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The Struggle for Palestinian Hearts and Minds: Violence and Public Opinion in the Second Intifada

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Abstract: This paper examines how violence in the Second Intifada influences Palestinian public opinion. Using public opinion poll micro data linked to data on fatalities, we find that although Israeli violence discourages Palestinians from supporting moderate political positions, this “radicalization” is fleeting, and vanishes completely within 90 days. We do find evidence suggesting that major political events in the Palestinian-Israeli conflict have had a longer-term impact on political preferences. Individuals who were teenagers during the period of the Oslo negotiations tend to have relatively moderate preferences, while those who were teenagers during the First Intifada tend to be relatively radical.

Keywords: Israeli-Palestinian conflict, political preferences, public opinion

JEL Codes: D72, D74, H56

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More than conventional warfare that pits two large armies of roughly equal strength against each other on a battlefield, modern conflict often pits two sides of unequal strength in an effort to influence the hearts and minds of civilians on both sides. These conflicts, in which a limited number of fatalities are used to affect negotiations, demoralize the civilian population, or strategically incapacitate the opponent, are largely psychological. Public opinion plays a crucial role in such conflicts, to the point that most of the battles are conducted through the news media.

In the context of the long-standing conflict between Israel and the Palestinians, the Second Intifada has been characterized by the increased use of suicide bombings by the Palestinians, and targeted killings of Palestinians by Israel, both which, either by design or by chance, often result in the death of civilians who are not involved in combat nor are the targets of the attack. These direct and extremely violent actions by both sides are intended, at least in part, to create fear and to reduce the willingness to resist in the opposite side. By their very nature, they convey an important message that goes beyond the actual damage or incapacitation that they might cause to the other side. For example, attacks and collective punishment such as curfews or border closings and movement restrictions imposed by the Israeli government might be aimed at convincing the Palestinians that Israel is not going to “surrender to violence.” Such messages, however, may be intended not only for the opposing violent factions, but also for the general public on both sides. Attacks by Palestinian organizations might be intended to demonstrate to the Palestinian public the resolve of those organizations to continue the struggle against the occupation by any means and at any cost.

There are, of course, dissenting views regarding the effects of Israeli and Palestinian fatalities on the preferences of the Palestinian people. On the one hand, several scholars and political commentators claim that counter-terrorism in general, and targeted killings in particular,

have a “boomerang” effect: these harsh measures may foster hatred and desire for revenge among the Palestinian population. Israeli violence, in this view, directly causes the radicalization and mobilization of the Palestinians, encouraging yet more attacks against Israelis (Rubinstein, 2002; Rosendorff and Sandler, 2004; Kaplan et al., 2005; Siquiera and Sandler, 2006).¹ In the words of Marwan Barghouti, former head of the Tanzim (an armed faction affiliated with Fatah):

First of all [...] the assassination policy is a policy of terror. It's also a very dangerous moral issue. And it also doesn't solve anything. Really. It just raises the level of hatred between the two peoples.²

On the other hand, the opposing view holds that Israel uses active measures of counter-terrorism because they are an effective tool in disrupting the operations of the Palestinian military organizations (Brophy-Baermann and Conybeare, 1994; Ganor, 2005). Zussman and Zussman (2006) report that the Israeli stock market reacts positively to the assassination of senior Palestinian military leaders, reflecting the expectation that future levels of terrorism will decrease. Similarly, Jaeger and Paserman (2007) find that targeted killings have a short-term deterrent or incapacitation effect: the overall number of Israeli fatalities and the number of Israelis killed in suicide attacks fall in the first week after a targeted killing.

According to this view, a pro-active policy that includes curfews, closures and targeted killings incapacitates Palestinian military organizations. Perhaps more importantly, these measures are meant to punish and cause fear among the wider Palestinian population and deter regular citizens from committing attacks and supporting military organizations. For example, Moshe Ya'alon, former chief of staff of the Israeli Defense Forces (IDF) has said

¹ Terrorism and counter-terrorism are contested terms, as a given act can be defined in opposite ways by the two sides to the conflict. Whereas Palestinians view their struggle in terms of resistance against the Israeli occupation, Israelis view this resistance as terrorism. We will subsequently refer to the outcomes of such actions using only the general terms of Palestinian and Israeli fatalities.

² “Death Isn't a Big Deal Anymore,” *Ha'aretz*, 12 November 2001.

I defined [victory] from the beginning of the confrontation: the very deep internalization by the Palestinians that terrorism and violence will not defeat us, will not make us fold. If that deep internalization does not exist at the end of the confrontation, we will have a strategic problem with an existential threat to Israel. If that [lesson] is not *burned into the Palestinian and Arab consciousness*, [emphasis ours] there will be no end to their demands of us. Despite our military might, the region will perceive us as being even weaker.³

Ya'alon defines victory in the Intifada not only as a military defeat, but more importantly in terms of the mindset of the Palestinians. In this view, continued Israeli violence should lead to a reduction in the support for continuing violence against Israelis.⁴

This paper empirically examines the effects of Palestinian and Israeli fatalities on the preferences of the Palestinian population. We combine daily data on fatalities from the beginning of the Second Intifada in September 2000 to February 2007 with micro data measuring the preferences of the Palestinian population. The data on preferences were obtained from a set of opinion surveys conducted during the same time period and comprise a large representative sample of Palestinians. We use the temporal and spatial variation in fatalities and the population's preferences to empirically test the two competing theories regarding the effects of violent attacks mentioned above.

The empirical results provide little support for the hypothesis that Palestinian fatalities lead the Palestinian population to move towards more radical positions. Palestinian fatalities inflicted by Israel slightly lower the Palestinian population's support for negotiations with Israel and shift political support away from the relatively moderate Fatah faction only within one month of their occurrence. This movement away from moderate positions, however, steadily

³ "The Enemy Within," *Ha'aretz*, 30 August 2002.

⁴ A thorough theoretical analysis by Bueno de Mesquita and Dickson (2007) establishes conditions for whether counter-terrorism brings about the radicalization or moderation of the targeted population. Accordingly, counter-terrorism brings about the radicalization of the population when it causes significant economic damage and suffering not only on the terrorists but on the whole population.

dissipates over time and totally disappears after ninety days. The overall effect of Palestinian fatalities (when accumulated over time) on the preferences of the population is not statistically significant.

The results also show that an increase in Palestinian fatalities does not shift preferences in support of Hamas (the largest and most important radical faction) or other radical factions. Rather, it seems to lead to a short run disaffection of the Palestinian population from the existing political factions. We also find that geographically proximate Palestinian fatalities have a larger effect than those that are distant. Palestinian fatalities in targeted killings, on the other hand, have a smaller effect on the population's preferences relative to other fatalities. Lastly, we find evidence that the shift away from moderate positions occurs mainly among Palestinians who were *a priori* expected to be more radical.

While we find little evidence that violence has an effect on Palestinian political preferences in the short run, we do find evidence that suggests important political events in the Palestinian-Israeli conflict have had a longer-term impact. We estimate that individuals who spent their formative years (age 14-17) during the period of the Oslo negotiations have, on average, more moderate preferences than would be predicted solely by their age and other demographic characteristics. In contrast, individuals who spent their formative years during the first Palestinian uprising (born between 1970 and 1973) have significantly more radical positions than what would be predicted by their age and other demographics. Therefore, it appears that violence, in the long run, leads to a radicalization of the Palestinian population.

I. Data

A. Palestinian Public Opinion Data

The data on Palestinian public opinion comes from a set of surveys conducted by the Development Studies Programme (DSP) at Bir Zeit University. This institute has conducted regular public opinion polls on all aspects of Palestinian life since the year 2000. Every poll has 1,200 observations, with approximately 65% of them from the West Bank and Jerusalem and the rest from the Gaza Strip. General information on these polls, including methodology, the wording of the questions, and summary results are available from the DSP web site.⁵

The DSP polls contain information on the gender, age, marital status, education level, refugee status, type of residence (city, village or refugee camp) and, notably, the district of residence of each respondent. This information is very important for our purposes, since it allows us to estimate the effect of fatalities on public opinion using a high level of spatial variation. In addition, the polls include a wide array of questions on economic conditions, perceptions of corruption, democracy, human rights, and various other social issues. Only a limited number of questions, however, appear repeatedly across polls. We employ the two questions that appear consistently and that inform us about respondents' political preferences: "Do you support or oppose the continuation of negotiations with the Israelis?" and "Which of the following political groups do you support?" Table 1 presents the dates of the polls conducted since the outburst of the Second Intifada and indicates which questions were asked in each poll. Both questions were asked together in 9 of the 20 polls we use in the analysis.

⁵ The participants for each poll are randomly chosen using sampling techniques in sample selection applied to statistical cells built using The Housing and Economic Establishment Census conducted by the Palestinian Central Bureau of Statistics. The selection of the area, the drawing of the map, the selection of the starting point and the gender of the respondent in the sample are according to a Kish Grid. Further information can be found at the institute's official website (<http://home.birzeit.edu/dsp/opinionpolls>, last seen on 2 October 2008).

Support for negotiations. In twelve polls, between November 2000 and September 2006, respondents were asked whether they supported or opposed the continuation of negotiations with Israel, giving a total of 13,692 observations on this variable. Over the whole period of interest, an average of 59.6 percent of Palestinians supported negotiations with Israel, 36.9 percent opposed negotiations, while the remainder did not know or did not answer. We characterize support of negotiations as being a more moderate position than being opposed to negotiations.

Political faction supported. The available options included all the major Palestinian factions.⁶ In addition, respondents who stated that they were independent were asked whether their preferences leaned towards Fatah, to one of the Islamic factions, or to one of the leftist factions.⁷ The question on political support appeared in 17 polls between November 2000 and February 2007, for a total of 19,904 observations. Fatah received 29.6 percent support on average over the whole period, while Hamas received 22.1 percent. Notably, the proportion of respondents reporting that they do not support any group was 28.6 percent, nearly as large as the proportion supporting Fatah. This suggests that a large fraction of the Palestinian population

⁶ The two main Palestinian political factions are Fatah and Hamas. Fatah was founded by Yasir Arafat in 1959, and from 1969 it has been the controlling group of the Palestinian national movement, first in the Palestinian Liberation Organization, and subsequently in the Palestinian National Authority, after it was established in 1993 following the Oslo Peace Accords. As the majority party in the Palestinian Legislative Council (PLC) up until 2006, Fatah was the primary negotiator with the Israeli government. It adopted the two-state approach to the solution of the conflict, agreeing in principle to a partition of mandatory Palestine between a Jewish and a Palestinian state, although the issues of Jerusalem, the final borders of the Palestinian state, and the status of refugees were postponed to final status negotiations. Unlike Fatah, Hamas does not entertain the possibility of a two-state solution. Hamas has expressly called for the destruction of Israel and the establishment of an Islamist state in all of mandatory Palestine (Mishal and Sela, 2000). Hamas has also been able to establish a strong support base through its provision of social services (Berman and Laitin, 2008).

⁷ The two main leftist factions are the Popular Front for the liberation of Palestine (PFLP) and the Democratic Front for the Liberation of Palestine (DFLP). We coded independents leaning to Fatah together with outright Fatah supporters.

feels disaffection from the Palestinian political parties. We address this issue in our empirical analysis and characterize the attitudes of this group.⁸

In Table 2 we characterize supporters of the different factions in terms of their level of radicalization. To this end, the first row of this table shows the percentage of individuals that support peace negotiations among the supporters of the different factions from the DSP data discussed above. Among supporters of Fatah, we find that 72 percent support peace negotiations, while only 48 percent of Hamas supporters do; clearly, Fatah supporters exhibit a more moderate position than Hamas supporters regarding peace negotiations. Moreover, we observe that individuals dissatisfied with the existing factions exhibit on average a more radical position than Fatah supporters, but a more moderate position than Hamas supporters.

As corroborative evidence, in rows 2 to 10 we present results from a series of public opinion polls conducted by a different polling institute, the Jerusalem Media and Communication Center (JMCC). In these polls, Palestinians were asked which of the political factions they “trusted most” in addition to a broader series of questions on attitudes towards the conflict.⁹ In each of the rows, the questions are coded so that high values indicate the more moderate position. In each case, we find strong evidence that Fatah supporters are more likely to hold a moderate position than those who support Hamas or the other factions. In addition, dissatisfied

⁸ The other factions that received a significant amount of support are the Palestinian Islamic Jihad (9.46 percent when grouped with other Islamic factions) and the Popular Front for the Liberation of Palestine (2.75 percent).

