating if the moral foundations (individualizing and binding) mediate the effect of violence on altruism, threat and emotions. We also include the group affiliation of the target as a moderator. For this purpose, we run a set of generalized linear models (GLM), one for each of the three outcomes of interest; altruism, threat and emotions. The results of these moderated mediation analyses are shown in tables S20-S22.

As regards altruism, the GLM shows that there was a significant direct effect of the severe damaging/destruction of one's home on altruism (b=0.142, p=0.019). While the individualizing foundations do have a mediating effect on altruism (b=0.061, p=0.013), the binding foundations do not (b=-0.013, p=0.205). Looking at the moderating role of target group, we see that damage or destruction of one's home has no effect on altruism when the target is Shia (b=-0.007, p=0.925). However, when the target is Sunni, home severely damaged or destroyed has a substantial effect on altruism (*B*= 0.388, p= <0.001), and this effect is in part mediated by increase support for individualizing foundations (*B*= 0.073, p= <0.001), with this indirect effect accounting for 19% of the total effect of severe housing damage or destruction on altruism.

For threat perceptions, while there was a significant and negative direct effect of the severe damaging or destruction of one's home on threat perceptions in general (b=-0.616, p<0.001), the mediating effects of the individualizing and binding foundations are only visible when looking at the moderating effects of target group. For Shia (outgroup) targets, there was a significant positive mediating effect of individualizing (b=0.123,

p=0.002) but not binding (b=0.022, p=0.115) foundations. For Sunni (ingroup) targets, both individualizing (b=-0.l66, p<0.001) and binding (b=-0.037, p=0.040) foundations had a negative mediating effect on threat perceptions. However, it is notable that the effect of binding foundations was both smaller and of lesser statistical significance.

Finally, turning to positive emotions, while we find a significant and positive direct effect of having one's home severely damaged or destroyed on positive emotions (b=1.197, p<0.001), this effect is mediated by individualizing (b=0.191, p<0.001) but not binding (b=-0.018, p=0.190) foundations. Looking at the moderating effect of target group, we find that this mediating effect was mainly a result of a significant positive mediating effect of individualizing foundations effect for Sunni (ingroup) targets (b=0.336, p<0.001), while the corresponding effect for Shia (outgroup) targets is much smaller and only marginally significant (b=0.055, p=0.092).

Table S20. GLM model for mediating effects on altruism (WTR)

Moderation effects (interactions)

Moderator	Interaction	Estimate	SE	Lower	Upper	β	z	p
	`House damaged/destroyed1`:`Target group1` ⇒ Individualizing	0.032	0.079	-0.123	0.186	0.012	0.400	0.690
	`House damaged/destroyed1`:`Target group1` ⇒ Binding	0.038	0.072	-0.104	0.179	0.016	0.520	0.603
	`House damaged/destroyed1`:`Target group1` ⇒ Altruism	0.382	0.120	0.148	0.617	0.109	3.194	0.001
	`Target group1`:Individualizing ⇒ Altruism	0.037	0.103	-0.164	0.238	0.078	0.359	0.719
	`Target group1`:Binding ⇒ Altruism	-0.041	0.112	-0.260	0.179	-0.090	-0.366	0.715

Conditional Mediation

Moderator levels					95% C.I. (a)				
Target group	Type	Effect	Estimate	SE	Lower	Upper	β	z	p
Average	Indirect	House damaged/destroyed1 ⇒ Individualizing ⇒ Altruism	0.061	0.025	0.013	0.110	0.035	2.470	0.013
Average		House damaged/destroyed1 ⇒ Binding ⇒ Altruism	-0.013	0.010	-0.033	0.007	-0.007	-1.268	0.205
Average	Component	House damaged/destroyed1 ⇒ Individualizing	0.556	0.039	0.478	0.633	0.408	14.109	< .001
Average		Individualizing ⇒ Altruism	0.110	0.044	0.024	0.196	0.085	2.509	0.012
Average		House damaged/destroyed1 ⇒ Binding	0.206	0.036	0.136	0.277	0.178	5.724	< .001
Average		Binding ⇒ Altruism	-0.062	0.048	-0.156	0.032	-0.041	-1.300	0.194
Average	Direct	House damaged/destroyed1 ⇒ Altruism	0.142	0.061	0.024	0.261	0.081	2.349	0.019
Average	Total	House damaged/destroyed1 ⇒ Altruism	0.190	0.055	0.083	0.298	0.108	3.481	< .001
Shia Target	Indirect	House damaged/destroyed1 ⇒ Individualizing ⇒ Altruism	0.049	0.024	0.002	0.097	0.028	2.042	0.041
Shia Target		House damaged/destroyed1 ⇒ Binding ⇒ Altruism	-0.008	0.009	-0.026	0.010	-0.004	-0.849	0.396
Shia Target	Component	House damaged/destroyed1 ⇒ Individualizing	0.540	0.056	0.431	0.649	0.396	9.710	< .001
Shia Target		Individualizing ⇒ Altruism	0.092	0.044	0.006	0.177	0.071	2.089	0.037
Shia Target		House damaged/destroyed1 ⇒ Binding	0.188	0.051	0.088	0.288	0.162	3.686	< .001

