

El-Bialy, Nora; Fraile Aranda, Elisa; Nicklisch, Andreas; Saleh, Lamis; Voigt, Stefan

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## Syrian Civil War Victims Trust Each Other, but Punish When and Whomever They Can

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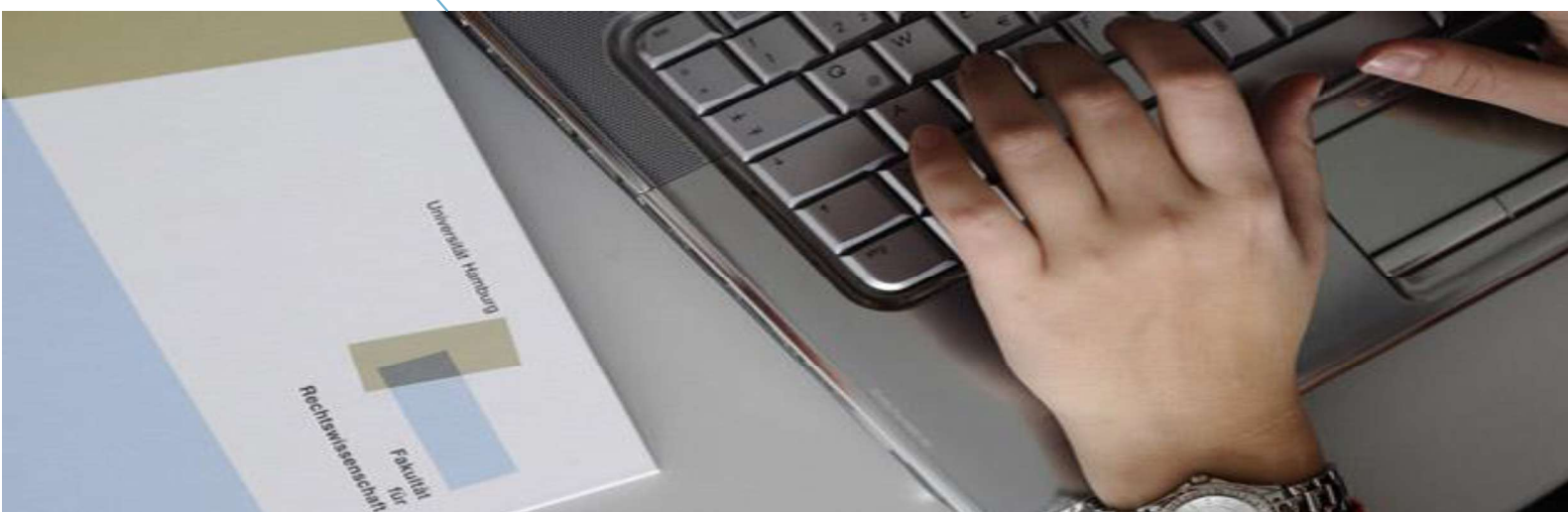
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Nora El-Bialy  
Elisa Fraile Aranda  
Andreas Nicklisch  
Lamis Saleh  
Stefan Voigt

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# Syrian Civil War Victims Trust Each Other, but Punish When and Whomever They Can

Nora El-Bialy<sup>1</sup>, Elisa Fraile Aranda<sup>2</sup>, Andreas Nicklisch<sup>3</sup>, Lamis Saleh<sup>4</sup> & Stefan Voigt<sup>5</sup>

## Abstract

*The civil war in Syria has been raging since 2011. We ask whether civil war experience affects voluntary cooperation and its coordination by means of peer punishment. To answer that question, we ran experiments with Syrians and Jordanians, and use a victimization index to measure the individual war exposure among Syrians. Despite being more trusting, severely victimized Syrians tend to be less cooperative when subsequent peer punishment is possible. Severely victimized participants punish whenever possible, not distinguishing between their opponent's decisions. Our findings show that experiencing extreme violence deteriorates the adequate use of sanctioning mechanisms.*

JEL classification: C72, C93, D91, O15, Z13.

Key words: Civil war, Victimization, Trust, Cooperation, Punishment.

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1 Institute of Law & Economics, University of Hamburg, Johnsallee 35, D-20148 Hamburg, Germany, Email: [Nora.Elbialy@ile-hamburg.de](mailto:Nora.Elbialy@ile-hamburg.de).

2 Institute of Law & Economics, University of Hamburg, Johnsallee 35, D-20148 Hamburg, Germany, Email: [Elisa.Fraile@ile-hamburg.de](mailto:Elisa.Fraile@ile-hamburg.de).

3 Center for Economic Policy Research, University of Applied Sciences of the Grisons, Comercialstr. 20, CH-7000 Chur, Switzerland, Email: [Andreas.Nicklisch@fhgr.ch](mailto:Andreas.Nicklisch@fhgr.ch)

4 Institute of Law & Economics, University of Hamburg, Johnsallee 35, D-20148 Hamburg, Germany, Email: [Lamis.Saleh@ile-hamburg.de](mailto:Lamis.Saleh@ile-hamburg.de).

5 Corresponding author: Institute of Law & Economics, University of Hamburg, Johnsallee 35, D-20148 Hamburg, Germany, Email: [Stefan.Voigt@ile-hamburg.de](mailto:Stefan.Voigt@ile-hamburg.de) and CESifo, Munich.