⁹ The JMCC has conducted polls on Palestinian political opinions since 1993, though the data in Table 2 focus exclusively on those polls conducted since the outbreak of the second Intifada in September 2000. One of the main advantages of the JMCC opinion polls is that in addition to faction supported, there are nine questions related to the conflict that are asked consistently over time. Our main analysis in the body of the paper uses only the DSP data because the JMCC polls only identify the broader region of residence of the respondents (West Bank, Jerusalem and Gaza Strip) but not their district. The results using the JMCC data, found in the Appendix, are qualitatively similar to those using DSP data. General information on the JMCC polls, including methodology, the exact wording of the questions, and summary results are available from the JMCC website (<http://www.jmcc.org>, last seen 2 October 2008).

individuals are consistently more moderate than Hamas supporters but more radical than those in favor of Fatah.

Figure 1 exhibits the evolution of the Palestinian population's preferences as measured by the questions discussed above. The average support for Fatah falls from an initial level of about 30 percent at the end of the year 2000 to about 20 percent after the first year of the Intifada, then rises back slowly to its initial level between 2002 and 2004, jumps abruptly in late 2004 after the death of Yasser Arafat, and then steadily declines. The fraction of Palestinians supporting negotiations with Israel presents a more erratic trend, even though qualitatively the pattern of peaks and troughs roughly matches the one observed for the Fatah support series.

B. Data on Fatalities

The data on fatalities are the same as those used in Jaeger and Paserman (2006, 2007, and 2008). The data are taken from the web site of B'Tselem, an Israeli human rights organization.¹⁰ Widely thought to be accurate and reliable, the data published by B'Tselem record in detail every fatality (excluding suicide bombers) on both sides of the conflict during the Second Intifada. They include information on the date, location and circumstances of the fatal wounding, the date of death, the age, gender and locality of residence of the victim, and whether the victim was a civilian or a member of the security forces. The main advantage of these data is their comprehensiveness and the symmetrical treatment of fatalities on both sides of the conflict, something that is unavailable in the official statistics compiled by either side.

We classify each Palestinian fatality according to the district where the fatal wounding took place, and whether or not he or she died during a targeted killing operation. We perform a

¹⁰ The B'Tselem website is <http://www.btselem.org>, last seen 2 October 2008.

similar classification of Israeli fatalities according to the district where the attack originated. In Table 3, we present the geographic variation in the average number of fatalities. For Palestinian fatalities and for Israeli fatalities occurring in the occupied territories, we simply record the district where the fatal wounding occurred; for Israeli fatalities in Israel, we record the Palestinian district from which the attack originated. The table also highlights Palestinian fatalities occurring in targeted killing actions. An average district suffered slightly over 9.3 Palestinian fatalities and claimed almost 2.4 Israeli fatalities per 90 day period.

The table depicts the high variability across districts in the number of fatalities that occur ninety days before each poll. There are a number of very violent districts in the West Bank like Jenin, Nablus and Hebron with a high number of Palestinian and claimed Israeli fatalities, whereas other districts exhibit a total number of fatalities well below the average. The variability across districts in the West Bank highlights the importance of exploiting both time series and cross sectional variability in our analysis. For example, if the Palestinian population is sorted across districts according to their political preferences and violence occurs mainly in radical districts, a simple cross-sectional analysis would yield a spurious correlation between radical attitudes and violence, while the actual direction of causality runs from attitudes to violence, and not the other way round. The availability of longitudinal data allows us to include district fixed effects in the analysis, so that we can separate the effect of violence from attributes of the district that are constant across time.

In contrast to the West Bank and Jerusalem, the average number of Palestinian fatalities of every district in Gaza is above the average, while the average number of Israeli fatalities originating in these districts is below the overall average. Particularly noteworthy is the number of fatalities in Gaza City, showing an average of almost 23 Palestinian fatalities within ninety

days before each poll (with almost 8 of them as a result of targeted killings) and only 1.48 Israeli fatalities originating there. This gap between Palestinian and claimed Israeli fatalities in Gaza is perhaps due to the fact that border closures in the Gaza Strip are easier to implement and enforce, thus keeping its residents away from Israeli territory.

The monthly number of Palestinian and Israeli fatalities during our sample period is shown in Figure 2. The figure shows that initially Palestinian fatalities outnumbered Israeli fatalities by a large amount, and then both series rose until Operation Defensive Shield (ODS) in March 2002. After ODS, the overall trend in Israeli fatalities sloped downward, while the number of Palestinian fatalities remained at a high level until the beginning of 2005. During 2005 and parts of 2006 we observe an important drop in the level of Palestinian fatalities. This was followed by a sharp increase in the summer of 2006 as a consequence of military operations conducted by Israel in Gaza following the abduction of an Israeli soldier and coincident with the Second Lebanon War.

These trends, combined with those in Figure 1, suggest that Palestinian public opinion may be more radical when Palestinian fatalities outnumber Israeli fatalities by a large amount (for example, in 2002-2003), and moderate when the difference is relatively small (e.g., 2005). An alternative interpretation is that the decline in the number of Israeli fatalities coupled with the stable number of Palestinian fatalities after 2002 induce the Palestinians to take on more moderate positions. These observations are based only on visually inspecting the data, however, and ignore important events, like Yasser Arafat's death, that might have affected both trends. In the next section we propose an empirical framework to investigate the effect of violence on Palestinian preferences, using regression analysis to exploit both geographic and time variation in public opinion and in the level of fatalities.

II. Empirical Framework

Our empirical specification allows us to examine how violence on both sides of the conflict affects the radicalization of the Palestinian population. Our general specification for the relationship between public opinion and violence is:

$$Y_{ijt} = a_1 P_{j,t-1} + a_2 P_{j,t-2} + \dots + a_{12} P_{j,t-12} + b_1 I_{j,t-1} + b_2 I_{j,t-2} + \dots + b_{12} I_{j,t-12} + \mathbf{X}_{ijt} \Phi + \mathbf{Z}_t \delta + c_j + u_{ijt}. \quad (1)$$

where Y_{ijt} is a binary indicator for whether individual i in district j and poll conducted at time t expresses a moderate or radical preference; $P_{j,t-k}$ is the number of Palestinian fatalities in district j that occurred k weeks prior to date t ; $I_{j,t-k}$ is the number of Israeli fatalities that originated in district j and occurred k weeks before date t ; \mathbf{X}_{ijt} is a vector of individual and time-varying district characteristics as well as period dummies; \mathbf{Z}_t is a vector of variables that are common to all districts at time t ; c_j is a district fixed effect; and the a 's, b 's and the vector Φ are unknown parameters that need to be estimated. Non-systematic determinants of the support for a moderate position are captured by the error term, u_{ijt} .

This general specification allows fatalities at every different lag (in weeks) to have a potentially different effect on the support for moderate positions.¹¹ Given our data, however, it may be impossible to estimate separately the a 's and the b 's with a satisfactory degree of precision. Therefore, we impose the following restrictions:

$$a_k = \begin{cases} \alpha_1 & \text{for } 1 \leq k \leq 4 \\ \alpha_2 & \text{for } 5 \leq k \leq 8 \\ \alpha_3 & \text{for } 9 \leq k \leq 12 \end{cases} \quad (2a)$$

and

¹¹ For fatalities occurring more than 12 weeks before the poll, we assume that the effect is zero.

$$b_k = \begin{cases} \beta_1 & \text{for } 1 \leq k \leq 4 \\ \beta_2 & \text{for } 5 \leq k \leq 8 \\ \beta_3 & \text{for } 9 \leq k \leq 12 \end{cases} \quad (2b)$$

Substituting (2a) and (2b) into (1), we obtain the following compact specification:

$$Y_{ijt} = \alpha_1 \sum_{k=1}^4 P_{j,t-k} + \alpha_2 \sum_{k=5}^8 P_{j,t-k} + \alpha_3 \sum_{k=9}^{12} P_{j,t-k} + \beta_1 \sum_{k=1}^4 I_{j,t-k} + \beta_2 \sum_{k=5}^8 I_{j,t-k} + \beta_3 \sum_{k=9}^{12} I_{j,t-k} + \mathbf{X}_{ijt} \Phi + \mathbf{Z}_t \delta + c_j + u_{ijt}. \quad (3)$$

This specification imposes the restriction that the effect of fatalities is the same within each month (i.e. four-week periods) prior to the poll at time t but may vary between months. Specifically, α_1 represents the effect of one Palestinian fatality that occurred in the first month that preceded the poll (we call this the *immediate* effect) while α_2 and α_3 represent the effect of one Palestinian fatality that occurred two and three months before the poll, respectively.¹²

Two additional remarks about our empirical specification are in order. First, if we restrict α_1 , α_2 , and α_3 to be equal, we essentially constrain the effect of every Palestinian fatality in the 12 weeks preceding the poll to be constant. The same interpretation is given to β_1 , β_2 and β_3 with respect to Israeli fatalities. We present results for both the constant-effect specification and for the dynamic specification, where we allow the effects of fatalities to differ over time.¹³

Second, in the above specification the individual coefficients tell us the effect of a one-

¹² By focusing on broader time intervals we are employing cells with a relatively large number of fatalities as well as a significant variance. For example, the average number of Palestinian fatalities per district in the four weeks prior to the poll dates is 2.26, with a standard deviation of 4.66. The comparable average and standard deviation for Israeli fatalities per district in the four weeks prior to the poll dates is 0.56 and 2.12 respectively, and the average and standard deviation for overall Israeli fatalities is 8.88 and 8.53, respectively. Using long enough time periods to generate sufficient variation in the right hand side variables is crucial to being able to estimate the coefficients of equation (3) with a satisfactory level of precision.

¹³ We have experimented with different lag structures. In no case did we find statistically significant effects past the third month prior to the poll. Moreover, based on (admittedly low-power) model specification tests, for both the Akaike and Bayesian information criteria it is never the case that a model with more than 3 monthly lags is the best-fitting model. We therefore use a specification with 3 monthly lags as one that captures the relationship between public opinion and violence with a sufficient degree of parsimony. These additional results are available from the authors by request.

time increase in violence, occurring exactly k weeks before the poll. We may also be interested in the overall effect of a *permanent* increase in the level of violence. Taking into consideration the lengths of the periods captured by each coefficient, the overall effect of a permanent increase in Palestinian fatalities equals $4(\alpha_1 + \alpha_2 + \alpha_3)$, while the overall effect of an increase in Israeli fatalities equals $4(\beta_1 + \beta_2 + \beta_3)$. These effects will be reported alongside the individual coefficients in each table.

III. Results

A. Political preferences by demographic characteristics

We first examine how support for the Palestinian factions and negotiations varies by demographic group by pooling all the DSP surveys. The first five columns of Table 5 show the share of each demographic group that supports each of the major factions (the columns sum to 100 percent within each row). The sixth column shows the percentage of respondents who support Fatah among those who support Fatah, Hamas or PIJ, while the last column shows the percentage who support the continuation of negotiations with Israel.

The results in Table 4 suggest that there are no clear and striking differences between Fatah and Hamas supporters regarding areas and types of residency, refugee status, marital status and age. Females, however, show a greater tendency to support Hamas relative to males.¹⁴ At the same time, a larger percentage of females support negotiations relative to males. Also, in a separate analysis using the JMCC polls (not reported), we find that for every question, females express more moderate views than males, but express a higher level of trust in Hamas. This leads

¹⁴ Similar calculations using JMCC data show that females' relative support for Fatah (53.16) is only slightly lower than males (54.19). This is the only qualitative difference in the summary statistics of the two data sets.

us to conclude that females show a higher support for Hamas because of the greater degree of social services provided by Hamas (and of which women tend to be the greater beneficiaries). With regard to education, support for Fatah relative to Hamas does not increase monotonically, but follows a U-shape pattern. This is driven, however, by individuals with some college or more advanced education being less likely to support Hamas and more likely to support one of the smaller factions, with the support for Fatah relatively unaffected.

We observe similar patterns in the demographic groups' support for negotiations, with two noteworthy differences. First, as noted above, women show a greater degree of support for negotiations than males. Second, support for negotiations increases monotonically with age. We do not observe a similar pattern in the support for Fatah because disaffection from all political factions also increases monotonically with age.

The bottom of Table 4 presents evidence on the relationship between local economic indicators and the political preferences. The economic indicators, calculated from microdata obtained from the Palestinian Labor Force Survey, measure the quarterly unemployment rate and average hourly wage in each district.¹⁵ These figures indicate that there is no strong correlation between economic conditions and support for a given political party, even though support for Fatah decreases in districts with high unemployment rates and low average wages. This is consistent with the economic voting hypothesis whereby voters assign the responsibility for bad economic outcomes to the governing party (Lewis-Beck and Stegmaier, 2000).¹⁶ It is also

¹⁵ The survey is conducted by the Palestinian Central Bureau of Statistics. We present in the table the relaxed definition of the local unemployment rate, which includes not only workers actively looking for work but discouraged workers as well. We view this variable as more appropriate, given the very high number of discouraged workers throughout the period. Qualitatively, our results are essentially identical when we use the standard definition of unemployment.