Shia Target		Binding ⇒ Altruism	-0.042	0.048	-0.136	0.052	-0.028	-0.872	0.383
Shia Target	Direct	House damaged/destroyed1 ⇒ Altruism	-0.049	0.081	-0.208	0.110	-0.028	-0.603	0.547
Shia Target	Total	House damaged/destroyed1 ⇒ Altruism	-0.007	0.077	-0.159	0.144	-0.004	-0.095	0.925
Sunni Target	Indirect	House damaged/destroyed1 ⇒ Individualizing ⇒ Altruism	0.073	0.026	0.022	0.124	0.042	2.817	0.005
Sunni Target		House damaged/destroyed1 ⇒ Binding ⇒ Altruism	-0.019	0.012	-0.041	0.004	-0.011	-1.609	0.108
Sunni Target	Component	House damaged/destroyed1 ⇒ Individualizing	0.571	0.056	0.462	0.681	0.419	10.243	< .001
Sunni Target		Individualizing ⇒ Altruism	0.128	0.044	0.043	0.214	0.099	2.930	0.003
Sunni Target		House damaged/destroyed1 ⇒ Binding	0.225	0.051	0.125	0.325	0.194	4.408	< .001
Sunni Target		Binding ⇒ Altruism	-0.083	0.048	-0.176	0.011	-0.054	-1.728	0.084
Sunni Target	Direct	House damaged/destroyed1 ⇒ Altruism	0.333	0.082	0.173	0.494	0.189	4.069	< .001
Sunni Target	Total	House damaged/destroyed1 ⇒ Altruism	0.388	0.077	0.236	0.540	0.221	5.009	< .001

Note. Confidence intervals computed with method: Standard (Delta method)

Note. Betas are completely standardized effect sizes

Table S21. GLM model for mediating effects on threat perception

Moderation effects (interactions)

Moderator	Interaction	Estimate	SE	Lower	Upper	β	z	p
	`House damaged/destroyed1`:`Target group1` ⇒ Individualizing	-0.030	0.079	-0.185	0.125	-0.012	-0.383	0.702
	`House damaged/destroyed1`:`Target group1` ⇒ Binding	0.010	0.073	-0.132	0.152	0.004	0.137	0.891
	`House damaged/destroyed1`:`Target group1` ⇒ Perceived threat	-0.914	0.202	-1.309	-0.518	-0.148	-4.525	< .001
	`Target group1`:Individualizing ⇒ Perceived threat	-0.615	0.177	-0.962	-0.268	-0.725	-3.474	< .001
	`Target group1`:Binding ⇒ Perceived threat	-0.425	0.193	-0.802	-0.047	-0.526	-2.204	0.028

Conditional Mediation

Moderator levels					95% C.I. (a)				
Target group	Type	Effect	Estimate	SE	Lower	Upper	β	z	p
Average	Indirect	House damaged/destroyed1 ⇒ Individualizing ⇒ Perceived threat	-0.027	0.037	-0.099	0.045	-0.009	-0.737	0.461
Average		House damaged/destroyed1 ⇒ Binding ⇒ Perceived threat	-0.006	0.012	-0.029	0.017	-0.002	-0.536	0.592
Average	Component	House damaged/destroyed1 ⇒ Individualizing	0.471	0.040	0.394	0.549	0.363	11.928	< .001
Average		Individualizing ⇒ Perceived threat	-0.057	0.078	-0.209	0.095	-0.024	-0.739	0.460
Average		House destroyed1 ⇒ Binding	0.139	0.036	0.067	0.210	0.124	3.815	< .001
Average		Binding ⇒ Perceived threat	-0.046	0.084	-0.211	0.120	-0.016	-0.541	0.588
Average	Direct	House damaged/destroyed1 ⇒ Perceived threat	-0.616	0.101	-0.815	-0.417	-0.198	-6.072	< .001
Average	Total	House damaged/destroyed1 ⇒ Perceived threat	-0.646	0.096	-0.833	-0.458	-0.207	-6.761	< .001
Shia Target	Indirect	House damaged/destroyed1 ⇒ Individualizing ⇒ Perceived threat	0.122	0.040	0.043	0.201	0.038	3.026	0.002
Shia Target		House damaged/destroyed1 ⇒ Binding ⇒ Perceived threat	0.022	0.014	-0.005	0.050	0.007	1.576	0.115