## 1. Introduction

The experience of war is one of the most impactful experiences humans can have. It shapes personal attitudes for decades, if not for the rest of one's life. The current war in Syria is a particularly awful example of the abusive use of power and mass violence against members of one's own society. Estimates indicate that around 500,000 people have been killed (Human rights watch, 2019), and the consequences for those who survived are far-reaching ranging from physical injuries to post-traumatic mental disorders that cause depression and high distress levels (Galovski and Lyons, 2004). Among those who survived, more than 5 million left the country, 6.6 million are internally displaced and around 13 million are labelled as people in need (UNHCR, 2019). Thus, the majority of Syrian nationals have endured expulsion, suppression, and economic deprivation.

War experience has been shown to influence deeply rooted behavioral characteristics that guide human interaction. Risk acceptance is increased in individuals who experience war-related violence (Voors et al., 2012). So is altruism in post-civil war societies (e.g., Callen et al., 2014, Bauer et al., 2016, Islam et al., 2018). Therefore, a critical question is how the experience of extreme violence will impact the way Syrians organize their coexistence after the civil war is over. Behavioral norms and the disciplining effect of (peer) punishment for norm violations play a key role in a well-functioning society (Ostrom, 1990, Fehr and Gächter, 2000, 2002). Pro-social<sup>6</sup> punishment usually carries a positive connotation (Mayhew and van Kesteren, 2002). However, since many Syrians have experienced oppressive and anti-social forms of punishment, one might question whether pro-social punishment can play a similarly positive role in Syria's future.

To answer this question, we gather and analyze data from a series of experiments conducted in both Syria and Jordan.<sup>7</sup> We analyze participants' behavior in two separate games that

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6 That is, punishment that is targeted at norm violators.

7 Our experiment matches each participant with participants from the same nationality living in the same country. We use Jordanian participants living in Jordan as our baseline, and compare their behaviour with Syrians who live in Syria.

vary the risk of being exploited in situations of unilateral cooperation: a trust game and a prisoner's dilemma game. In the trust game, one player – the trustor – may initiate an efficiency-enhancing cooperation whereas the other player – the trustee – merely divides the surplus of the cooperation. In the prisoner's dilemma, both players have to choose either the efficiency-enhancing cooperation or an individually profit maximizing defection that leads to inferior results in terms of efficiency in case of mutual defection. However, in the prisoner's dilemma players are provided with the opportunity to sanction each other using peer punishment at their own cost once they have learned whether the other player cooperated or defected. Cooperation in the trust game is far riskier for the trustor (since the game terminates with the division of the surplus) than cooperation for either player in the prisoner's dilemma (as non-cooperators in the prisoner's dilemma risk subsequent financial sanctions).<sup>8</sup> Thus, the strategic incentives suggest that cooperation is less likely in the trust game than in the prisoner's dilemma with peer punishment.

Against this intuition, comparison across participants shows a reversed pattern for Syrians, especially those who experienced extreme violence during the civil war and with high victimization levels: They are significantly more likely to trust than other participants (i.e., Jordanians and non-victimized Syrian participants).<sup>9</sup> At the same time, however, Syrian war victims are significantly less cooperative and punish significantly more often in the prisoner's dilemma game, regardless of their own behavior and that of their counterparts. These findings suggest that the experience of war-related victimization coincides with an increased willingness to trust, yet correlates with little use of pro-social punishment as a

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8 We do not want players to participate twice in the prisoners' dilemma, one without and one with a punishment option, as they may feel obliged to opt consistently across the two variations of the game. For this reason, we introduce the two different, but related games.

9 Our finding complements Bauer et al. (2018) showing that former child soldiers in Northern Uganda show higher levels of trustworthiness and community engagement in the aftermath of the conflict.

means to sustain cooperation.<sup>10</sup> Instead, the painful experience of violence implies that subjects subsequently punish whenever possible and under all constellations.

The rest of the paper is organized as follows: In section 2, the experimental set-up is described. The main variables are introduced in section 3 which also contains the descriptive statistics. The results are reported in section 4. Section 5 concludes.

## **2. The Experimental Set-Up**

All experimental sessions were computerized. Both games were part of a larger study that consisted of four other games.<sup>11</sup> The order of the games always remained the same, starting with the simplest game and advancing to the more complicated, quasi-interactive games. Simple Arabic language was used throughout the experiment. Players completed both games in the strategy form. That is, participants decided in the trust game both in the role of the trustor and in the role of the trustee for all possible choices, and in the prisoner's dilemma first whether to cooperate or to defect, and second, whether to punish or not when facing a cooperator or a defector. The players' payoffs were determined after all participants had finished the experiment by matching players' decisions with the corresponding decision of another randomly chosen player. After completing the games, participants answered a post-experiment questionnaire designed to elicit socio-demographic characteristics. The questionnaire given to Syrian participants included questions about war.

To measure trust and trustworthiness, we used a two player trust game (e.g., Berg et al., 1995). Players made their decisions in both the role of trustor and trustee according to the strategy method.<sup>12</sup> In the role of the trustor, they started with an endowment of 300 points,

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10 We would like to stress that we cannot offer causal evidence. It could be that subjects are victimized because they trusted, but they may trust because they were victimized.

11 The other games measured altruism, risk taking, reciprocity, and honesty.

12 For instructions, see the Appendix.

while in the role of the trustee, they started with an endowment of 100 points. In the role of the trustor, they decide on the amount of points to be transferred to the trustee (in multiples of 50 points). The amount sent was tripled by the experimenter. In the role of trustee, they decide on the amount they want to return to the trustor for every possible amount sent by the trustor.