¹⁶ For the overwhelming majority of our sample period, Fatah held both the presidency of the Palestinian National Authority, the majority in the Palestinian Legislative Council (PLC), and the Prime Minister's office. Hamas

consistent with the notion that recessionary economies make mobilization for radical causes more attractive because of the lack of economic opportunity (Bueno de Mesquita, 2005; Bueno de Mesquita and Dickson, 2007). Given that the variation in the support for negotiations does not show a definitive pattern, it is important to control for economic conditions in equation (3) to differentiate between radicalization induced by political or economic reasons.

B. Main Results

In Table 5 we present results from estimating equation (3) using as our dependent variable an indicator for support for negotiations (Table 5a) and an indicator for support for Fatah (Table 5b). The models are estimated with ordinary least squares (OLS) and the estimated heteroskedasticity-consistent standard errors allow for temporal and spatial clustering.¹⁷ All regressions include controls for sex, age, marital status, education, the local unemployment rate, the local wage rate and a measure of border closings, provided by the Palestinian Ministry of Labor. In our preferred specification (column 2) we include a full set of district dummies, and two period dummies to capture broad trends in violence and public opinion in the different phases of the conflict (before Operation Defensive Shield, between ODS and the death of Yasser Arafat, and after the death of Yasser Arafat). We assess sensitivity of our results to the exact specification of the district and time effects in the remaining columns.

In column 1 of Tables 5a and 5b we present estimates of the constant-effect specification, in which every Palestinian fatality within 12 weeks of the poll is constrained to have the same

became the majority party in the PLC and took hold of the Prime Minister's Office following its success in the legislative elections in January 2006.

¹⁷ Since the number of districts is small (16), we do not present standard errors that are robust also to serial correlation within districts (i.e., clustering only at the district level). The properties of clustered standard errors when the number of clusters is small are not well understood.

effect on the Palestinians' political preferences; Israeli fatalities are treated similarly. Using this specification, there is no statistically significant relationship between violence and support for negotiations or Fatah. The dynamic-effect specification (shown in column 2) depicts a different picture. When we do not constrain the coefficients to be equal, Palestinian fatalities have the immediate effect of radicalizing the population, but this effect falls off rather quickly. This result is consistent across both measures. Specifically, 10 additional Palestinian fatalities in the respondent's district of residence reduce support for negotiations in the first month after they occur by almost 2.4 percentage points, and they reduce the support for Fatah by 1.5 percentage points. The effect of Palestinian fatalities is not statistically significant two months after the incident, and changes sign within three months of their occurrence. Consequently, the overall effect of a permanent increase in Palestinian fatalities on the preference for moderate attitudes, while negative, is not statistically significant.¹⁸

Contrary to the effect of Palestinian fatalities, we find that Israeli fatalities claimed by individuals living in or occurring in the different districts have essentially no effect on either support for negotiations with Israel or support for Fatah. The coefficients for the first lag are negative, but estimated with little precision. This result holds in both the constant-effect and in the dynamic effects specification.

In column 3, we present results without including district fixed effects. Consistent with our prior expectations, the coefficients on the first lag of both Palestinian and Israeli fatalities

¹⁸ Table 1 in the Appendix presents the same estimations as Table 6 but using as the dependent variable an average index of moderation based on all the relevant questions asked by the JMCC (see the Data Appendix for details on the construction of this index). These results lead us to the same main conclusion: we observe a fleeting radicalization effect that completely disappears within 90 days. The radicalization effect according to JMCC, however, occurs in the second month after the incident. This difference may be caused by the lack of information on the respondents' district of residence, which precludes us from estimating the regressions with enough geographic precision.

increase markedly (in absolute value), and the latter becomes statistically significant in the regression for Fatah support. This increase reflects the fact that districts with more radical attitudes are more likely to engage in violence against Israelis, and hence are also more likely to be targeted by Israeli military activity. That the coefficient on Palestinian fatalities remains statistically significant when the district fixed effects are included (in column 2) is reassuring, however: it suggests that most of the variation that drives the results is the over-time variation within district and not the time-invariant cross-district variation.

In columns 4 and 5, we assess the sensitivity of our results to different specifications of the time effects. In column 4, we exclude the time effects, meaning that we are using all of the variation in violence and attitudes over time for identification. The results are similar to those of column 3, i.e., both Palestinian and Israeli fatalities tend to have a larger radicalization effect. Of course, this specification attributes all of the changes over time in Palestinian attitudes to violence alone, and ignores important events that may have affected the general trend in public opinion.

At the opposite extreme, column 5 includes a full set of poll fixed effects. The poll fixed effects absorb all of the fluctuations in attitudes that are common to all Palestinians at each point in time. Hence, identification is achieved off deviations in violence and attitudes at the district level from this common time effect (and from the district-level averages). The picture now is somewhat different. The first lag of Palestinian fatalities becomes essentially zero in the “support for negotiations” regression and insignificant in the “support for Fatah” regression. On the other hand, we now find a large and significant radicalization effect of Israeli fatalities at all lags on support for negotiations. This would imply that attacks successfully carried out by Palestinian factions embolden the Palestinian population. However, we are cautious in putting too much

weight on these results, since they appear to be sensitive to the choice of dependent variable, and it is not clear that it is appropriate to absorb all of the time-series variation with the poll fixed effects.¹⁹

To get a more concrete sense of the duration of the effects of Palestinian fatalities on the attitudes toward the conflict, we next run a series of 12 regressions for each dependent variable using the following specification:

$$Y_{ijt} = \gamma_m \sum_{k=1}^m P_{j,t-k} + \beta_1 \sum_{k=1}^4 I_{j,t-k} + \beta_2 \sum_{k=5}^8 I_{j,t-k} + \beta_3 \sum_{k=9}^{12} I_{j,t-k} + X_{ijt} \Phi + \mathbf{Z}_t \delta + c_j + u_{ijt}, \quad m = 1, \dots, 12 \quad (4)$$

Each coefficient γ_m represents the effect of all Palestinian fatalities that occurred up to m weeks before the poll at time t . If Palestinian fatalities indeed generate a radicalization of attitudes in the short run that fades away with time, we would expect to find that the γ 's are large and negative at low values of m , and then revert towards zero at longer lags. Figures 3a and 3b present the estimated γ coefficients for support for negotiations and Fatah support, together with 90 percent confidence bands. With the exception of the very first coefficient in the “support for negotiations” equation, the pattern of coefficients confirms the results from Table 5. Fatalities that occur in the first few weeks before the poll induce a stronger shift toward more radical positions, but this effect is attenuated with time. Note also that the confidence bands include zero essentially all the time, meaning that none of the γ coefficients are statistically significant. Again, we find that any shift in Palestinian political preferences is fleeting and small in magnitude.

¹⁹ It may be that Palestinian sentiment is driven more by the overall level of violence against Israelis, rather than violence originating in a specific locality. We evaluated this hypothesis by replacing the number of Israeli fatalities attributed to the district with the overall number of Israeli fatalities. The results for the effect of Israeli fatalities were imprecise, while the results for the effects of Palestinian fatalities were robust to this alternative specification. We will return to the effect of fatalities at different levels of geographic aggregation in Section IV.B.

Overall, our results provide little support for the notion that Palestinian fatalities cause the radicalization of the Palestinian population. We observe a short-lived radicalization effect of Palestinian fatalities that completely dissipates over three months. In the next section we test the robustness of these results with different subpopulations and different classifications of fatalities.

IV. Robustness Checks

A. Testing for Reverse Causality

One methodological concern regarding our identification strategy is that we are not correctly identifying the direction of causality. It is possible that radicalization leads to more Israeli violence rather than vice versa, or that both processes are governed by a common, unobserved third factor. To test for this possibility we now estimate the following specification by aggregating the data to the poll \times district level

$$F_{j,t+k} = \alpha P_{j,t-12} + \beta I_{j,t-12} + \gamma M_{jt} + X_{jt}\Phi + \mathbf{Z}_t\delta + c_j + u_{jt}. \quad (5)$$

where $F_{j,t+k}$ is the number of either Palestinian or Israeli fatalities in district j that occurred in the k weeks after date t ; M_{jt} is the average support for moderate positions of the population in district j according to a poll conducted at time t ; and the rest of the variables are as in equation (1).²⁰

Note that a consistently negative and significant γ implies that the radicalization of the population causes increases in the number of fatalities. This would suggest that perhaps there is a third factor that jointly causes both radicalization and fatalities, casting doubt on our identification strategy.²¹

²⁰ Estimating equation (3) using data aggregated at the poll \times district level yields results that are almost identical to those reported in Table 5. In equation (5) we must aggregate the data because there is no individual variation in the left-hand side variable.

²¹ There is a temporal mismatch between these regressions and those in Table 6. Because our data are not truly panel data, and the polls occur at somewhat irregular intervals, the values for the fatalities variables that occur after

Table 6 displays the results of the estimations of equation (5) using as the dependent variable Palestinian and Israeli fatalities one, two and three months after every poll. In panel A, we find that there is a significant and positive relationship between support for negotiations and subsequent Palestinian fatalities, increasing in magnitude as the temporal distance between the poll date and the date of subsequent fatalities increases. In panel B, however, we do not find any statistically significant relationship between support for Fatah and future fatalities. We are encouraged by these results: the fact that we do not find any evidence for a *negative* and significant effect of current moderate position on future fatalities seems to rule out the possibility that the short-run negative coefficients in Table 5 were driven by a common factor that affected both radicalization and Israeli violence.²² If anything, the results seem to indicate that Israel uses force to spoil the peace process.²³ We are reluctant to place too much emphasis on these results, however, because they are not robust to the choice of the political preference variable.²⁴

A more subtle methodological concern for the results in Table 5 arises if Israeli security forces *preemptively* increase the level of violence in anticipation of a shift to more radical attitudes in the Palestinian population. However, for these results to threaten the validity of the results in Table 5, it would have to be the case that Israel could forecast *at the district level* the direction in which public opinion was moving and act accordingly. While we cannot completely rule out this possibility, this strikes us as implausible.

the polls are not the same as the values for the fatalities variables that are used in Table 6. While there is no reason that this should *a priori* lead to different results from those that would obtain if we had “regular” panel data, it is at least possible that the selection of different time periods leads to the results in Table 7.

²² Adding leads of Palestinian and Israeli fatalities in the specifications of Table 5 has essentially no effect on the estimated coefficients of interest.

²³ Kydd and Walter (2002) propose that extremists commit attacks during peace process negotiations to force the government to retaliate. According to their model, the government retaliation causes the radicalization of the moderate population thus spoiling the peace process negotiations.

²⁴ Moreover, results using our index of moderation and the JMCC data (available upon request) show a negative but insignificant relationship between moderation and subsequent Palestinian fatalities.

B. The Effects of Geographic Variation in Preferences and Violence

Our analysis thus far has focused on Palestinian local fatalities only. That is, our fatality variables include only those Palestinian fatalities from a particular district or area and we have implicitly assumed that fatalities elsewhere have no effect on public opinion. In Table 7 we relax this assumption and, using the rich geographic detail available in the DSP data, include both local Palestinian fatalities and other Palestinian fatalities in the regressions. In columns 1 and 3 we include separately local fatalities (those that occurred in the district of residence of the respondent) and all other fatalities, again using the dynamic effect specification of equation (3). In columns 2 and 4 we separate further between local district fatalities, fatalities that occurred in other districts within the same region (West Bank or Gaza), and fatalities that occurred in the other region. There is a strikingly clear ranking in the effects of fatalities on support for Fatah by geographic distance: fatalities that occurred within the district of residence lead to the largest shift away from Fatah, followed by fatalities that occurred in other districts within the same region and by fatalities that occurred in the other region. For all types of fatalities, we observe a pattern consistent with the one documented in Table 5 – an immediate radicalization of the population that rapidly dissipates over time. It appears therefore that the effect of fatalities diminishes both with temporal and geographic distance. Geographic distance, however, does not seem to affect the support for negotiations with Israel. The estimated coefficients on Palestinian fatalities are statistically equal for every fatality, regardless of the location of the incident.