Shia Target	Component	House damaged/destroyed1 ⇒ Individualizing	0.486	0.056	0.378	0.595	0.375	8.772	< .001
Shia Target		Individualizing ⇒ Perceived threat	0.250	0.078	0.098	0.402	0.102	3.224	0.001
Shia Target		House damaged/destroyed1 ⇒ Binding	0.134	0.051	0.034	0.233	0.119	2.621	0.009
Shia Target		Binding ⇒ Perceived threat	0.167	0.084	0.001	0.332	0.059	1.973	0.049
Shia Target	Direct	House damaged/destroyed1 ⇒ Perceived threat	-0.159	0.138	-0.428	0.111	-0.050	-1.156	0.248
Shia Target	Total	House damaged/destroyed1 ⇒ Perceived threat	-0.015	0.134	-0.278	0.248	-0.005	-0.112	0.911
Sunni Target	Indirect	House damaged/destroyed1 ⇒ Individualizing ⇒ Perceived threat	-0.166	0.041	-0.247	-0.086	-0.052	-4.066	< .001
Sunni Target		House damaged/destroyed1 ⇒ Binding ⇒ Perceived threat	-0.037	0.018	-0.072	-0.002	-0.012	-2.053	0.040
Sunni Target	Component	House damaged/destroyed1 ⇒ Individualizing	0.456	0.056	0.346	0.567	0.351	8.102	< .001
Sunni Target		Individualizing ⇒ Perceived threat	-0.365	0.078	-0.517	-0.213	-0.147	-4.701	< .001
Sunni Target		House damaged/destroyed1 ⇒ Binding	0.143	0.052	0.042	0.245	0.128	2.773	0.006
Sunni Target		Binding ⇒ Perceived threat	-0.258	0.084	-0.423	-0.092	-0.090	-3.055	0.002
Sunni Target	Direct	House damaged/destroyed1 ⇒ Perceived threat	-1.073	0.139	-1.345	-0.800	-0.334	-7.724	< .001
Sunni Target	Total	House damaged/destroyed1 ⇒ Perceived threat	-1.276	0.136	-1.543	-1.009	-0.410	-9.380	< .001

Note. Confidence intervals computed with method: Standard (Delta method)

Note. Betas are completely standardized effect sizes

Table S22. GLM model for mediating effects on positive emotion

Moderation effects (interactions)

Moderator	Interaction	Estimate	SE	Lower	Upper	β	z	p
	`House damaged/destroyed1`:`Target group1` ⇒ Individualizing	0.042	0.079	-0.112	0.197	0.016	0.535	0.592
	`House damaged/destroyed1`:`Target group1` ⇒ Binding	0.050	0.072	-0.092	0.191	0.022	0.688	0.492
	`House damaged/destroyed1`:`Target group1` ⇒ Positive emotions	0.343	0.167	0.016	0.669	0.060	2.055	0.040
	`Target group1`:Individualizing ⇒ Positive emotions	0.484	0.143	0.204	0.764	0.631	3.385	< .001
	`Target group1`:Binding ⇒ Positive emotions	-0.118	0.156	-0.424	0.189	-0.160	-0.752	0.452