To measure cooperation when peer punishment is possible, we use a two player prisoner's dilemma. The game has two stages. In the first stage, both participants simultaneously choose whether to cooperate or to defect.<sup>13</sup> If both players cooperate, the sum of payoffs for both players is maximized. However, if one player defects and the other cooperates, the defecting player maximizes her payoff, whereas the payoff of the unilaterally cooperating player is minimized. If both players defect, the payoff of both players is inferior to the case of mutual cooperation. In the second stage, both players decide again simultaneously whether they want to reduce their partners' points at a personal cost conditional on the decision of the other person.

All our participants have a very similar socio-demographic background.<sup>14</sup> Syrians originate from both government and rebel-controlled areas (at the time of the experiment). For our experiments, we recruited 100 subjects in Syria. The experiment took place in December 2017. Participants were recruited from Homs, Hama, Damascus, Aleppo and Idlib. Some of these cities were under the control of the Syrian government and others of the rebels. At that time, conditions were stable enough to allow us to conduct our experiment.<sup>15</sup> For logistical reasons, the recruitment method varied slightly depending on where our participants were located. We appointed two recruiters to contact university students as our

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13 In the experiment, we used neutral language.

14 The similarities between the two countries before the war were apparent: not only do they share borders; they also share a common history, culture, language and religion. Citizens of both countries did not need a visa to cross common borders. Descriptive statistics are reported in the section 3.

15 Notice that we find severely victimized participants on both sides of the conflict, so that self-selection for the interplay between victimization and trust/cooperation is not an issue.

pool of possible participants. The recruiter in the area controlled by government<sup>16</sup> created a social network group and posted a flyer about our experiment on the group network.<sup>17</sup> People were then invited to participate in the experiment. Any individual expressing a willingness to participate received a personalized link to assure that each person participated only once. In rebel-controlled regions, the recruiter posted the same experiment flyer on more than one university campus.<sup>18</sup> Here too, only registered students could participate. The experiment was conducted online. At the end of the experiment, participants received feedback about the number of points that they had gained and the corresponding payoffs.<sup>19</sup>

In Jordan, we conducted sessions in March 2017, at partner universities in Amman and Irbid in the northern part of Jordan, some 20 miles west of the Syrian-Jordanian border. Here, around 80 Jordanians participated in computer labs on campus. We conducted a second wave of online experiments<sup>20</sup> in the same two cities in December 2017, where around 35 subjects participated in the experiment. Jordanian participants played one of two treatments; either they were playing with a Syrian refugee or they were playing with another Jordanian (participants were not aware of the two treatment conditions). In this paper, in order to maintain the same treatment as our Syrian participants, we limit our

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16 The cities that were under the control of the government during the experiment were Damascus, Homs and Hama.

17 There was no possibility to post an actual flyer of the experiment at the university campus for security reasons. Participants refused to be associated with any foreign activities due to the delicacy of the situation in Syria.

18 Idlib was not a government controlled city and there was, hence, the possibility to post the flyer at the university there. This also applied to the university of Aleppo at the time.

19 For the subjects at the government side, a list with the anonymous tokens (only each participant knew his own token) and the corresponding payoffs was published on the social network group. For the subjects on the non-government side, each participant was informed of his points and payoffs anonymously.

20 For this experiment, we applied exactly the same procedure as in Syria.



Jordanian sample to Jordanian participants who played with another Jordanian. In total, we have 60 Jordanians who completed the experiment.

### **3. Main Variables and Descriptive Statistics**

To quantify how much our participants have been victimized by the war, we follow an approach suggested by Bellows and Miguel (2009). They construct an index measuring war-related violence based on the number of family members who were killed, injured or became refugees because of war. We design a similar individual ‘victimization index’ using the information provided by participants in the post-experiment questionnaire. We focus on three forms of victimization: (1) the loss of a close family member, (2) the loss of the economic basis of a family, and (3) displacement from the home region. Given the huge number of fatalities and the internal displacement crisis caused by the Syrian civil war, we chose the following questions in constructing our index:

- (1) Were you internally displaced inside Syria because of the war?
- (2) Did you lose any of your family members because of the war?
- (3) Did you suffer from any material losses because of the war?

All three issues are covered by our post-experiment questionnaire. The questions are formulated such that subjects’ answers are coded as simple dummy variables<sup>21</sup> and added to a victimization index with a minimum value of zero and a maximum value of three.

We chose to use rather general questions to avoid any possible psychological implications that more detailed question might have caused. About 76% of our Syrian participants have a victimization score of two or less (labeled as less victimized), while 24% of them have a score of three (labeled as severely victimized). The average victimization index score of

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21 This index is later used by (Voors et al., 2012). (Becchetti et al., 2014) create a similar index focusing on several consequences of the war; namely personal injuries, loss of relatives, material losses, damage to personal property, job losses and forced relocation.

our Syrian participants is 1.5, with a standard deviation of 1.06. More than 44% of Syrians have an index of 2 or 3.<sup>22</sup>

Table 1 provides descriptive socio-demographic statistics of both our samples. The mean participant in both samples belongs in the age group 26-36 years. All of our participants are either actively pursuing a university degree or have already finished their university education. We asked our Jordanian participants about their current household financial level and our Syrian participants about their household's financial levels in the year prior to the beginning of the war. We also asked about the importance of religion. Almost 100% of the participants declared that religion is very important in their everyday lives. The two samples are very similar with regard to education (Wilcoxon test p-value=0.50), and importance of religion (Wilcoxon test p-value=0.89). The difference in the proportion of married participants and the number of children is also not significant: 19% of the Syrians and 12% of the Jordanians are married (Wilcoxon test p-value=0.27). The mean number of children is slightly higher among the Jordanians (0.73) when compared to Syrian participants (0.27) (Wilcoxon test p-value=0.30). Yet, there are some noteworthy differences. Whereas the majority of the Syrian participants are males (63%), the opposite holds for the Jordanian sample (35.6%) (Wilcoxon test p value=0.00). Forty percent of the Jordanian participants had a paid job, while this holds true for only 23.7% of the Syrians (Wilcoxon test p-value=0.03). Therefore, we include all socio-demographic variables as controls in our regression models.