There are a variety of explanations for the observed short-term, local effect of fatalities on the radicalization of the population. First, violence at the local level triggers residents of a district to alter their daily routine as a consequence of a change in their perceived personal

security. These threats directly may affect their attitude toward the conflict and lead them to prefer more radical policies (Gordon and Arian, 2001). In addition, local violence may also affect the district's economy and its residents' expected future income, antagonizing the local population against compromises with Israel. Finally, the occurrence of local Palestinian fatalities directly affects the salience of the conflict in the affected district. Although all Palestinians are aware of the occurrence of a fatality by following information provided by the news media, Palestinians residing in the same district of the fatality may have undergone a more vivid or traumatic experience of the event. This is often reinforced by street processions before a burial and demonstrations against Israel after it. Nevertheless, as important as these effects may be in the immediate aftermath of a fatality, our analysis consistently shows that any effects on the political preferences of the population as a consequence of local violence are fleeting.²⁵

C. Do Targeted Killings have a Different Effect on Palestinian Preferences?

Jaeger and Paserman (2007) have noted that targeted killings of Palestinian leaders reduce subsequent Israeli fatalities in the short run, even though they may lead to an increase in intended violence. We examine how targeted killings and other fatalities affect public opinion in Table 8. In columns 1 and 3 we differentiate between total fatalities in targeted killings (including collateral fatalities) and other fatalities, while in columns 2 and 4 we separate out the targets and other fatalities in the targeted killing. Both specifications give very similar results – support for moderate attitudes is affected only by the deaths of Palestinians not in targeted killings, which follow the same pattern previously described in Table 6. Consistent with the

²⁵ Our results are consistent with evidence from the Israeli side of the conflict, Zussman, Zussman, and Romanov (2007) find that violence against Israelis does not affect the level of happiness among Jewish Israelis and has only a brief (one day) negative effect on the happiness of Arab Israelis.

theoretical analysis of Bueno de Mesquita and Dickson (2007), the assassination of leaders (a focused policy with low levels of negative externalities on the general population) does not lead to the radicalization of the population.

D. Do Radicals and Moderates have a Similar Reaction to Violence?

The previous subsections documented the effects of violence on the Palestinian population as a whole. This subsection studies the effects of violence on sub-samples of the population, grouped according to their political preferences, predicted on the basis of their time-invariant location and demographic characteristics. This analysis allows us to establish whether or not Palestinian and Israeli fatalities cause the ideological polarization of the Palestinian population. To the best of our knowledge, there is not a clear theoretical prediction regarding the effects of violence on the ideological polarization of the population. It is nevertheless important to empirically explore this issue since the polarization of the population might be one of the main causes behind internal social and political conflicts (Sartori, 1976). In addition, even if the attitudes of the large majority of the population are unaffected, Israeli violence could still have important implications for the long-run dynamics of the conflict if enough people with a high propensity for radicalism do become more radical and are induced to join militant factions.

To study this issue, we construct a measure of radicalism for every individual in our sample, based on his or her demographic characteristics, and then test separately the effects of fatalities for more and less radical Palestinians. We adopted the following procedure: (a) we drew a 25% random sample from our population, and estimated with a probit model, separately by gender, the probability that an individual supports Fatah based only on the pooled cross-

sectional variables on demographic characteristics described in Table 5;²⁶ (b) based on these estimates, we calculated fitted probabilities of supporting Fatah for every individual in the sample; (c) we defined as “radicals” people with a fitted probability below the median predicted value, and non-radicals those with a fitted probability above this median;²⁷ d) we estimated equation (3) on the remaining 75% of the sample (the part not used in estimating the probit models), adding the “radical” dummy, and its interaction with all lags of Palestinian and Israeli fatalities; e) we repeated steps (a)-(d) 200 times, so that our results would not be unduly affected by one particular draw of the estimation sample. In Table 9, we report the mean and the standard deviation of the parameters of interest from these 200 replications.²⁸

We find robust evidence that Palestinian fatalities occurring 1-4 weeks before the survey lead to a polarization in public opinion: support for Fatah and for peace negotiations decreases significantly among individuals with a high propensity to be radical, while those with a low propensity for radicalism are essentially unaffected. The difference in the effect is statistically significant with respect to support for Fatah, and marginally insignificant with respect to support for negotiations. As in Table 5, we find that more temporally distant Palestinian fatalities actually have a moderating effect, for both radicals and non-radicals. Consequently, even for radicals we do not find any evidence of a long-run effect of violence on political preferences. We find no statistically significant effects of Israeli fatalities on support for Fatah or for negotiations.

²⁶ The separate estimations for males and females on the full sample appear in Appendix Table 2. The results show that whereas support for Fatah increases among women with refugee status and among married men, it decreases among older men. Consistent with related research by Krueger and Maleckova (2003), the individuals’ level of education does not seem to affect their level of radicalization. The results are qualitatively the same when using support for negotiations instead of support for Fatah as the dependent variable. We present the results of support for Fatah because this question appeared in more polls. Therefore, it delivers more precise predictions.

²⁷ The mean over the 200 replications of the median predicted value is 0.285.

²⁸ The estimated effect for non-radicals is simply the coefficient on fatalities, the difference is the coefficient on the interaction between the radical dummy and fatalities, and the effect for radicals is the sum of the two.

E. The Effect of Violence on Support for Different Factions

While support for Fatah (the most moderate of the factions) is an indicator of the radicalization or outrage of the Palestinian population, the surveys include more specific information regarding the factions that individuals support. Table 10 explores this issue further, by estimating a multinomial logit model for faction supported. The dependent variable takes on one of six possible values: Fatah, Hamas, PFLP, Palestinian Islamic Jihad (grouped with other Islamic groups), other factions, and no faction. To facilitate comparison with previous tables, we present the marginal effects of violence on the support for each faction, rather than the multinomial logit coefficients.

The results from this exercise confirm that increases in Palestinian fatalities shift support away from Fatah in the short run. The size of the decrease in Fatah support is comparable to that found in Table 5: 10 additional fatalities in the four weeks prior to a poll lower support for Fatah by roughly 1.8 percentage points. This shift is not towards more radical groups like Hamas, PLFP and PIJ, however, but rather towards more disaffection: the coefficient on “supporting no one” has roughly the same magnitude as the coefficient on support for Fatah but with opposite sign, and is only marginally insignificant (p -value equal to 0.108). The shift away from Fatah may in fact represent radicalization as well as disaffection: the evidence in Table 2 clearly shows that individuals who support no faction have more radical preferences than Fatah supporters on all other measures. It is also possible that fatalities induce secular Palestinians to avoid expressing support for Fatah, without leading them to shift their allegiance to the Islamic or Marxist factions, whose ideology they do not share. In addition, we should not forget that all our previous results showed that Israeli violence leads to a decrease in support for negotiations with Israel, another sign of more radical preferences.

As was the case with most of our previous estimations, the shift away from Fatah dissipates over time. Local Israeli fatalities do not seem to have a significant effect in the support for any faction except for an immediate shift away from PIJ that completely dissipates over time.

V. The Effect of Violence on Preferences: A Long-Run Analysis

We have focused to this point only on the short-run effect of violence on political preferences. This subsection departs from that analysis to address whether individuals' experiences of important political processes affect their long-term attitudes toward the conflict. In particular, we focus on cohorts whose views were potentially shaped during the first Palestinian uprising and the signing of the Oslo agreements, to analyze whether these events significantly affected their long-term preferences. To achieve this, we adopt the view that the first exposure of young individuals (between the ages of 14 and 17, inclusive) to significant events has a long lasting effect on their preferences.²⁹ We believe that the age band we choose is a reasonable approximation of the time at which youngsters are first exposed in full to the realities of the conflict: internal closures and checkpoints that limit mobility within the Palestinian territories, political activism in schools, discrimination in the labor market, involvement in skirmishes and rock-throwing incidents with Israeli soldiers, or administrative detention in Israeli jails.

Since it is no longer key for us to be able to identify individuals at the district level, we can now take advantage of the richer set of questions in the JMCC surveys to estimate how

²⁹ This effect is not particularly restricted to violent conflicts. Individuals' that vote for a candidate in the first election in which they are eligible to vote have a more favorable opinion of the candidate in the future (Mullainathan and Washington, 2009). Similarly, different macro-economic shocks affecting young adults have a significant impact on their long-term risk attitudes (Malmendier and Nagel, 2007).

political preferences vary across different birth cohorts.³⁰ We first construct an index of moderate preferences towards the conflict using factor analysis based on the ten recurrent questions on political preferences presented in Table 2.³¹ The index is then standardized to have mean zero and standard deviation 1, so that the regression results are easily interpretable. Then, we regress this index of moderate preferences on a set of cohort dummy variables, age, demographic characteristics, lagged Palestinian and Israeli fatalities in the macro-area (Jerusalem, West Bank and Gaza), economic variables (are unemployment rates, hourly wages, and border closings), and a full set of area and poll fixed effects. Because we have polls observed over a span of 7 years, we are able to separately identify both cohort and age effects in the data.

The results of these regressions are presented in Table 11. The table clearly shows that individuals born between 1976 and 1979 (ages 14-17 at signing of Oslo agreements) express significantly more moderate political preferences than what would be predicted by their year of birth. In contrast, individuals born between 1970 and 1973 (ages 14-17 at the outburst of first Intifada) have significantly more radical positions than what would be predicted by their year of birth. This is true regardless of whether the cohort dummies are entered separately (columns 1 and 2) or jointly (column 3) and whether we control for a higher order polynomial in the year of birth (columns 4 and 5). Column 6 shows that adjacent cohorts were not affected as much by these major political events. The preferences of the 1980-1981 birth cohort (13 or younger at the time of the Oslo accords) and of the 1974-75 cohort (18 or older at the time of Oslo, but 13 or younger at the time of the First Intifada) are essentially indistinguishable from the year of birth

³⁰ The results were similar both in terms of magnitude and statistical significance, when we used the “Support for negotiations” variable from the DSP data as the dependent variable. Results were qualitatively similar but not significant when we used “Support for Fatah” as the dependent variable. These results are available from the authors upon request.

³¹ See the Data Appendix for the details of how the moderation index was created.

trend. Interestingly the 1968-1969 birth cohort (18-19 at the outburst of the First Intifada) appears a fair bit more moderate than the trend.

The differences are highly statistically significant in most specifications, and quantitatively important: for example, the coefficients in column 6 imply that the index of moderation was 0.05 standard deviations higher than the trend for those aged 14-17 at the time of Oslo, and 0.05 standard deviations higher than the trend for those aged 14-17 at the time of the First Intifada. This is equivalent to roughly one half the effect of being male (0.10 of a standard deviation decrease in the index), and about one quarter of the effect of going from zero years of education to having a college degree (0.21 standard deviations decrease in the index).

Finally, columns 7 and 8 look at the effects separately by gender. Interestingly, the cohort effects are substantially different for the two sexes. The First Intifada had a strong radicalization effect for boys who were between 14 and 17 years old at its outburst, but no effect for girls. By contrast, the Oslo process had a strong moderation effect for girls in the relevant age range, but not for boys. These results are consistent with our hypothesis that the 14-17 age band is indeed the one in which long-term political preferences are formed: the First Intifada is likely to have a much larger effect on boys than on girls, because it was exactly the 14-17 year old boys who were primarily involved in the demonstrations and confrontations with Israeli soldiers.³² On the other hand, it is probably women who built greater aspirations around the Oslo peace process, and they would probably have benefited more from the normalization of relations with Israel and the ensuing demilitarization of the Palestinian society.

³² Our data on Palestinian fatalities in the Second Intifada confirms that this is the case: the percentage of boys among Palestinian fatalities in the 14-17 age group is 97%, as opposed to 87% in the 11-13 age group, and only 63% in the 0-10 age group. This indicates fairly unambiguously that boys were substantially more likely to be actively engaged in the uprising and in confrontations with Israeli soldiers.

VI. Conclusions

This paper empirically investigates the effects of violence on the political preferences of the Palestinian population using detailed micro data and rigorous statistical analysis. This is one of the central and more contentious questions regarding the Israeli-Palestinian conflict, which divides scholars and policy makers alike. Despite its importance, to the best of our knowledge there had been no study providing systematic empirical evidence on this matter, and the claims that violence increases, does not affect, or decreases the radicalization of the Palestinian population were based on casual empiricism only.

We find that the average member of the Palestinian population holds more radical positions immediately after the occurrence of a Palestinian fatality in their district of residence. This effect is temporary, however, and vanishes completely within 90 days. As a consequence, the overall effect of Palestinian fatalities over three months of their occurrence is not statistically significant. The radicalization effect of Palestinian fatalities is not homogenous across individuals with *ex ante* different preferences. Rather, only individuals that are more radical *a priori* (based on their demographic characteristics) are affected by the violence, and it therefore brings about the polarization of the Palestinian population. Our results are robust to using different measures of public opinion as well as to Palestinian fatalities incurred during targeted killing operations and other fatalities. We observe that not only temporal proximity but also geographic proximity has an effect on radicalization: local Palestinian fatalities have a stronger effect than Palestinian fatalities in other districts.