Conditional Mediation

Moderator levels					95% C.I. (a)				
Target group	Type	Effect	Estimate	SE	Lower	Upper	β	z	p
Average	Indirect	House damaged/destroyed1 ⇒ Individualizing ⇒ Positive emotions	0.191	0.036	0.120	0.262	0.067	5.249	< .001
Average		House damaged/destroyed1 ⇒ Binding ⇒ Positive emotions	-0.018	0.014	-0.045	0.009	-0.006	-1.312	0.190
Average	Component	House damaged/destroyed1 ⇒ Individualizing	0.550	0.039	0.473	0.627	0.405	13.968	< .001
Average		Individualizing ⇒ Positive emotions	0.347	0.061	0.227	0.467	0.165	5.665	< .001
Average		House damaged/destroyed1 ⇒ Binding	0.200	0.036	0.130	0.271	0.173	5.563	< .001
Average		Binding ⇒ Positive emotions	-0.090	0.067	-0.221	0.041	-0.037	-1.350	0.177
Average	Direct	House damaged/destroyed1 ⇒ Positive emotions	1.197	0.084	1.031	1.362	0.420	14.196	< .001
Average	Total	House damaged/destroyed1 ⇒ Positive emotions	1.373	0.078	1.221	1.525	0.483	17.706	< .001
Shia Target	Indirect	House damaged/destroyed1 ⇒ Individualizing ⇒ Positive emotions	0.055	0.033	-0.009	0.120	0.020	1.684	0.092

Shia Target		House damaged/destroyed1 ⇒ Binding ⇒ Positive emotions	-0.006	0.012	-0.029	0.018	-0.002	-0.467	0.640
Shia Target	Component	House damaged/destroyed1 ⇒ Individualizing	0.529	0.056	0.420	0.638	0.389	9.497	< .001
Shia Target		Individualizing ⇒ Positive emotions	0.105	0.061	-0.015	0.225	0.050	1.711	0.087
Shia Target		House destroyed1 ⇒ Binding	0.176	0.051	0.076	0.276	0.152	3.447	< .001
Shia Target		Binding ⇒ Positive emotions	-0.032	0.067	-0.163	0.100	-0.013	-0.472	0.637
Shia Target	Direct	House damaged/destroyed1 ⇒ Positive emotions	1.025	0.113	0.804	1.247	0.362	9.074	< .001
Shia Target	Total	House damaged/destroyed1 ⇒ Positive emotions	1.075	0.110	0.860	1.290	0.378	9.803	< .001
Sunni Target	Indirect	House damaged/destroyed1 ⇒ Individualizing ⇒ Positive emotions	0.336	0.048	0.242	0.430	0.115	7.016	< .001
Sunni Target		House damaged/destroyed1 ⇒ Binding ⇒ Positive emotions	-0.034	0.017	-0.067	-4.92e−4	-0.011	-1.989	0.047
Sunni Target	Component	House damaged/destroyed1 ⇒ Individualizing	0.571	0.056	0.462	0.680	0.420	10.257	< .001
Sunni Target		Individualizing ⇒ Positive emotions	0.589	0.061	0.469	0.709	0.273	9.618	< .001
Sunni Target		House damaged/destroyed1 ⇒ Binding	0.225	0.051	0.125	0.325	0.195	4.420	< .001
Sunni Target		Binding ⇒ Positive emotions	-0.149	0.067	-0.280	-0.018	-0.059	-2.227	0.026
Sunni Target	Direct	House damaged/destroyed1 ⇒ Positive emotions	1.368	0.114	1.144	1.592	0.467	11.987	< .001
Sunni Target	Total	House damaged/destroyed1 ⇒ Positive emotions	1.671	0.110	1.456	1.885	0.588	15.237	< .001

Note. Confidence intervals computed with method: Standard (Delta method)

Note. Betas are completely standardized effect sizes

ROBUSTNESS CHECKS: DISAGGREGATED ANALYSIS OF THE IMPACT OF VIOLENCE ON MORALITY

In this section we regress binding and individualizing morality on our measures of exposure to violence disaggregated by actor and type. Models 1-2 in Table S23 present the results for housing damage/destruction, our measure of indiscriminate violence, without additional controls (models 1-2). In models 3-4 we add all exposure types. In Models 5-6 we add additional individual-level controls. In models 7-8 we exclude those that report being purposely targeted by violence (models 7-8). All models include neighborhood fixed-effects.

The results suggest that when disaggregating by actor (Islamic State vs. government forces) indiscriminate violence by government forces appears to produce a larger and more statistically significant effect on morality than indiscriminate violence by the Islamic State. This is particularly true for endorsement of binding morality - housing damage/destruction by the Islamic State is unrelated to endorsement of group-oriented morality. These results are robust to alternative model specifications.