Participants were incentivized by points earned during the games that were exchanged into real money after the experiment. The average payout (paid in local currency for Jordanians) was around 12 Jordanian Dinars (equivalent to around US\$16.00). In Jordan, participants were paid in cash at the end of the sessions. In Syria, we adjusted the exchange rate to meet an equal purchasing power accordingly, and the average payment was US\$12.00. Participants at locations not under government control received their payments from the recruiter in cash. Participants at locations under governmental control were also offered

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22 Completing the post-experiment questionnaire was optional. 97% of participants completed the post-experiment questionnaire.

their payment in cash. However, many participants did not pick up their payoffs for security reasons: they feared facing personal harm and security problems for receiving money from a foreign institution.<sup>23</sup>

Table 1. Descriptive statistics

Variables	Syrian Participants					Jordanian participants				
	N	Mean	St. Dev.	Min	Max	N	Mean	St. Dev.	Min	Max
Age	100	2.170	0.570	1	6	60	2.367	0.758	2	5
Male	100	0.630	0.485	0	1	59	0.356	0.483	0	1
Education	95	4.063	0.727	1	6	60	4.183	0.748	3	6
Paid Job	97	0.237	0.428	0	1	60	0.400	0.494	0	1
Fin Status	95	3.284	1.145	1	5	60	3.750	1.083	1	5
Married	97	0.186	0.391	0	1	59	0.119	0.326	0	1
No. Children	95	0.274	0.750	0	5	41	0.732	1.718	0	7
Importance of Religion	89	3.865	0.404	2	4	57	3.877	0.381	2	4

Age is a categorical variable describing age groups from 1 to 6 with the lowest age group being 16-26 years. Male is a dummy variable describing the gender of the participants. Education is a categorical variable asking participants about the highest degree of education that they obtained with the following answers: 1) read and write 2) primary school degree 3) high school degree 4) currently in university education 5) university degree 6) post-graduate degree. Paid job is a dummy variable asking participants, if they have a job with a fixed income. Fin status refers to household financial status that is a categorical variable from 1 to 5. For the Syrian participants it measures their household's financial level in the last year before the war in Syria. For the Jordanian participants it measures their current financial status. Married and No. Children are dummy variables. Importance of religion is a categorical variable ranging from (1) very important to (4) not important at all.

#### 4. Results

In the trust game, we measure trust by the average amount trustors send in the first round of the game. There is little difference in the average amount sent between the two groups: Syrian trustors send on average 19.7% of their endowment, while Jordanians send 15%.<sup>24</sup>

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23 We document the distribution of our variables of interest differentiating between participants who received the payment and those who refused to receive the money in the Appendix.

24 Two-sided p-value=0.7114.

However, once the war experience among Syrian participants is controlled for, considerable differences become apparent. Figure 1 shows the average amounts sent differentiating between four different groups of participants. The results reveal that the more victimized Syrian participants are more likely to trust the trustee,<sup>25</sup> suggesting that all three levels of victimization coincide with increased trust. Even when we control for a number of socio-demographic traits (see Table 1 in the Appendix), high degrees of the victimization correlate significantly with high levels of trust by the trustor.<sup>26</sup>

Regarding the prisoner's dilemma game, we compute cooperation rates. Again, we find only a moderate difference between Jordanians and Syrians. The cooperation rate of the Jordanians (62%) does not differ significantly from that of the Syrians (57%) (see Figure 1).<sup>27</sup> Once again, however, we find significant differences among Syrians when controlling for the degree of victimization. The cooperation rate of less victimized Syrians is 71%, while that of those severely victimized is only 40%.<sup>28</sup> Results from a probit regression analysis on the cooperation decisions among Syrians show the robustness of this finding. The degree of victimization coincides negatively with cooperation (see Table 3 in the Appendix). In other words, victimized Syrians tend to trust more (results of the first game), but to cooperate less frequently (results of the second game).

The key to the reversal can be found in the second stage of the prisoner's dilemma. Here, we observe widespread anti-social punishment behavior by severely victimized Syrian participants.<sup>29</sup> Overall, Syrian participants punish significantly more often (on average

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25 The correlation between the victimization score and the amount invested is significantly positive at 0.29 ( $p=0.0037$ , two-sided correlation test).

26 We also analysed the trustworthiness of participants (i.e., the share of the cooperation gain that trustees return freely to the trustors), but do not find any significant difference between victimized and non-victimized Syrian trustees. Further details are discussed in the Appendix.