These results bear some similarity to, but also contrast with, the estimated effects of violence on the preferences of the Israeli electorate found in the previous literature. As in Berrebi and Klor (2006), we find that violent attacks have a significant effect on the preferences of the

aggrieved population. The local effect of fatalities on the preferences of the Palestinian population is similar in nature to the increase in the electoral support for more radical Israeli political parties as a consequence of local Israeli fatalities. In contrast to our findings, however, Berrebi and Klor (2008) find that the political impact of terror attacks on the preferences of the Israeli electorate remains statistically significant for over a year after their occurrence. The different reactions of Israelis and Palestinians suggest that the number of fatalities affects the duration of the political impact of violence. The number of Palestinian fatalities has been substantially higher than the number of Israeli fatalities throughout the past 20 years: hence, it appears that there are diminishing returns in the impact of violence on political preferences, and that above certain levels of violence fatalities just become another fact of life for the aggrieved population.

The temporary nature of the movements in Palestinian attitudes implies that outbursts of violence have little consequences for the overall level of animosity in Palestinian society, and one therefore should look elsewhere for the causes of secular shifts in public opinion. Our investigation of the effects of significant political events on the long-term preferences of the Palestinian population yields, however, somewhat different results. We find that there are significant differences across cohorts in the long-term effects of events in the conflict. Palestinians who were teenagers at the outburst of the First Intifada have, between the years 2000 and 2006, more radical preferences than other cohorts, whereas Palestinians who were teenagers during the period of negotiating the Oslo agreements have, in the period at issue, more moderate preferences than other birth cohorts. These results show that, contrary to local fluctuations on the level of fatalities, significant political processes may perpetuate or alleviate the conflict by sowing the seeds of hatred or moderation among younger generations of Palestinians.

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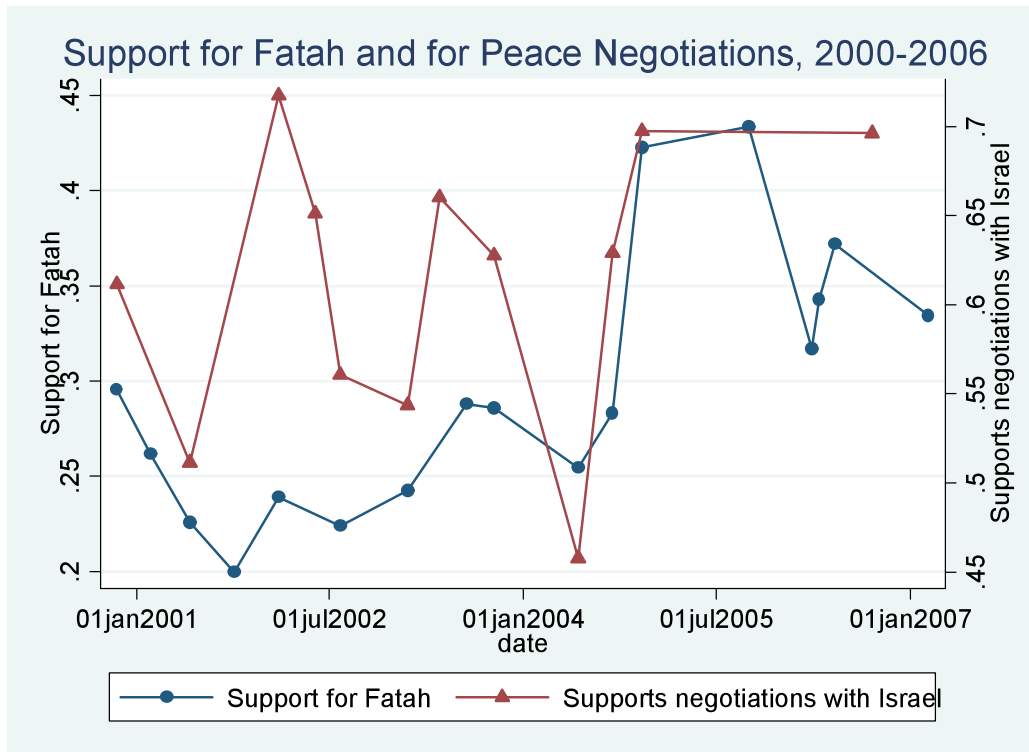


Figure 1: Support for Fatah and for Peace Negotiations

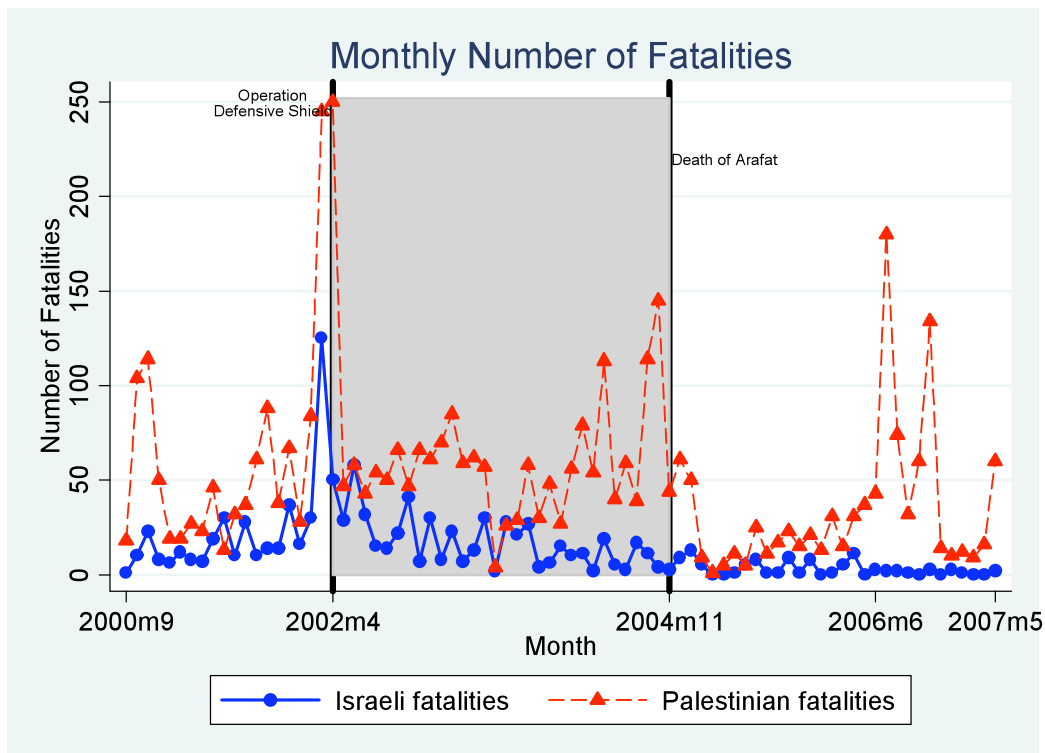


Figure 2: Monthly number of fatalities, 2000-2007

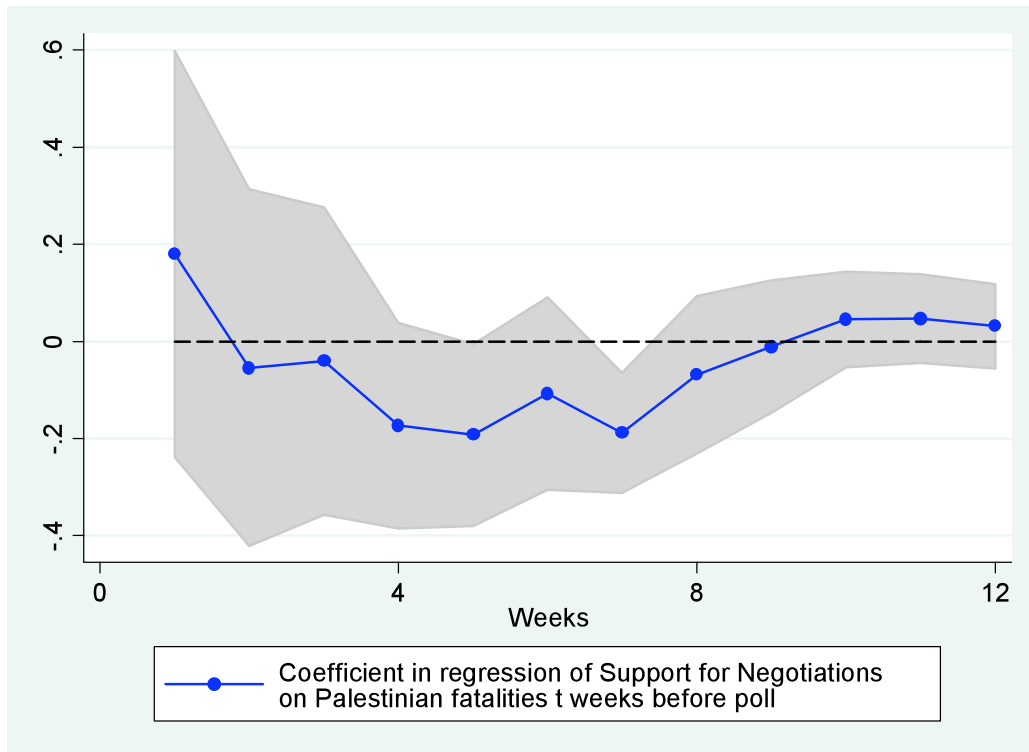


Figure 3a: The dynamic effect of fatalities on support for negotiations

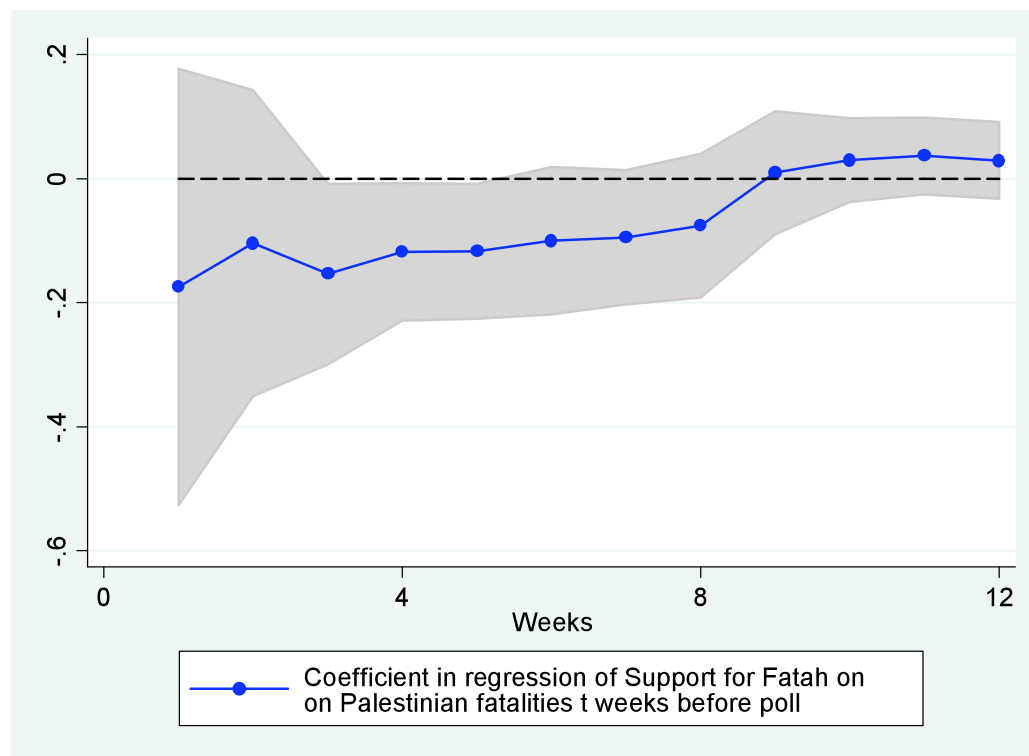


Figure 3b: The dynamic effect of fatalities on Fatah support

Table 1
Dates and Contents of DSP's Polls of Palestinian Opinion

Exact Wording of the Questions				
			Do you support or oppose the continuation of negotiations with the Israelis?	Which of the following political groups do you support?
Date	Poll #	Period		
November 6, 2000	2		✓	✓
February 8, 2001	3	Phase 1: Before		✓
May 31, 2001	4	Operation Defensive	✓	✓
October 4, 2001	5	Shield		✓
February 7, 2002	6		✓	✓
May 21, 2002	7		✓	
July 31, 2002	8		✓	✓
February 6, 2003	10	Phase 2: Between	✓	✓
May 8, 2003	12	Operation Defensive	✓	
July 24, 2003	13	Shield and Arafat's		✓
October 10, 2003	14	death	✓	✓
June 4, 2004	16		✓	✓
September 9, 2004	18		✓	✓
December 3, 2004	20		✓	✓
September 30, 2005	22			✓
March 27, 2006	25	Phase 3: After		✓
April 19, 2006	26	Arafat's death		✓
May 31, 2006	27			✓
September 14, 2006	28		✓	
February 22, 2007	30			✓
Total number of polls			12	17
Total N			13,692	19,904

Table 2
Attitudes Towards the Conflict and Support for Different Factions

Attitudes	N	Number of polls	Percentage in favor of moderate position among supporters of:					
			Fatah	Hamas	PIJ	Others	No one	All
DSP Data								
Support for negotiations	9,724	9	72.0	48.0	48.0	57.4	61.3	59.6
JMCC Data								
Supports for peace negotiations	4,252	4	75.2	31.1	32.9	37.6	54.3	52.2
Support for Oslo peace process	5,149	5	61.2	18.1	18.0	22.6	36.9	38.1
Opposes continuation of the Intifada	8,550	8	30.4	13.6	14.2	19.1	31.9	21.7
Support for popular Intifada only	5,975	6	32.8	12.5	16.4	24.1	28.3	24.8
Best way to achieve national goals is through negotiations	6,323	6	21.3	7.0	10.4	13.1	16.4	15.0
Opposes resumption of military operations	11,447	11	51.6	26.4	18.0	40.6	43.9	36.8
Opposes suicide bombings	9,500	9	49.5	24.4	20.0	42.7	46.2	35.6
End result of the intifada: NOT liberation of all historic Palestine	5,245	5	67.0	36.0	37.4	49.2	59.2	54.0
Preferred solution to the conflict: NOT Islamic/Palestinian state	12,250	11	92.0	76.4	74.8	86.3	88.7	85.6

Source: Authors' calculations using poll data from DSP and JMCC.