These results make intuitive sense, as airstrikes and indiscriminate shelling by ground forces on the government side account for the lion's share of the severe housing damage or destruction occurring during the Battle of Mosul - the Islamic State was dug-in and ground forces slowly advanced into West Mosul backed by coalition air support and the use of heavy artillery.

However, this approach to disaggregation ignores the fact that it is sometimes difficult for civilians to identify the source of indiscriminate shelling and bombing and thus they may blame both sides for the severe damaging or destruction of their home.

We did not limit participants from selecting both actors. Table S24 further disaggregates perpetrator into three categories: Islamic State, government forces, or both. The findings suggest that housing damage/destruction attributed to both sides has a significant and positive effect on endorsement of both individualizing and binding morality. Mirroring the results presented in the main analysis, the effect of indiscriminate violence attributed to both sides on endorsement of person-oriented morality is more than twice as large as its effect on endorsement of group-oriented morality.

Based on these further analyses, we conclude that war exposure attributed to either side appears to enhance participants' moral concerns in general, but especially those associated with person-oriented morality.

Table S23. Robustness checks: Impact of violence on moral foundations disaggregated by actor (Islamic State vs. government forces)

VARIABLES	(1) Bind	(2) Ind	(3) Bind	(4) Ind	(5) Bind	(6) Ind	(7) Bind	(8) Ind
House damaged/destroyed (Daesh)	0.007	0.080*	0.003	0.117**	0.003	0.098*	0.047	0.126**
	(0.046)	(0.048)	(0.055)	(0.057)	(0.056)	(0.058)	(0.058)	(0.060)
House damaged/destroyed (Gov)	0.259***	0.537***	0.254***	0.516***	0.283***	0.475***	0.240***	0.431***
	(0.040)	(0.041)	(0.047)	(0.049)	(0.051)	(0.053)	(0.054)	(0.055)
Injured personally (Daesh)			0.022	0.021	0.014	0.041	0.026	0.057
			(0.049)	(0.051)	(0.049)	(0.051)	(0.050)	(0.052)
Injured personally (Gov)			-0.032	-0.098	-0.015	-0.091	-0.067	-0.111
			(0.089)	(0.092)	(0.089)	(0.093)	(0.091)	(0.094)
Injured family (Daesh)			-0.020	0.092	-0.025	0.092	-0.023	0.127**
			(0.056)	(0.058)	(0.056)	(0.058)	(0.059)	(0.061)
Injured family (Gov)			-0.038	0.003	-0.028	0.019	-0.049	0.014
			(0.045)	(0.046)	(0.045)	(0.047)	(0.045)	(0.047)
Killed family (Daesh)			0.004	0.081	0.001	0.086	-0.004	0.106
			(0.064)	(0.066)	(0.064)	(0.067)	(0.067)	(0.069)
Killed family (Gov)			0.017	0.012	0.015	0.023	-0.021	0.033
			(0.043)	(0.044)	(0.043)	(0.045)	(0.044)	(0.046)

Female					-0.099***	-0.024	-0.071**	-0.019
					(0.035)	(0.037)	(0.036)	(0.038)
Age					0.000	0.033*	0.002	0.033*
					(0.016)	(0.017)	(0.017)	(0.017)
Education					-0.022	-0.025	-0.027	-0.025
					(0.017)	(0.018)	(0.019)	(0.019)
SES 2003					0.009	-0.053**	0.006	-0.059***
					(0.020)	(0.021)	(0.021)	(0.022)
SES 2004					0.026	0.033*	0.026	0.028
					(0.018)	(0.018)	(0.018)	(0.019)
Constant	3.729***	3.425***	3.736***	3.391***	3.728***	3.534***	3.771***	3.567***
	(0.024)	(0.025)	(0.050)	(0.052)	(0.123)	(0.128)	(0.133)	(0.138)
Observations	999	999	999	999	991	991	896	896
R-squared	0.045	0.164	0.046	0.168	0.058	0.181	0.057	0.176
Number of neighborhoods	50	50	50	50	50	50	48	48

Standard errors in parentheses
*** p<0.01, ** p<0.05, * p<0.1

Note: Models 7-8 exclude those that report having been personally targeted.

