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Ginges *et al.* 10.1073/pnas.0701768104.

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**Methods and Data Analysis.**

**Israeli Settlers.**

*Participants and procedures.* A sample of 601 Jewish adults residing in the West Bank and Gaza (settlers) was selected via random digit dialing procedures in which all telephone numbers had an equal probability of selection. This population consists primarily of people who moved to the West Bank and Gaza after the 1967 war for economic benefits or religious/ideological beliefs and who occupy significant tracts of land that would make up a Palestinian State that generally refuse to leave. The sample was 50.7% female; the median age was 34 (range: 18-61); the median education level was 13-14 years of formal higher education (some college education); 20.8% described themselves as nonreligious, 20.3% as traditional, 33.1% as "Religious Leumi" (National-Religious), and 20.1% as Religious-Haredi (ultra-Orthodox); 27.6% described themselves as having an average income, 31.6% as below average, and 30.4% as above average. The survey was carried out in August 2005, a few days before the Israeli withdrawal from Gaza.

The experiment was embedded within a larger survey, and its order within the survey was assigned randomly to each participant by using computer-assisted telephone interviewing, so that there were no "order effects" in responses. Participants were randomly assigned to one of two experiments and then to one of three different types of deals within each scenario (Taboo, Taboo+, or Symbolic). All deals (and all measures in each experiment) were subjected to rigorous pretesting to ensure transparency of meaning and comprehension. See *Methods* in the main text for a full description of each type of scenario and deal. Note that the Tragic deal is instrumentally equivalent to the Taboo deal. Palestinians "giving up" the right of return (in the Symbolic deal, Experiment 1, is purely symbolic because, in all types of deals presented, no Palestinians are allowed to return. Palestinians

recognizing the legitimacy of the State of Israel (in the Symbolic deal, Experiment 2) is again purely symbolic because each deal explicitly includes a Jewish State of Israel alongside the Palestinian state. In contrast, the Taboo+ deal is instrumentally superior to the Taboo and Tragic deals. In Experiment 1, the Taboo+ deal involves a monetary incentive, and in Experiment 2, the Taboo+ deal promises freedom from violence and a life of peace. For all measures, there was no interaction between scenario type and type of deal (all $F$s < 0.5, all $P$s > 0.6), thus the results from both experiments are pooled.

*Measures*.

*Sacred values.* To determine which participants believed that the "Land of Israel" was an essential value, we asked participants: "Do you agree that there are some extreme circumstances where it would be permissible for the Jewish people to give away part of the Land of Israel?" (Possible responses: Yes, No, Don't know.) Those who answered "No" (46%) expressed the belief that the integrity of the Land of Israel was an essential value that was closed to instrumental evaluation. Religious settlers were more likely than secular settlers to believe that the Land of Israel was a sacred value (Wald = 23.457, OR = 3.54, $P < 0.001$) whereas settlers with more education were less likely to believe the Land of Israel was a sacred value (Wald = 4.481, OR = 0.84, $P = 0.034$).

*Criterion variables.* After they heard about a hypothetical peace deal, we asked participants to describe their affective response, their support for violent opposition to the deal, and how implementable they believed the deal was. To measure emotional responses, participants were asked "which of the following words best describes how you would feel about an Israeli leader who would sign such a deal: pity, disgust, approval, anger, or neutral?" Because pretesting suggested that direct measures were unlikely to be answered by participants because of political and legal sensitivities, we used an indirect measure by asking participants to estimate the percentage of "typical settlers who would use violence to oppose this agreement." This measure took advantage of the highly robust finding of a positive correlation between people's own opinions and preferences with their estimates of the relative frequency of these opinions and preferences in the population (1, 2). Thus, an expectation of levels of violence was used as an indirect measure of each participant's own preferences for violent responses.