Table 3
Summary Statistics of Palestinian and Israeli Fatalities

Area	Average Palestinian Fatalities within 90 Days Prior to a Poll by District of Fatality		Average Israeli Fatalities within 90 Days Prior to a Poll, by District of Fatality
	All	Targeted Killings	All
Jerusalem	1.28 (1.46)	0.00 (0.00)	2.88 (5.83)
West Bank			
Jenin	13.72 (16.56)	0.56 (1.19)	7.80 (12.81)
Toubas	1.88 (3.09)	0.56 (1.61)	0.16 (0.62)
Tulkarem	7.12 (7.41)	0.40 (0.91)	3.16 (5.01)
Nablus	17.92 (20.29)	0.72 (2.01)	6.60 (12.46)
Qalqilya	1.96 (2.86)	0.00 (0.00)	1.00 (2.40)
Salfeet	1.00 (2.10)	0.08 (0.40)	0.08 (0.40)
Jericho	1.00 (1.08)	0.00 (0.00)	0.48 (0.92)
Ramallah	6.96 (13.84)	0.20 (0.82)	2.68 (4.60)
Bethlehem	3.92 (7.61)	0.48 (1.12)	2.24 (5.17)
Hebron	6.64 (8.70)	0.24 (0.52)	5.68 (8.93)
Total	62.12 (74.99)	3.24 (4.55)	29.88 (36.85)
Gaza Strip			
Gaza North	24.28 (34.39)	1.60 (3.98)	1.00 (1.44)
Gaza City	22.84 (21.01)	7.96 (8.59)	1.48 (3.40)
Deir El-Balah	10.00 (9.71)	0.04 (0.20)	0.36 (0.81)
Khan Younis	13.76 (11.93)	0.88 (1.45)	1.52 (2.65)
Rafah	14.56 (15.20)	0.72 (1.57)	0.96 (2.47)
Total	85.44 (68.97)	11.20 (9.45)	5.32 (6.63)
Total for All Areas	148.84 (116.86)	14.44 (9.19)	38.08 (43.29)

Source: Authors' calculations using data from B'Tselem, linked to dates of polls from DSP.

Note: Standard deviations in parentheses.

Table 4
Faction Support by Demographic Characteristics

	Share supporting:					Fatah share out of Fatah, Hamas and PIJ alone	Support for Negotiations
	Fatah	Hamas	PIJ	Others	No one		
All	29.12	22.64	9.53	10.35	28.36	47.51	61.72
Demographic Characteristic							
Area of residence							
Jerusalem	19.87	19.67	12.02	8.55	39.89	38.54	58.83
West Bank	30.06	21.50	9.72	11.56	27.16	49.06	62.01
Gaza Strip	29.65	24.86	8.76	9.00	27.73	46.86	61.93
Type of residence							
Cities	28.10	23.81	9.05	9.82	29.21	46.09	61.39
Villages	29.57	20.72	10.27	11.10	28.35	48.83	62.62
Refugee camps	30.40	24.25	8.98	9.90	26.47	47.78	60.36
Refugee Status							
Non-refugees	28.19	21.98	9.67	10.91	29.25	47.10	62.97
Refugees	29.94	22.34	9.49	9.86	28.37	48.47	60.15
Gender							
Males	33.70	18.32	9.30	12.66	26.02	54.96	59.76
Females	24.67	26.85	9.75	8.11	30.62	40.27	63.69
Marital Status							
Married	28.39	21.90	9.69	10.29	29.73	47.33	64.30
Non-married	30.87	22.74	9.55	11.09	25.76	48.88	53.62
Age							
15-29	29.59	24.69	9.88	10.06	25.77	46.12	56.83
30-44	31.12	22.78	9.56	10.39	26.15	49.04	62.55
45-59	26.84	20.42	10.01	10.25	32.48	46.87	67.56
≥60	22.89	17.30	6.91	11.58	41.32	48.60	69.66
Education							
Illiterate	25.56	19.37	8.20	9.36	37.50	48.10	70.64
Elementary	30.43	23.51	8.78	8.40	28.89	48.52	67.25
Middle school	28.13	25.48	9.81	9.79	26.79	44.36	59.77
Secondary	30.41	23.80	9.55	10.29	25.95	47.70	58.80
Some college	30.24	19.79	10.10	12.66	27.20	50.29	57.31
College degree	30.23	16.64	11.04	14.95	27.13	52.21	58.07
Local Economic Indicators							
Local Unemployment Rate							
≤ 30%	30.21	23.56	8.89	10.34	26.99	48.21	62.79
30% - 40%	30.38	21.7	10.92	8.93	28.08	48.22	59.59
≥ 40%	26.01	22.79	8.4	12.35	30.45	45.47	63.04
Daily wage (in year 2000 NIS)							
≤ 55 NIS	26.83	21.79	9.73	8.74	32.91	45.98	61.89
55 NIS - 65 NIS	31.69	24.44	8.91	9.22	25.75	48.72	62.56
≥ 65 NIS	26.46	20.28	10.4	13.26	29.61	46.31	60.15

Source: Authors' calculations using poll data from DSP.

Table 5a
The Effect of Violence on Support for Negotiations with Israel

Variable	(1)	(2)	(3)	(4)	(5)
Palestinian fatalities prior to poll (100s):					
- 1 to 12 weeks	0.042 [0.049]				
-1 to 4 weeks		-0.238 ** [0.119]	-0.303 *** [0.105]	-0.285 ** [0.128]	0.019 [0.085]
- 5 to 8 weeks		-0.088 [0.106]	-0.074 [0.097]	-0.037 [0.120]	-0.050 [0.072]
- 9 to 12 weeks		0.209 ** [0.087]	0.181 *** [0.070]	0.332 *** [0.099]	0.063 [0.054]
<i>Overall effect of Palestinian fatalities</i>	<i>0.499</i> <i>[0.586]</i>	<i>-0.470</i> <i>[0.699]</i>	<i>-0.789</i> <i>[0.601]</i>	<i>0.039</i> <i>[0.792]</i>	<i>0.129</i> <i>[0.569]</i>
Local Israeli fatalities prior to poll (100s):					
- 1 to 12 weeks	-0.136 [0.129]				
-1 to 4 weeks		-0.161 [0.241]	-0.262 [0.202]	-0.256 [0.245]	-0.340 *** [0.125]
- 5 to 8 weeks		-0.057 [0.133]	-0.089 [0.081]	-0.141 [0.131]	-0.187 ** [0.086]
- 9 to 12 weeks		0.039 [0.236]	0.009 [0.181]	-0.034 [0.244]	-0.246 [0.157]
<i>Overall effect of Israeli fatalities</i>	<i>-1.630</i> <i>[1.551]</i>	<i>-0.714</i> <i>[1.837]</i>	<i>-1.369</i> <i>[1.203]</i>	<i>-1.721</i> <i>[1.905]</i>	<i>-3.091 ***</i> <i>[0.989]</i>
Daily wage	-0.004 ** [0.002]	-0.004 ** [0.002]	-0.001 * [0.001]	-0.003 [0.002]	-0.000 [0.001]
Local unemployment rate	0.118 [0.134]	0.081 [0.125]	0.026 [0.102]	-0.097 [0.128]	0.156 [0.116]
Closure days out of past 30 days	0.0012 [0.0009]	0.0009 [0.0009]	0.0011 [0.0008]	-0.0002 [0.0010]	0.0035 [0.0010]
District Fixed Effects	Yes	Yes	No	Yes	Yes
Time Effects	Two period dummies	Two period dummies	Two period dummies	No time dummies	13 poll dummies
<i>N</i>	11,969	11,969	11,969	11,969	11,969
<i>R</i> ²	0.032	0.033	0.029	0.028	0.052
Number of poll × district clusters	174	174	174	174	174

Source: Authors' calculations using fatality data from B'Tselem, poll data from DSP, labor market data from the Palestinian Labor Force Survey and border closures data from the Palestinian Ministry of Labor.

Note: Estimated via OLS. Dependent variable is an indicator variable for supporting peace negotiations. All regressions include controls for residence type, gender, age, marital status, refugee status, education dummies, local unemployment rate, the local wage rate, the number of closure days in the 30 days preceding the poll. In columns 1-3, the two period dummies are for Phases 2 and 3 of the conflict, as defined in Table 1. Robust standard errors, adjusted for clustering at the poll-district level, in brackets; * indicates statistically significant at 10% level, ** indicates statistically significant at 5% level; *** indicates statistically significant at 1% level.

Table 5b
The Effect of Violence on Support for Fatah

Variable	(1)	(2)	(3)	(4)	(5)
Palestinian fatalities prior to poll (100s):					
- 1 to 12 weeks	0.025 [0.038]				
- 1 to 4 weeks		-0.149 ** [0.071]	-0.229 *** [0.074]	-0.220 ** [0.109]	-0.084 [0.066]
- 5 to 8 weeks		-0.098 [0.110]	-0.118 [0.124]	-0.171 [0.179]	-0.028 [0.090]
- 9 to 12 weeks		0.150 *** [0.044]	0.138 *** [0.046]	0.201 *** [0.067]	0.041 [0.036]
<i>Overall effect of Palestinian fatalities</i>	<i>0.295</i> <i>[0.450]</i>	<i>-0.392</i> <i>[0.510]</i>	<i>-0.837</i> <i>[0.554]</i>	<i>-0.758</i> <i>[0.879]</i>	<i>-0.280</i> <i>[0.443]</i>
Local Israeli fatalities prior to poll (100s):					
- 1 to 12 weeks	0.039 [0.084]				
- 1 to 4 weeks		-0.059 [0.123]	-0.225 ** [0.092]	-0.274 [0.179]	-0.144 [0.103]
- 5 to 8 weeks		0.180 * [0.104]	0.107 * [0.093]	0.165 [0.108]	0.186 * [0.105]
- 9 to 12 weeks		-0.043 [0.155]	-0.024 [0.174]	-0.110 [0.168]	-0.074 [0.124]
<i>Overall effect of Israeli fatalities</i>	<i>0.464</i> <i>[1.009]</i>	<i>0.313</i> <i>[0.928]</i>	<i>-0.571</i> <i>[0.837]</i>	<i>-0.875</i> <i>[1.167]</i>	<i>-0.130</i> <i>[0.802]</i>
Daily wage	0.001 [0.001]	0.001 [0.001]	-0.003 *** [0.000]	0.001 [0.001]	0.002 [0.001]
Local unemployment rate	-0.192 *** [0.070]	-0.202 *** [0.070]	-0.102 * [0.056]	-0.630 *** [0.086]	-0.048 [0.076]
Closure days out of past 30 days	-0.0006 [0.0005]	-0.0006 [0.0004]	-0.0002 [0.0005]	-0.0013 * [0.0007]	0.0005 [0.0006]
District Fixed Effects	Yes	Yes	No	Yes	Yes
Time Effects	Two period dummies	Two period dummies	Two period dummies	No time dummies	13 poll dummies
<i>N</i>	16,474	16,474	16,474	16,474	16,474
<i>R</i> ²	0.042	0.043	0.039	0.030	0.047
Number of poll × district clusters	221	221	221	221	221

Source: Authors' calculations using fatality data from B'Tselem, poll data from DSP, labor market data from the Palestinian Labor Force Survey and border closures data from the Palestinian Ministry of Labor.