27 Proportion test two-sided  $p$ -value=0.6784

28 Wilcox rank sum test  $p$ -value= 0.01839.

29 The term "anti-social punishment" refers to defectors punishing co-operators in public good games. (Herrmann et al. (2008)] document that anti-social punishment behaviour exists

32%) than Jordanians (13%).<sup>30</sup> Among the Syrians, players who defect (choose not to cooperate) are significantly more likely to punish players who cooperate, i.e. choose to punish anti-socially. This tendency also holds for severely victimized Syrians who assume the defector role in the game (see Figure 1).<sup>31</sup>

To identify the factors associated with this punishment pattern, we restrict the analysis to the Syrian participants. To do so, we rely on both the trust game as well as the prisoner's dilemma. Regarding the trust game, we estimate models in which the points sent by the trustor as well as the points returned by the trustee function as the dependent variables and estimate OLS regressions. Regarding the prisoner's dilemma, we run probit regressions with the choice to cooperate and to punish pro-socially or anti-socially as the variables to be explained. The victimization index serves as the main explanatory variable. Along with it, we control for a number of covariates: age, gender, education level, income level, and the number of children. Estimation results are reported in Table 2, while Figure 2 shows the marginal effects of victimization across the five regressions.

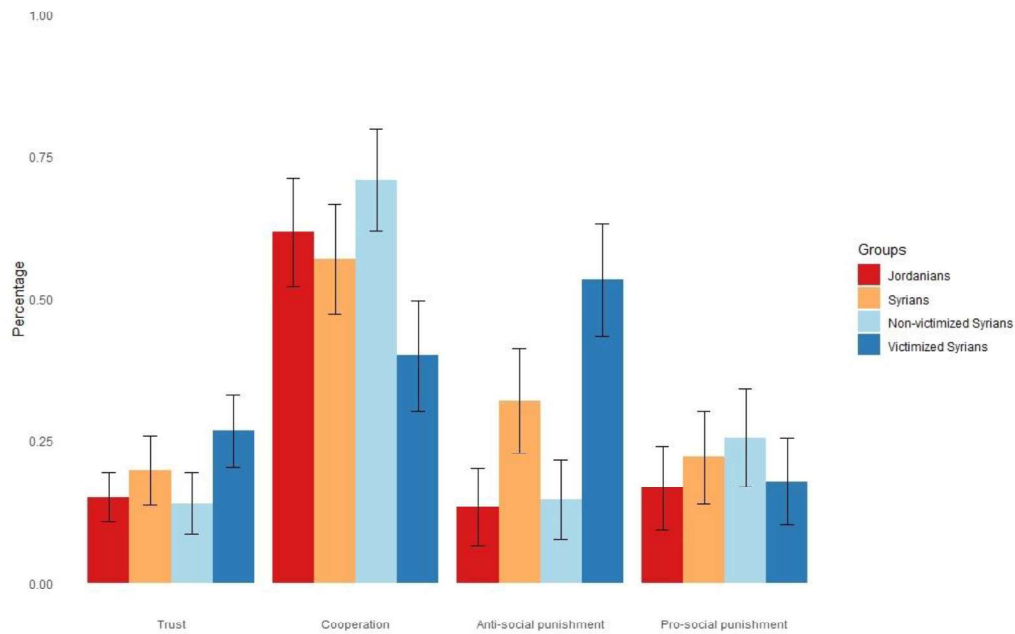
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worldwide, without identifying any regional focus. Recall that we use the strategy method for eliciting players' punishment plans. That is, we ask players whether they want to punish when facing both a cooperator and a defector.

30 Wilcoxon rank sum test p-value= 0.00855.

31 We find that, on average, Syrians (54%) are more likely to punish than Jordanians (30%). The same applies, although to a lesser extent, for pro-social punishment (22% for Syrians and around 17% for Jordanians). We find no correlation between the victimization levels among the Syrians and their general punishment patterns, and specifically for pro-social punishment patterns.

Figure 1. Behaviour patterns among the different groups



The estimation results indicate that the level of civil war victimization correlates significantly with anti-social punishment behavior, while there seems to be no systematic association between victimization levels and pro-social punishment: Syrian defectors who have been severely victimized are significantly more likely to punish than those who have been less victimized. This result suggests that being exposed to different levels of violence in the context of the civil war deteriorates the passive acceptance of being punished when retaliation is possible.