*Analysis*. We first tested the expectation that (*i*) across conditions, moral-absolutists would display more emotional outrage and support for violence than non-absolutists; (*ii*) moral-absolutists for whom deals involved compromises over sacred values would irrationally report more emotional outrage and greater support for violence when responding to Taboo+ deals compared with Taboo deals; and (*iii*) non-absolutists for whom peace deals involved compromises over strong preferences would rationally report less emotional outrage and support for violence in response to Taboo+ deals compared with Taboo deals because the former deals included added instrumental incentives. To test these hypotheses we used the following focused contrasts (weights in parentheses) to test the expectation of the following order between conditions: Sacred Value/Taboo+ (+3) > Sacred Value/Taboo (+1) > Preference/Taboo (-1) > Preference/Taboo+ (-3). This linear contrast proved statistically significant for measures of support for violence (t[438] = 4.965, $P < 0.001$, one-tailed, $d = 0.47$) and emotional outrage (t[438] = 2.985, $P = 0.0015$, one-tailed, $d = 0.48$). We next tested the expectation that moral-absolutists responding to the Symbolic deals would, compared with those responding to Taboo and Taboo+ deals, show less emotional outrage (t[438] = 2.798, $P = 0.0025$, one-tailed, $d = 0.27$) and support for violence (t[595] = 1.593, $P = 0.06$, one-tailed $d = 0.13$). As noted in the text, these effect sizes had some large practical effects, particularly in reducing the frequency of extremely intense (defined as one standard deviation above the mean) support for violence.

**Palestinian Students.**

*Participants and procedures.* A sample of 719 Palestinian students were surveyed individually in 14 Palestinian university campuses throughout the West Bank and Gaza in May-June 2006, a month before the Israeli reentry into Gaza. The sample consisted of approximately equal numbers of students who self-identified as Islamists (50.1%) and Nationalists (49.9%) and of males (49.9%) and females (50.1%). The median age of respondents

was 20 (range: 18-38). Thirty-six percent said their family lived below the official poverty line (1,700 NIS monthly), 23% said their family was on the poverty line, and ≈30% were above the poverty line.

The experiments were embedded within a larger survey carried out by K.S. at the Palestinian Center for Policy and Survey Research. All respondents participated in two surveys, one of which occurred at the start of the survey and the second at the end. Participants were randomly allocated into the Taboo+, Taboo, or Symbolic conditions and were in the same condition for both experiments. Both experiments measured reactions to a peace deal. All deals (and all measures in each experiment) were subjected to rigorous pretesting to ensure transparency of meaning and comprehension. See *Methods* for a full description of each type of experiment and deal. Again, note that the Symbolic deal is instrumentally equivalent to the Taboo deal. Israel "giving up" its rights to the West Bank (in the Symbolic deal, Experiment 2) or recognizing the Palestinian state (in the Symbolic deal, Experiment 1) are purely symbolic gestures because in all types of deals presented, a Palestinian State would be created on the West Bank. In contrast, the Taboo+ deal is instrumentally superior to the Taboo and Symbolic deals, involving different types of monetary incentives.

### Measures.

*Sacred values.* 57.9% of the sample were moral-absolutists who rejected any compromise over either the Palestinian right of return and Palestinian sovereignty over Jerusalem no matter how great the benefit to the Palestinian people. Self-identifying Islamists were more likely to be moral-absolutists than Nationalists (Wald = 8.941, OR = 1.643, $P$ = .003) and frequency of Mosque attendance (but not prayer) positively predicted the likelihood of being a moral-absolutist (Wald = 7.141, OR = 1.153, $P$ = .008).

*Criterion variables.* After they heard about a hypothetical peace deal, we asked participants to describe their affective response, their support for violent opposition to the deal and how implementable they believed the deal was. To measure emotional responses, participants were asked "which of the following words best describes how you feel about this deal: pity, disgust, approval, anger, or neutral?" We then asked them to indicate which of these emotions also described their emotional responses. We created an index of emotional outrage by giving participants a score of "4" if they used anger or disgust to describe both their first and second emotional response, a score of "3" if they used only anger or disgust to describe their first emotional response, a score of "2" if they only used anger or disgust to describe their second emotional response, and a score of "1" if participants never nominated anger or disgust as an accurate description of their emotional reactions.

We again used an indirect measure of support for violence by asking participants to estimate the percentage of typical Palestinians who would "support a campaign of suicide attacks to oppose this agreement" (in Experiment 1) and would "martyr themselves in a suicide attack to oppose this agreement" (in Experiment 2).