Note: Estimated via OLS. Dependent variable is an indicator variable for supporting Fatah. All regressions include controls for residence type, gender, age, marital status, refugee status, education dummies, local unemployment rate, the local wage rate, the number of closure days in the 30 days preceding the poll. In columns 1-3, the two period dummies are for Phases 2 and 3 of the conflict, as defined in Table 1. Robust standard errors, adjusted for clustering at the poll-district level, in brackets; * indicates statistically significant at 10% level, ** indicates statistically significant at 5% level; *** indicates statistically significant at 1% level.

Table 6
Testing for Reverse Causality

	(1)	(2)	(3)	(4)	(5)	(6)
	Palestinian fatalities in 4 weeks after poll (100s)	Palestinian fatalities in 8 weeks after poll (100s)	Palestinian fatalities in 12 weeks after poll (100s)	Israeli fatalities in 4 weeks after poll (100s)	Israeli fatalities in 8 weeks after poll (100s)	Israeli fatalities in 12 weeks after poll (100s)
Dependent variable:						
A: Support for negotiations	0.450 *** [0.139]	1.752 *** [0.539]	3.782 *** [1.129]	-0.011 [0.048]	0.236 [0.188]	0.720 * [0.417]
<i>N</i>	174	174	174	174	174	174
<i>R</i> ²	0.392	0.391	0.397	0.502	0.538	0.552
B: Support for Fatah	-0.022 [0.155]	0.105 [0.555]	0.261 [1.212]	-0.074 [0.072]	-0.098 [0.230]	-0.057 [0.522]
<i>N</i>	221	221	221	221	221	221
<i>R</i> ²	0.249	0.257	0.271	0.235	0.328	0.368

Source: Authors' calculations using fatality data from B'Tselem, poll data from DSP, labor market data from the Palestinian Labor Force Survey and border closures data from the Palestinian Ministry of Labor.

Note: Estimated via OLS. Regressions are run at the district \times poll level (DSP). All regressions include controls for number of Palestinian and Israeli fatalities in the 12 weeks before the survey; the averages of residence type, gender, age, marital status, refugee status, education dummies; the local unemployment rate, the local wage rate, and the number of closure days in the 30 days preceding the poll; two time dummies (as defined in Table 6); and district fixed effects (DSP). Robust standard errors in brackets.

* indicates statistically significant at 10% level, ** indicates statistically significant at 5% level; *** indicates statistically significant at 1% level.

Table 7
The Effect of Violence on Support for Peace Negotiations and Fatah: Local and Non-Local Fatalities

Variable	A. Support for Negotiations		B. Support for Fatah	
	(1)	(2)	(3)	(4)
Palestinian fatalities prior to poll (100s), local:				
-1 to 4 weeks	-0.354 *** [0.086]	-0.363 *** [0.081]	-0.115 * [0.063]	-0.119 * [0.062]
- 5 to 8 weeks	0.198 * [0.123]	0.317 ** [0.129]	-0.279 *** [0.108]	-0.305 *** [0.119]
- 9 to 12 weeks	-0.159 * [0.089]	-0.222 *** [0.084]	0.172 *** [0.045]	0.196 *** [0.055]
<i>Overall effect of local Palestinian fatalities</i>	<i>-1.261 *** [0.537]</i>	<i>-1.074 ** [0.500]</i>	<i>-0.887 * [0.466]</i>	<i>-0.908 ** [0.458]</i>
Palestinian fatalities prior to poll (100s), all other districts:				
-1 to 4 weeks	-0.374 *** [0.040]		-0.012 [0.022]	
- 5 to 8 weeks	0.245 ** [0.100]		-0.253 *** [0.071]	
- 9 to 12 weeks	-0.253 *** [0.084]		0.138 *** [0.030]	
<i>Overall effect of Palestinian fatalities in other districts</i>	<i>-1.526 *** [0.141]</i>		<i>-0.508 *** [0.159]</i>	
Palestinian fatalities prior to poll (100s), other districts in same region:				
-1 to 4 weeks		-0.392 *** [0.060]		-0.026 [0.030]
- 5 to 8 weeks		0.333 *** [0.107]		-0.297 *** [0.098]
- 9 to 12 weeks		-0.250 *** [0.081]		0.155 *** [0.047]
<i>Overall effect of Palestinian fatalities, other districts in same region</i>		<i>-1.237 *** [0.275]</i>		<i>-0.674 *** [0.260]</i>
Palestinian fatalities prior to poll (100s), other regions:				
-1 to 4 weeks		-0.369 *** [0.049]		-0.004 [0.034]
- 5 to 8 weeks		0.410 *** [0.111]		-0.225 *** [0.086]
- 9 to 12 weeks		-0.403 *** [0.102]		0.121 *** [0.045]
<i>Overall effect of Palestinian fatalities in other regions</i>		<i>-1.445 *** [0.246]</i>		<i>-0.432 * [0.222]</i>
<i>N</i>	11,969	11,969	16,474	16,474
<i>R</i> ²	0.051	0.052	0.046	0.046
Number of poll × district clusters	174	174	221	221

Source: Authors' calculations using fatality data from B'Tselem, poll data from DSP, labor market data from the Palestinian Labor Force Survey and border closures data from the Palestinian Ministry of Labor.

Note: Estimated via OLS. Dependent variable is indicator for supporting Fatah or support for peace negotiations. All regressions include controls for overall number of Israeli fatalities, residence type, gender, age, marital status, refugee status, religion, education dummies, local unemployment rate, the local wage rate, the number of closure days in the 30 days preceding the poll, period dummies, and 15 district fixed effects. Robust standard errors, adjusted for clustering at the poll-district level, in brackets; * indicates statistically significant at 10% level, ** indicates statistically significant at 5% level; *** indicates statistically significant at 1% level.

Table 8
The Effect of Violence on Support for Negotiations and Fatah: Targeted Killings and Other Fatalities

Variable	A. Support for Negotiations		B. Support for Fatah	
	(1)	(2)	(3)	(4)
Palestinian fatalities not in targeted killings prior to poll (100s)				
-1 to 4 weeks	-0.215 *	-0.248 **	-0.161 **	-0.158 **
	[0.119]	[0.122]	[0.075]	[0.073]
- 5 to 8 weeks	-0.125	-0.148	-0.236	-0.236
	[0.114]	[0.109]	[0.193]	[0.197]
- 9 to 12 weeks	0.231 **	0.230 **	0.187 ***	0.188 ***
	[0.100]	[0.095]	[0.052]	[0.053]
<i>Long-run effect of Palestinian fatalities not in targeted killings</i>	<i>-0.436</i>	<i>-0.664</i>	<i>-0.841</i>	<i>-0.821</i>
	<i>[0.609]</i>	<i>[0.613]</i>	<i>[0.726]</i>	<i>[0.736]</i>
Palestinian fatalities in targeted killings prior to poll (100s)				
-1 to 4 weeks	-0.274		-0.012	
	[0.259]		[0.090]	
- 5 to 8 weeks	-0.121		0.058	
	[0.252]		[0.114]	
- 9 to 12 weeks	-0.533		0.048	
	[0.488]		[0.272]	
<i>Long-run effect of Palestinian fatalities in targeted killings</i>	<i>-3.708</i>		<i>0.373</i>	
	<i>[3.161]</i>		<i>[1.252]</i>	
Palestinian fatalities in targeted killings, not object of targeted killing, prior to poll (100s)				
-1 to 4 weeks		-0.969 ***		0.126
		[0.377]		[0.212]
- 5 to 8 weeks		1.365		-0.105
		[1.025]		[0.297]
- 9 to 12 weeks		-0.103		0.001
		[1.271]		[0.409]
<i>Long-run effect of Palestinian fatalities in targeted killings, not object of targeted killing</i>		<i>1.173</i>		<i>0.091</i>
		<i>[8.171]</i>		<i>[2.290]</i>
Palestinian fatalities object of targeted killing prior to poll (100s)				
-1 to 4 weeks		0.283		-0.134
		[0.190]		[0.178]
- 5 to 8 weeks		-1.108		0.273
		[0.732]		[0.485]
- 9 to 12 weeks		-0.939 *		0.090
		[0.510]		[0.542]
<i>Long-run effect of Palestinian fatalities object of targeted killings</i>		<i>-7.056</i>		<i>0.915</i>
		<i>[4.777]</i>		<i>[2.816]</i>
<i>N</i>	11,969	11,969	16,474	16,474
<i>R</i> ²	0.034	0.034	0.043	0.043
Number of poll × district clusters	174	174	221	221

Source: Authors' calculations using fatality data from B'Tselem, poll data from DSP, labor market data from the Palestinian Labor Force Survey and border closures data from the Palestinian Ministry of Labor.

Note: Estimated via OLS. Dependent variable is indicator for supporting Fatah or support for peace negotiations. All regressions include controls for overall number of Israeli fatalities, residence type, gender, age, marital status, refugee status, education dummies, local unemployment rate, the local wage rate, the number of closure days in the 30 days preceding the poll, period dummies, and 15 district fixed effects. Robust standard errors, adjusted for clustering at the poll-district level, in brackets; * indicates statistically significant at 10% level, ** indicates statistically significant at 5% level; *** indicates statistically significant at 1% level.

Table 9
The Effect of Violence on Support for Fatah and Negotiations by Predicted Level of Radicalism

	A. Support for Negotiations			B. Support for Fatah		
	Non-radical	Radical	Difference	Non Radical	Radical	Difference
Palestinian fatalities prior to poll (100s):						
- 1 to 4 weeks	-0.078 [0.150]	-0.355 ** [0.159]	-0.278 [0.181]	-0.028 [0.117]	-0.253 *** [0.090]	-0.225 * [0.127]
- 5 to 8 weeks	-0.157 [0.124]	-0.004 [0.142]	0.153 [0.150]	-0.136 [0.160]	-0.080 [0.135]	0.056 [0.170]
- 9 to 12 weeks	0.219 ** [0.106]	0.194 * [0.102]	-0.025 [0.109]	0.178 *** [0.074]	0.120 * [0.065]	-0.058 [0.098]
<i>Long-run effect of Palestinian fatalities</i>	<i>-0.063</i> <i>[0.784]</i>	<i>-0.662</i> <i>[0.873]</i>	<i>-0.599</i> <i>[0.803]</i>	<i>0.056</i> <i>[0.743]</i>	<i>-0.852</i> <i>[0.658]</i>	<i>-0.908</i> <i>[0.807]</i>
Local Israeli fatalities prior to poll (100s):						
- 1 to 4 weeks	-0.430 [0.311]	0.014 [0.279]	0.444 [0.317]	-0.084 [0.198]	-0.037 [0.187]	0.047 [0.256]
- 5 to 8 weeks	0.002 [0.159]	-0.134 [0.173]	-0.137 [0.177]	0.208 [0.144]	0.153 [0.127]	-0.055 [0.152]
- 9 to 12 weeks	0.185 [0.265]	-0.062 [0.292]	-0.247 [0.278]	-0.138 [0.187]	0.060 [0.248]	0.198 [0.286]
<i>Long-run effect of local Israeli fatalities</i>	<i>-0.974</i> <i>[1.949]</i>	<i>-0.732</i> <i>[2.177]</i>	<i>0.241</i> <i>[1.776]</i>	<i>-0.060</i> <i>[1.186]</i>	<i>0.703</i> <i>[1.298]</i>	<i>0.763</i> <i>[1.420]</i>
<i>N</i>		11,969			16,474	
Number of poll × district clusters		174			221	

Source: Authors' calculations using fatality data from B'Tselem, poll data from DSP, labor market data from the Palestinian Labor Force Survey and border closures data from the Palestinian Ministry of Labor.

Note: The coefficients in the table represent the means of estimated parameters from 200 bootstrap replications. The bootstrap procedure involved estimating first the probability of supporting Fatah on 25% of the sample, calculating the "radical" dummy based on whether one's predicted probability of supporting Fatah fell below or above the median, and then estimating the main model on the remaining 75% of the sample. All regressions include controls for residence type, gender, age, marital status, refugee status, education dummies, two period dummies and 15 district fixed effects. * indicates statistically significant at 10% level, ** indicates statistically significant at 5% level; *** indicates statistically significant at 1% level.