Figure 2. Mean marginal effects of victimization

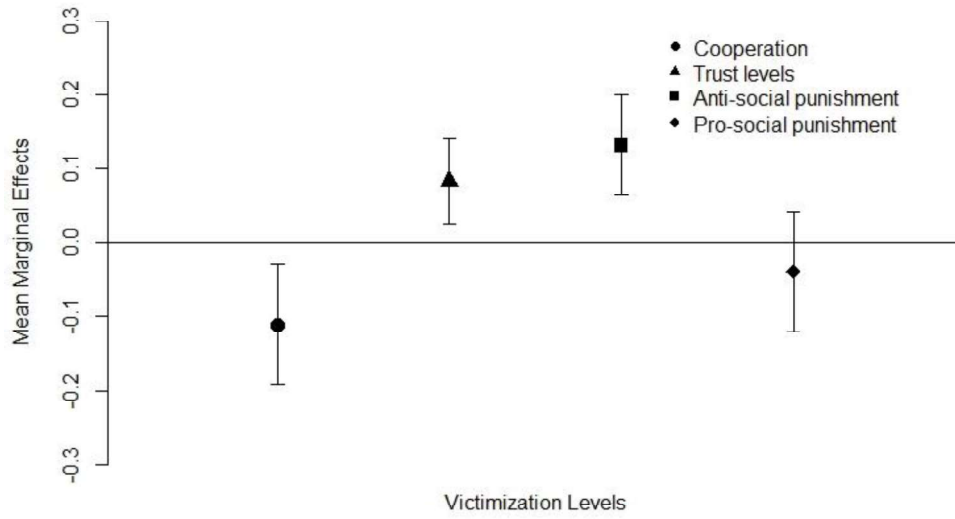


Table 2: Regression estimations

	<i>Dependent variable:</i>				
	% points sent by trustor	% points returned by trustee	Cooperation	Pro-social punishment	Anti-social punishment
Victimization	0.084 <sup>***</sup>	0.017	-0.347 <sup>**</sup>	-0.141	0.507 <sup>***</sup>
	(0.030)	(0.015)	(0.142)	(0.150)	(0.158)
Age	0.015	0.001	-0.129	-0.149	-0.318
	(0.060)	(0.031)	(0.273)	(0.361)	(0.408)
Male	0.078	0.079 <sup>**</sup>	0.296	-0.127	-0.504
	(0.067)	(0.034)	(0.322)	(0.337)	(0.350)
Education	0.057	-0.010	-0.540 <sup>**</sup>	-0.253	0.695 <sup>***</sup>
	(0.042)	(0.022)	(0.235)	(0.215)	(0.254)
Income	-0.020	-0.032 <sup>**</sup>	0.063	0.114	-0.064
	(0.027)	(0.014)	(0.135)	(0.142)	(0.146)
Num. Children	-0.041	0.016	-0.202	0.095	0.297
	(0.050)	(0.026)	(0.241)	(0.260)	(0.272)
Constant	-0.179	0.317 <sup>***</sup>	2.906 <sup>**</sup>	0.425	-3.061 <sup>**</sup>
	(0.223)	(0.115)	(1.201)	(1.191)	(1.358)
Observations	92	92	92	92	92
R <sup>2</sup>	0.145	0.123			
Adjusted R <sup>2</sup>	0.085	0.061			
F Statistic	2.402 <sup>**</sup>	1.990 <sup>*</sup>			
Log Likelihood			-51.970	-46.008	-43.466
Akaike Criter.			117.940	106.017	100.932

Note: For the delineation of the covariates, see Table 1. \* p<0.1; \*\* p<0.05; \*\*\* p<0.01.

## 5. Conclusions

The results of our study provide important insights into the relationship between war violence and human behavior. Our data show that victimization does not reduce cooperation because of increased distrust, but rather that victimization erodes the ability to use pro-social punishment as a disciplining tool. Severely victimized Syrians do not take into account whether or not the interacting person has violated a norm or not. Instead, they are more likely to punish unconditionally. With war experience, subjects seem to feel obliged to show others their readiness to execute punishment, while the acceptance of receiving punishment that many defectors show elsewhere (e.g., Kamei & Putterman,



2015) dissolves. Thus, peer punishment loses its ability to sustain cooperation, and defection appears the more attractive option.

These results shed a grim light on the development prospects for post-war Syrian society. Surprisingly, subjects who witnessed many of the war horrors could, nonetheless, potentially serve as the nucleus for the challenging reorganization of the Syrian society. They are more likely to trust unilaterally than any other Syrians or Jordanians, and, consequently could help Syrian society to realize efficiency gains that result from mutual trust. However, a necessary precondition for this seems to be the absence of punishment inclinations. Developing mutually beneficial cooperation in a post-war environment in which the victims of violence themselves are quick to punish under any set of circumstances is a major challenge. Therefore, prospects for the development of Syria appear rather limited.

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## Appendix

### Trustworthiness

We also compare trustworthiness levels between Syrians and Jordanians. We find that Syrian trustees return, on average, 26% of the points they receive, while Jordanians return 27% of the points. There is no significant difference between the two return rates ( $p$ -value=0.8417, a Wilcoxon rank sum two-sided test). We extended our analysis of trustworthiness by estimating individual linear return functions with an intercept and the slope of their trustworthiness. Recall that we elicit trustworthiness by using the strategy method, which gives us six individual data points regarding returns conditional on the amount the trustor sends. In other words, we ask every participant for every hypothetical amount sent in steps of 50 points from a minimum of 0 to a maximum of 250 the amount she would like to return. The intercept of the response function of severely victimized Syrians lies within the 95% confidence interval of (33.02, 39.39) points while the intercept of the response function of less victimized Syrians lies within (25.78, 31.70) points; as shown in figure A1 the confidence intervals of both groups do not overlap. The slope for severely victimized Syrians lies within (0.82, 0.95) compared to (0.86, 0.97) for the less seriously victimized, results are shown in figure A2.

Figure A1. Intercept of the trustworthiness response function among Syrians dependent on their degree of victimization