*Analysis.* We first tested the expectation that (*i*) across conditions, moral-absolutists would display more emotional outrage and support for violence than non-absolutists; (*ii*) moral-absolutists for whom deals involved compromises over sacred values would irrationally report more emotional outrage and greater support for violence when responding to Taboo+ deals compared with Taboo deals; and (*iii*) non-absolutists for whom peace deals involved compromises over strong preferences would rationally report less emotional outrage and support for violence in response to Taboo+ deals compared with Taboo deals because the former deals included added instrumental incentives. To test these hypotheses, we used the following focused contrasts (weights in parentheses) to test the expectation of the following order between conditions: Sacred Value/Taboo+ (+3) > Sacred Value/Taboo (+1) > Preference/Taboo (-1) > Preference/Taboo+ (-3). This linear contrast proved statistically significant for measures of support for violence in Experiment 1 (t[691] = 1.479, $P$ = 0.0065, one-tailed, $d$ = 0.11) and Experiment 2 (t[688] = 3.025, $P$ = 0.0015, one-tailed, $d$ = 0.23), and emotional outrage in Experiment 1 (t[713] = 2.79, $P$ = 0.0025, one-tailed, $d$ = 0.21) and Experiment 2 (t[713] = 2.159, $P$ = 0.015, one-tailed, $d$ = 0.16). For moral-absolutists, the greater opposition to Taboo+ compared with Taboo deals was

statistically reliable for emotional outrage in Experiment 1 (t[383] = 1.728, $P$ = 0.0425 one-tailed, $d$ = 0.18) , support for violence in Experiment 1 (t[378] = 1.661, $P$ = 0.0485 one-tailed, $d$ = 0.17), and support for violence in Experiment 2 (t[317] = 1.764, $P$ = 0.04 one-tailed, $d$ = 0.20). We then tested the expectation that moral-absolutists responding to the Symbolic deals would, compared with those responding to Taboo and Taboo+ deals, show less emotional outrage in Experiment 1 (t[713] = 3.506, $P$ < 0.001, $d$ = 0.26) and Experiment 2 (t[713] = 2.435, $P$ = 0.0075, one-tailed, $d$ = 0.18). In neither experiment was this hypothesis supported for measures of support for violence (n.s.).

### Palestinian Refugees.

*Participants and procedures.* A sample of 535 Palestinian refugees residing in the West Bank and Gaza was interviewed in person by the Palestinian Center for Policy and Survey Research in late December 2005, one month before Hamas's election to power. The sampling process went through three stages: (*i*) randomly selecting population locations (clusters or counting areas) using probability proportionate to size; (*ii*) randomly selecting households from the population locations by using updated maps; and (*iii*) selecting a person who is 18 years of age or older from among persons in the house by using Kiesh tables' method. The sample was self-weighting, but there was also checking that the age groups obtained were similar to those in the society by using data from official Palestinian and Israeli government statistics. To maximize the chances to enter all homes in the sample, two fieldworkers, a male and a female, conducted every interview to overcome social difficulties that might prevent a male/female from entering a home that would not have males/females at the time of interview. Respondents were assured anonymity.

*Profile of respondents.* All were Muslim; 52.4% were female; the median age was 34 (range: 18-81); 25.3% had at least some college education, 31.8% were high school graduates, 25% had some high school education, and 4.1% were illiterate; 90.1% prayed five times a day; 50.4% said that their family's monthly income was below the poverty line (NIS 1,800), 16.5% said that their family's income was "the same" as the poverty line, and 28.7% were over the poverty line.

In the Palestine survey, the experiment occurred at the beginning of the survey. Participants were randomly assigned to one of experiments and then to one of three different types of deals within each scenario (Taboo, Taboo+, or Symbolic). See *Methods* for a full description of each type of scenario and deal. Again, note that the Tragic deal is instrumentally equivalent to the Taboo deal, whereas the Taboo+ deal is instrumentally superior to the Taboo and Symbolic deals. For all measures, there was no interaction between experiment and type of deal (all $F$s < 1.8, all $P$s > 0.1), thus the results presented here are pooled.

*Materials*.