Table 10
The Effect of Violence on Support for Different Factions

Variable	Multinomial logit: Marginal Effects on support for					
	Fatah	Hamas	PFLP	PIJ/Islam.	Others	No One
Palestinian fatalities prior to poll (100s):						
- 1 to 4 weeks	-0.179 ** [0.086]	-0.016 [0.086]	0.020 [0.020]	-0.009 [0.106]	0.004 [0.070]	0.180 [0.112]
- 5 to 8 weeks	-0.115 [0.111]	-0.128 [0.095]	0.037 [0.030]	0.068 [0.093]	0.108 [0.104]	0.030 [0.093]
- 9 to 12 weeks	0.170 *** [0.048]	-0.018 [0.051]	-0.014 [0.015]	-0.100 [0.062]	0.065 ** [0.032]	-0.103 * [0.063]
<i>Long-run effect of Palestinian fatalities</i>	<i>-0.495 [0.534]</i>	<i>-0.647 [0.507]</i>	<i>0.170 [0.147]</i>	<i>-0.159 [0.550]</i>	<i>0.707 [0.463]</i>	<i>0.425 [0.633]</i>
Local Israeli fatalities prior to poll (100s):						
- 1 to 4 weeks	-0.067 [0.132]	0.149 [0.243]	0.019 [0.055]	-0.310 *** [0.115]	0.128 [0.109]	0.080 [0.237]
- 5 to 8 weeks	0.186 * [0.107]	-0.195 [0.142]	0.040 [0.035]	-0.059 [0.103]	-0.035 [0.072]	0.063 [0.177]
- 9 to 12 weeks	-0.058 [0.168]	0.086 [0.167]	0.049 [0.047]	0.304 *** [0.103]	-0.135 [0.087]	-0.245 * [0.146]
<i>Long-run effect of Israeli fatalities</i>	<i>0.242 [0.976]</i>	<i>0.157 [1.300]</i>	<i>0.434 [0.333]</i>	<i>-0.259 [0.788]</i>	<i>-0.165 [0.632]</i>	<i>-0.409 [1.299]</i>
<i>N</i>	16,474					
Number of poll × district clusters	221					

Source: Authors' calculations using fatality data from B'Tselem, poll data from DSP, labor market data from the Palestinian Labor Force Survey and border closures data from the Palestinian Ministry of Labor.

Note: Entries in table are marginal effects. All regressions include controls for residence type, gender, age, marital status, refugee status, education dummies, local unemployment rate, the local wage rate, the average number of closure days in the 30 days preceding the poll, and two period dummies. The models include 15 district fixed effects. Robust standard errors, adjusted for clustering at the poll-district level, in brackets; * indicates statistically significant at 10% level, ** indicates statistically significant at 5% level; *** indicates statistically significant at 1% level.

Table 11
The Effect of Political Processes on Support for Moderate Positions (JMCC)

Variable	(1) Full sample	(2) Full sample	(3) Full sample	(4) Full sample	(5) Full sample	(6) Full sample	(7) Males	(8) Females
Age 14-17 at signing of Oslo agreements	0.061 *** [0.020]		0.043 ** [0.021]	0.037 * [0.021]	0.039 * [0.021]	0.051 ** [0.025]	0.002 [0.036]	0.109 *** [0.036]
Age 14-17 at outburst of First Intifada		-0.082 *** [0.021]	-0.072 *** [0.022]	-0.065 *** [0.022]	-0.062 *** [0.023]	-0.049 * [0.026]	-0.116 *** [0.038]	0.022 [0.038]
Age	0.106 *** [0.010]	0.105 *** [0.010]	0.105 *** [0.010]	0.104 *** [0.010]	0.103 *** [0.010]	0.104 *** [0.010]	0.071 *** [0.012]	0.099 *** [0.015]
Year of Birth	0.102 *** [0.010]	0.102 *** [0.010]	0.102 *** [0.010]	0.085 *** [0.012]	0.094 *** [0.023]	0.102 *** [0.025]	0.052 * [0.030]	0.109 *** [0.041]
Year of Birth squared ($\div 10^3$)				0.014 *** [0.005]	-0.004 [0.039]	-0.022 [0.044]	0.021 [0.055]	-0.064 *** [0.001]
Year of birth cube					0.011 [0.024]	0.022 [0.027]	-0.006 [0.034]	0.056 [0.045]
Year of birth 1980-1981						0.021 [0.031]	0.047 [0.045]	0.014 [0.043]
Year of birth 1974-1975						0.001 [0.032]	-0.087 * [0.046]	0.083 * [0.044]
Year of birth 1968-1969						0.049 [0.032]	-0.025 [0.046]	0.124 *** [0.046]
Area fixed effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Poll fixed effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
<i>N</i>	19,885	19,885	19,885	19,885	19,885	19,885	19,885	19,885
<i>R</i> ²	0.075	0.075	0.075	0.076	0.076	0.076	0.089	0.074

Source: Authors' calculations using fatality data from B'Tselem, poll data from JMCC, labor market data from the Palestinian Labor Force Survey and border closures data from the Palestinian Ministry of Labor.

Note: Estimated via OLS. Dependent variable is an aggregate measure of "moderation" constructed from ten different variables available in JMCC data set. All regressions include controls for residence type, gender, age, marital status, refugee status, education dummies, local unemployment rate, the local wage rate, the number of closure days in the 30 days preceding the poll, district fixed effects, and a full set of poll fixed effects. Robust standard errors, adjusted for clustering at the poll-district level, in brackets.

* indicates statistically significant at 10% level, ** indicates statistically significant at 5% level; *** indicates statistically significant at 1% level.

[NOT FOR PUBLICATION]

Data Appendix: Construction of the moderation index from the JMCC data

To construct our index of moderation we take the 10 questions on political preferences asked in the JMCC surveys, described in Table 2. We recoded all the variables so that high values indicate support for moderate positions. The list of variables and their values are as follows:

V_1 : Supports the Oslo peace process (scale: 1-4).

V_2 : Supports negotiations (scale: 1-4).

V_3 : Opposes continuation of intifada (scale: 1-4)

V_4 : Best way to achieve national goals (1 - armed struggle; 2 – armed struggle and negotiations; 3 – negotiations only).

V_5 : Intifada's final goal (1 – free all Palestine; 2 – end occupation; 3 – improve bargaining position);

V_6 : Intifada's character (1 – military only; 2 – military and popular; 3 – popular only).

V_7 : Resumption of military operations (1 – harmful response; 2 – suitable response).

V_8 : Opposes suicide bombings (scale: 1-4).

V_9 : Solution to the conflict (1 – Islamic state; 2 – all other options).

V_{10} : Faction supported (1 – All other factions or no faction; 2 – Fatah).

Taking the two JMCC polls in which all 10 questions are asked simultaneously (poll number 43 on December 5-7, 2001; and poll number 47 on December 7-9, 2002), we use factor analysis to construct an aggregate measure of moderate preferences derived from the standardized individual variables listed above. The results of the factor analysis are presented in Appendix Table 3. The third column presents the scoring coefficients, a_1, a_2, \dots, a_{10} . We define the individual components of the moderation index for individual i in poll t as $a_k \tilde{V}_{kit}$, for $k = 1, 2, \dots, 10$, where \tilde{V}_{kit} is the standardized version of variable V_k for individual i in poll t . Since not all the questions are asked in all the polls, these individual components will have several missing values. Our goal is to construct an index of moderation that is applicable also to the polls in which not all the variables are available. Therefore, we define our index as the simple average of the non-missing individual components:

$$Moderation_{it} = \frac{\sum_{k \in Q_t} a_k \tilde{V}_{kit}}{\sum_{k \in Q_t} 1}$$

where Q_t is the set of indices of the variables available in poll t . Finally, the resulting measure is standardized to have mean zero and standard deviation one in the entire sample. This standardized measure is the dependent variable in the regressions of Table 12.

[APPENDIX TABLES NOT FOR PUBLICATION]

Appendix Table 1
The Effect of Violence on Support for Moderate Positions (JMCC)

Variable	(1)	(2)	(3)	(4)	(5)
Palestinian fatalities prior to poll (100s):					
- 1 to 12 weeks	0.009 [0.035]				
-1 to 4 weeks		-0.031 [0.087]	-0.048 [0.086]	0.053 [0.095]	-0.208 ** [0.091]
- 5 to 8 weeks		-0.231 *** [0.081]	-0.236 *** [0.094]	-0.427 *** [0.124]	-0.363 *** [0.088]
- 9 to 12 weeks		0.165 *** [0.064]	0.156 *** [0.066]	0.343 *** [0.081]	0.160 *** [0.058]
<i>Overall effect of Palestinian fatalities</i>	<i>-0.587 [0.670]</i>	<i>-0.387 [0.454]</i>	<i>-0.510 [0.437]</i>	<i>-0.122 [0.526]</i>	<i>-1.643 *** [0.484]</i>
Local Israeli fatalities prior to poll (100s):					
- 1 to 12 weeks	-0.086 [0.101]				
-1 to 4 weeks		-0.037 [0.200]	0.019 [0.201]	-0.384 * [0.201]	-0.156 [0.158]
- 5 to 8 weeks		-0.340 [0.457]	-0.189 [0.495]	-0.344 [0.473]	0.097 [0.345]
- 9 to 12 weeks		0.171 [0.285]	0.185 [0.287]	0.315 [0.280]	0.288 [0.248]
<i>Overall effect of Israeli fatalities</i>	<i>-1.137 [0.828]</i>	<i>-0.823 [1.155]</i>	<i>0.060 [1.004]</i>	<i>-1.651 [1.460]</i>	<i>0.916 [1.128]</i>
Daily wage	-0.002 [0.005]	-0.001 [0.004]	-0.003 *** [0.001]	0.005 [0.005]	0.001 [0.004]
Local unemployment rate	-0.878 * [0.486]	-1.071 *** [0.368]	-1.355 *** [0.263]	-2.232 *** [0.405]	-0.945 ** [0.412]
Closure days out of past 30 days	0.0004 [0.0015]	-0.0007 [0.0014]	-0.0008 [0.0015]	-0.0037 * [0.0020]	0.0026 * [0.0014]
Region Fixed Effects	Yes	Yes	No	Yes	Yes
Time Effects	Two period dummies	Two period dummies	Two period dummies	No time dummies	13 poll dummies
<i>N</i>	19,885	19,885	19,885	19,885	19,885
<i>R</i> ²	0.066	0.067	0.067	0.064	0.074
Number of poll × area clusters	54	54	54	54	54

Source: Authors' calculations using fatality data from B'Tselem, poll data from JMCC, labor market data from the Palestinian Labor Force Survey and border closures data from the Palestinian Ministry of Labor.

Note: Estimated via OLS. Dependent variable is an aggregate measure of "moderation" constructed from ten different variables available in JMCC data set. All regressions include controls for residence type, gender, age, marital status, refugee status, education dummies, local unemployment rate, the local wage rate, the number of closure days in the 30 days preceding the poll. In columns 1-3, the two period dummies are for Phases 2 and 3 of the conflict, as defined in Table 1. Robust standard errors, adjusted for clustering at the poll-district level, in brackets; * indicates statistically significant at 10% level, ** indicates statistically significant at 5% level; *** indicates statistically significant at 1% level.

Appendix Table 2
Probability of Supporting Fatah Based on Pooled Cross-Sectional Demographic and Economic Characteristics

Variable	Males	Females
Type of residence		
City	-0.010 [0.038]	-0.077 * [0.041]
Refugee Camp	0.031 [0.061]	-0.047 [0.058]
Refugee	0.040 [0.034]	0.078 * [0.042]
Married	0.115 *** [0.042]	-0.018 [0.045]
Age	-0.007 *** [0.001]	0.000 [0.001]
Education		
Elementary School	0.105 * [0.060]	0.079 [0.054]
Middle School	-0.045 [0.063]	0.024 [0.056]
Secondary Education	0.080 [0.064]	0.028 [0.057]
Some College	0.042 [0.072]	0.110 [0.075]
College Degree	0.036 [0.068]	0.007 [0.080]
<i>N</i>	8,111	8,363
<i>R</i> ²	0.011	0.011
Number of poll × district clusters	221	221

Source: Authors' calculations using fatality data from B'Tselem, poll data from DSP, labor market data from the Palestinian Labor Force Survey and border closures data from the Palestinian Ministry of Labor

Note: Estimated via Probit. Dependent variable is indicator for supporting Fatah. Both columns include 15 district fixed effects. Robust standard errors, adjusted for clustering at the poll-district level, in brackets; * indicates statistically significant at 10% level, ** indicates statistically significant at 5% level; *** indicates statistically significant at 1% level.

Appendix Table 3
Factor Analysis

Variable	Factor Loading	Uniqueness	Scoring Coefficient on the aggregate measure of moderation
V1: Support for negotiations	0.6399	0.5905	0.1473
V2: Support for Oslo peace process	0.7384	0.4547	0.2343
V3: Opposes continuation of Intifada	0.5765	0.6676	0.1184
V4: Best way to achieve national goals	0.7326	0.4634	0.2082
V5: Intifada's final goal	0.4519	0.7958	0.0865
V6: Intifada's character	0.4558	0.7922	0.0762
V7: Resumption of military operations	0.6345	0.5974	0.1566
V8: Opposes suicide bombings	0.6904	0.5233	0.1956
V9: Solution to the conflict	0.4280	0.8168	0.0843
V10: Faction supported.	0.4132	0.8293	0.0658

Source: Authors' calculations using poll data from JMCC surveys.