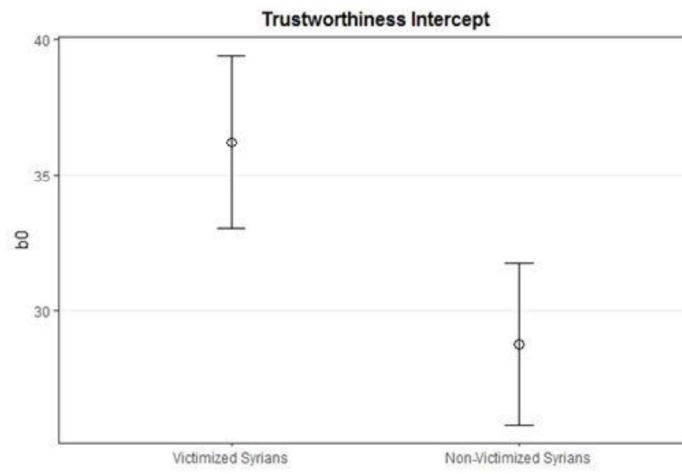
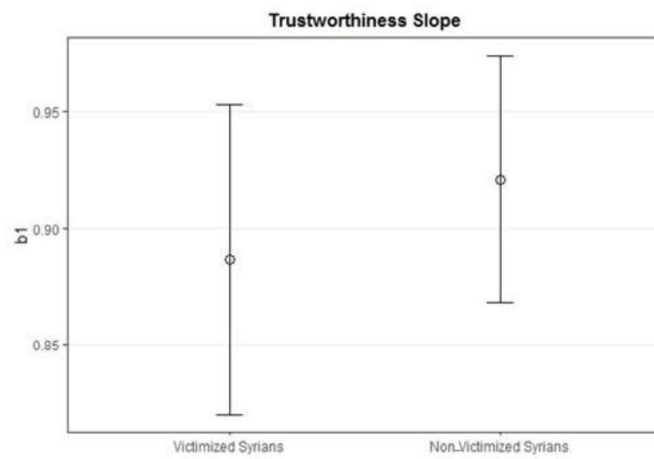


Figure A2. The slope of the trustworthiness function among Syrians dependent on their degree of victimization



## **Monetary incentives**

Overall, 59 of our Syrian participants lived in cities under governmental control, and 41 in cities not under governmental control. Among the participants living under governmental control, 48 did not pick up the cash payoffs to avoid protect their personal security. All but one of the participants living in cities under non-governmental control picked up the money. Table 1A shows the distribution of the participants in our experiment based on both their location in Syria at the time of the experiment as well as whether they received the cash payoffs for the experiment. Notice that we find victimized participants both in areas under governmental control and in areas not under governmental control. We do not worry about the impact of the cash payments on the participants in the areas that are not under the control of the government as almost all participants were paid. On the other hand, as shown in the table the situation was different for the participants that lived in the government-controlled cities. Between those paid and those unpaid under the government control, we find no differences in cooperation (Wilcoxon rank sum test  $p$ -value=0.887) or anti-social punishment (Wilcoxon rank sum test  $p$ -value=0.323) in the prisoner's dilemma, but for trust (Wilcoxon rank sum test  $p$ -value=0.01) in the trust game. Notice that one cannot claim that (victimized) subjects trust significantly more because they decide for themselves that the decision to trust has no monetary consequences (as they do not pick up the money later): unpaid Syrians trust significantly less than paid subjects. Hence, by including unpaid subjects, if at all, we underestimate the effect of victimization in Syria.

Table A1. The distribution of participants in different parts of Syria and variables of interest

		Government	Non-government
Paid	N		
	Unpaid	11	40
Trust levels		48	1
		0,45	0,22
Cooperation		0,13	0
		0,72	0,3
Anti-Social punishment		0,75	1
		0,27	0,55
		0,15	0

## Game Instructions used in Experiment

The experiments were conducted in Arabic. To ensure properly translating, we had the original English version translated into Arabic by one group of translators and translated back into English by another group of translators.

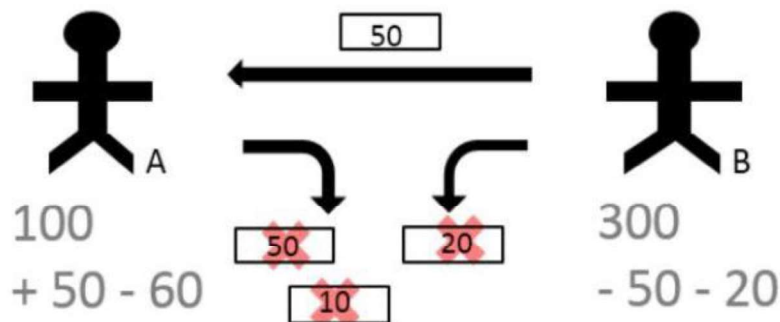
### 1. Trust Game

Now consider yourself to be in the following situation with a Syrian living in Syria. Hence, there are two persons involved (person A and person B).

Here are the rules:

- Person A gets 100 points, whereas person B gets 300 points.
- Person A can take away ANY amount of points from person B and keep it for himself. Person B can react and fine person A by destroying any number of person A's points.
- To fine person A, person B has to pay a fee of 20 points.
- The destroyed points and the fee paid by person B disappear (X), hence no one receives them.

Have a look at this example:



Person A takes 50 points from person B:  $\Rightarrow$  A gains 50 additional points  
 $\Rightarrow$  B loses 50 points.

Person B decides to fine A by destroying 60 of his points  $\Rightarrow$  B loses 20 points (fee)



⇒ A loses 60 points (destroyed points)

Please look at the following two pages. On the basis of this example, please choose how you want to behave in each situation. You are once taking the position of person A (100 points) and another time the position of person B (300 points). In the following cases, person A can take away 6 different amounts of points from person B: 0 points, 50 points, 100 points, 150 points, 200 points or 250 points. If person B pays the fee, he can destroy any amount of points (0 to all) from person A.

After all participants have completed the questionnaire, we will match you with a Syrian living in Syria. We will reward you both according to one randomly chosen decision and the corresponding reaction.