*Sacred values.* To determine which participants believed that the "right of return" for Palestinian refugees was a sacred value, we asked participants: "Do you agree that there are some extreme circumstances where it would be permissible for the Palestinian people to give up the right of return?" (Possible responses: Yes, No, Don't know). Those who answered "No" (>80%) expressed the belief that the right of return was a moral value that was closed to instrumental evaluation.

*Criterion variables.* After they heard about a hypothetical peace deal, we asked participants about their support for violent opposition to the deal and how implementable they believed the deal was. We then asked three ostensibly unrelated questions measuring support for suicide attacks.

*Support for violence.* We again used an indirect measure by asking participants to estimate the percentage of "typical Palestinians who would use violence to oppose this agreement."

*Implementability.* Participants were asked "Do you think this deal could be peacefully and successfully implemented?" (Possible responses: Yes, No, Don't know.) As noted in the article, perceived implementability did not differ between experimental conditions (all Walds < 1, all $P$s > 0.6).

*Support for suicide attacks.* Two questions dealing with whether Islam supported suicide bombing were asked immediately after the "implementability" question. First, participants were asked: "In your opinion, what is the position of Islam regarding bombing attacks (which some call martyrdom attacks and others call suicide attacks) that target civilians, such as the bombing of a bus in an Israeli city?" (Possible responses: certainly supports, supports, opposes, certainly opposes, don't know.) Second, participants were asked: "In your opinion, what is the position of Islam regarding the bomber who carried out the bombing attack (which some call martyrdom attacks and others call suicide attacks) killing himself with the aim of killing the enemy, as some Palestinians do? Does Islam allow or not allow such an action?" (Possible responses: certainly allows, allows, does not allow, certainly does not allow, don't know.) Responses to these two questions were correlated ($r = 0.603$, $P < 0.001$) and formed a reliable scale (Cronbach's Alpha = 0.735).

A third question asked participants to nominate their first emotional reaction when hearing about bombing attacks (which some call martyrdom attacks and others call suicide attacks). Participants were given a choice of fifteen emotions including joy. Overall, joy was the most common response (56.3%), although, as the results presented in the article show, this response was strongly influenced by context: in this case, which deal participants responded to in our survey. This question was asked after several other questions dealing with emotional reactions (to Israeli checkpoints, Israeli settlements, and the Israeli security barrier). Participants were unaware of any intended link between the "peace deal" they had been asked about and this item, ruling out posturing. Instead, any impact of experimental condition (deal type) on responses to this question were a result of context effects (3), where emotions and cognitions associated with the type of deal participants had been asked to consider influenced their affective response to hearing about a suicide attack.

*Analysis* We were unable to compare moral-absolutists with non-absolutists in the refugee study. Unlike the other two studies, random assignment to experimental conditions in the refugee study was made in neighborhood clusters rather than individually. The small numbers of non-absolutist refugees meant that we were unable to distinguish between the effects of our experimental manipulations and neighborhood differences for non-absolutists. Nevertheless, we report this study because of its important implications for policy and because the statistically reliable pattern found amongst moral-absolutist refugees replicated the pattern found for moral-absolutists in the other two studies.

We used focused linear contrasts (contrast weights in parentheses) to test the hypothesis that for moral-absolutist refugees who held the right of return to be a sacred value, opposition to peace deals involving compromising this value would be highest in response to the Taboo+ deal, which was the most instrumentally favorable and lowest in response to the Tragic deal: Taboo+ (2) > Taboo (1) > Symbolic (-3). This linear contrast was statistically significant for support for violence (t [480] = 2.631, $P = 0.0045$ one-tailed, $d = 0.24$), belief that Islam supported suicide attacks (t [493] = 2.797, $P = 0.0025$ one-tailed, $d = 0.25$), and reports of "joy" when hearing of a suicide attack against Israelis (t [529] = 2.726, $P = 0.002$ one-tailed, $d = 0.48$). Compared with refuges responding to the other two types of deals, those responding to the Symbolic deals showed less support for violence (t[384] = 2.467, $P = 0.007$ one-tailed, $d = 0.25$), showed less belief that Islam supported suicide attacks (t[391] = 2.639, $P = 0.0045$ one-tailed, $d = 0.27$), and were about half as likely to report feeling joy when hearing of a suicide attack (Wald = 6.91, OR = 0.513, $P = 0.0045$ one-tailed).

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