Table S24. Robustness checks: Impact of violence on morality disaggregated by actor (Islamic State, government forces or both)

VARIABLES	(1) Bind	(2) Ind	(3) Bind	(4) Ind	(5) Bind	(6) Ind	(7) Bind	(8) Ind
House damaged/destroyed (Daesh)	0.081	0.175**						
	(0.072)	(0.074)						
House damaged/destroyed (Gov)	0.315***	0.507***						
	(0.055)	(0.057)						
House damaged/destroyed (Both)	0.236***	0.525***						
	(0.075)	(0.077)						
Injured personally (Daesh)			-0.007	0.024				
			(0.050)	(0.052)				
Injured personally (Gov)			-0.145	-0.196*				
			(0.102)	(0.106)				
Injured personally (Both)			0.408**	0.279				
			(0.185)	(0.193)				
Injured family (Daesh)					-0.015	0.095		
					(0.059)	(0.062)		
Injured family (Gov)					-0.020	0.021		
					(0.047)	(0.049)		
Injured family (Both)					-0.104	0.100		

					(0.128)	(0.133)		
Killed family (Daesh)							0.041	0.137*
							(0.069)	(0.071)
Killed family (Gov)							0.033	0.046
							(0.045)	(0.046)
Killed family (Both)							-0.164	-0.120
							(0.139)	(0.145)
House damaged/destroyed (Daesh)			-0.005	0.092	0.004	0.099*	0.004	0.100*
			(0.055)	(0.058)	(0.056)	(0.058)	(0.055)	(0.058)
House damaged/destroyed (Gov)			0.284***	0.476***	0.284***	0.475***	0.279***	0.470***
			(0.051)	(0.053)	(0.052)	(0.054)	(0.052)	(0.053)
Injured personally (Daesh)	0.012	0.039			0.013	0.041	0.016	0.044
	(0.049)	(0.051)			(0.049)	(0.051)	(0.049)	(0.051)
Injured personally (Gov)	-0.009	-0.085			-0.010	-0.090	-0.000	-0.072
	(0.089)	(0.093)			(0.090)	(0.093)	(0.090)	(0.093)
Injured family (Daesh)	-0.036	0.082	-0.028	0.090			-0.020	0.099*
	(0.056)	(0.059)	(0.056)	(0.058)			(0.056)	(0.058)
Injured family (Gov)	-0.028	0.019	-0.042	0.007			-0.022	0.027
	(0.045)	(0.047)	(0.045)	(0.047)			(0.045)	(0.047)
Killed family (Daesh)	-0.013	0.072	-0.002	0.083	0.003	0.086		
	(0.065)	(0.067)	(0.064)	(0.066)	(0.064)	(0.067)		
Killed family (Gov)	0.007	0.015	0.019	0.027	0.017	0.023		
	(0.043)	(0.045)	(0.043)	(0.045)	(0.043)	(0.045)		

Control variables								
Female	-0.099***	-0.023	-0.101***	-0.026	-0.100***	-0.025	-0.097***	-0.022
	(0.035)	(0.036)	(0.035)	(0.036)	(0.035)	(0.037)	(0.035)	(0.036)
Age	0.001	0.033**	-0.001	0.032*	0.000	0.033*	-0.000	0.032*
	(0.016)	(0.017)	(0.016)	(0.017)	(0.016)	(0.017)	(0.016)	(0.017)
Education	-0.022	-0.025	-0.021	-0.024	-0.022	-0.025	-0.023	-0.026
	(0.017)	(0.018)	(0.017)	(0.018)	(0.017)	(0.018)	(0.017)	(0.018)
SES 2004	0.009	-0.053**	0.007	-0.054***	0.009	-0.053**	0.007	-0.056***
	(0.020)	(0.021)	(0.020)	(0.021)	(0.020)	(0.021)	(0.020)	(0.021)
SES 2004	0.025	0.032*	0.028	0.035*	0.027	0.033*	0.025	0.032*
	(0.018)	(0.018)	(0.018)	(0.018)	(0.018)	(0.018)	(0.018)	(0.018)
Constant	3.730***	3.537***	3.736***	3.541***	3.722***	3.533***	3.733***	3.541***
	(0.123)	(0.128)	(0.123)	(0.127)	(0.124)	(0.128)	(0.123)	(0.127)
Observations	991	991	991	991	991	991	991	991
R-squared	0.061	0.184	0.065	0.185	0.058	0.181	0.061	0.185
Number of neighborhoods	50	50	50	50	50	50	50	50

Standard errors in parentheses
*** p<0.01, ** p<0.05, * p<0.1