**How many points do you take away if you are person A? \***

Please choose **only one** of the following:

- 0 points (I will keep my 100 points, person B can keep his 300 points)
- 50 points (I will receive then 150 points, person B keeps only 250 points)
- 100 points (I will receive then 200 points, person B keeps only 200 points)
- 150 points (I will receive then 250 points, person B keeps only 150 points)
- 200 points (I will receive then 300 points, person B keeps only 100 points)
- 250 points (I will receive then 350 points, person B keeps only 50 points)

**How will you respond if you are person B?**

**If person A takes away 0 points (A has 100 points and you 300 points):**

If you choose 'Pay the fee (20 points) and destroy the following amount of points from A.' please also specify your choice in the accompanying text field. Only numbers may be entered in 'Pay the fee (20 points) and destroy the following amount of points from A.'

Please choose **only one** of the following:

- Keep everything as it is.
- Pay the fee (20 points) and destroy the following amount of points from A\*.

\*

**If person A takes away 50 points (A has 150 points and you 250 points): \***

Please choose **only one** of the following:

- Keep everything as it is.
- Pay the fee (20 points) and destroy the following amount of points from A\*.

\*

**If person A takes away 100 points (A has 200 points and you 200 points):**

Please choose **only one** of the following:

- Keep everything as it is.
- Pay the fee (20 points) and destroy the following amount of points from A\*.

\*

**If person A takes away 150 points (A has 250 points and you 150 points):**

Please choose **only one** of the following:

- Keep everything as it is.
- Pay the fee (20 points) and destroy the following amount of points from A\*.

\*

**If person A takes away 200 points (A has 300 points and you 100 points): \***

Please choose **only one** of the following:

- Keep everything as it is.
- Pay the fee (20 points) and destroy the following amount of points from A\*.

\*

**If person A takes away 250 points (A has 350 points and you 50 points):**

Please choose **only one** of the following:

- Keep everything as it is.

- Pay the fee (20 points) and destroy the following amount of points from A\*.

\*

## 2. Prisoner's Dilemma

Now consider yourself to be in the following situation in which you may collaborate with a Syrian living in Syria. Hence there are two people interacting.

Here are the rules:

The game has two stages.

In stage 1, each person chooses simultaneously between two options, X and Y. In stage 2, each person chooses simultaneously between two options, Q and P. In stage 1, choosing X leads to 50 points for the choosing person and 90 points for the other; choosing Y yields 80 points for the choosing person and 0 points for the other. Therefore, if both persons choose X, each person earns 140 points, if both persons choose Y, each person earns 80 points. If one person chooses X, but the other Y, the first choosing X earns 50 points, while the one choosing Y earns 170 points.

1. In stage 2, persons are informed on the option chosen by the other person. Then each person has the opportunity to destroy points of the other person at own cost, or leave them as they are. That is, in stage two you (and the other) can choose either Q implying no punishment for the other person and no cost for you, or P leading to a deduction of 40 points from the other's payoff and a decrease of your income by 10 points.

Have a look at those three examples:

1. You choose X, the other X. You and the other earn 140 points each. You then choose Q, while the other chooses P. 40 points are destroyed from your income and 10 points deducted from the other's income. You end up with 100 points, the other with 130 points.
2. You choose Y, the other Y. You and the other earn 80 points each. You then choose Q, the other chooses Q as well. No points are destroyed nor deducted. You end up with 80 points, the other with 80 points as well.
3. You choose X, the other Y. You earn 50 points and the other earns 170 points. You then choose P, while the other chooses Q. 40 points are destroyed from the other's income and 10 points deducted from your income. You end up with 40 points, the other with 130 points.

Please look at the following page. On the basis of those examples, please choose how you are going to behave in this situation.

After all participants have completed the questionnaire, we will randomly select you and a Syrian living in Syria and reward you both according to your decisions.

## Stage 1

What will you choose in stage 1?  
I choose

Choose one of the following answers

Please choose only one of the following:

- X (this implies 50 points for me and 90 points for the other)
- Y (this implies 80 points for me and 0 points for the other)

## Stage 2

What will you choose in stage 2?\*

If the other person chooses X (in combination with your decision X in stage 1 this yields 140 point for you and 140 points for the other):

\*If the player chooses X in the first stage

Choose one of the following answers

Please choose only one of the following:

- Q (this implies 0 points destruction for the other and 0 points decrease for your income)
- P (this implies 40 points destruction for the other and 10 points decrease for your income)

What will you choose in stage 2?\*

If the other person chooses Y (in combination with your decision X in stage 1 this yields 50 points for you and 170 points for the other):

\* If the player chooses X in the first stage

Choose one of the following answers

Please choose only one of the following:

- Q (this implies 0 points destruction for the other and 0 points decrease for your income)
- P (this implies 40 points destruction for the other and 10 points decrease for your income)



What will you choose in stage 2?\*

If the other person chooses X (in combination with your decision Y in stage 1 this yields 170 points for you and 50 points for the other):

\* If the player chooses Y in the first stage

Choose one of the following answers

Please choose only one of the following:

- Q (this implies 0 points destruction for the other and 0 points decrease for your income)
- P (this implies 40 points destruction for the other and 10 points decrease for your income)

What will you choose in stage 2?\*

If the other person chooses Y (in combination with your decision Y in stage 1 this yields 80 points for you and 80 points for the other):

\* If the player chooses Y in the first stage

Choose one of the following answers

Please choose only one of the following:

- Q (this implies 0 points destruction for the other and 0 points decrease for your income)
- P (this implies 40 points destruction for the other and 10 points decrease for your income)