

REPORT DOCUMENTATION PAGE

Form Approved
OMB No. 0704-0188

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1. REPORT DATE (DD-MM-YYYY) 1-12-2005		2. REPORT TYPE EVALUATION OF DATABASE		3. DATES COVERED (From - To) 1/1/2001 - 1/1/2004	
4. TITLE AND SUBTITLE Putting Numbers to What We Know: Tracking Terrorist Attacks In Israel, the West Bank and Gaza				5a. CONTRACT NUMBER NONE	
				5b. GRANT NUMBER NONE	
				5c. PROGRAM ELEMENT NUMBER NONE	
6. AUTHOR(S) James W. Steward DeVere D. Woods Jr.				5d. PROJECT NUMBER NONE	
				5e. TASK NUMBER NONE	
				5f. WORK UNIT NUMBER NONE	
7. PERFORMING ORGANIZATION NAME(S) AND ADDRESS(ES) Indiana State University Department of Criminology 243 Holmstedt Hall Terre Haute, IN. 47803				8. PERFORMING ORGANIZATION REPORT NUMBER NONE	
9. SPONSORING / MONITORING AGENCY NAME(S) AND ADDRESS(ES) NONE				10. SPONSOR/MONITOR'S ACRONYM(S) NONE	
				11. SPONSOR/MONITOR'S REPORT NUMBER(S) NONE	
12. DISTRIBUTION / AVAILABILITY STATEMENT DISTRIBUTION A. Approved for public release: distribution unlimited.					
13. SUPPLEMENTARY NOTES					
14. ABSTRACT The activity of terrorist groups in the Middle East from January 1, 2001 through December 31, 2002 was examined to test six published assumptions about terrorism. Using existing data from the Anti Defamation League/International Policy Institute for Counter-Terrorism database, we found that aggregating reports of terrorist attacks skew the results due to outliers in the data. Our data show the increase in deaths from terrorism is a result of suicide bombings and the activities of one particular group.					
15. SUBJECT TERMS Terrorism, Suicide Bombings, Hamas					
16. SECURITY CLASSIFICATION OF: NONE			17. LIMITATION OF ABSTRACT	18. NUMBER OF PAGES 28	19a. NAME OF RESPONSIBLE PERSON JAMES W STEWARD
a. REPORT	b. ABSTRACT	c. THIS PAGE			19b. TELEPHONE NUMBER (include area code) 831-242-3880

**Putting Numbers to What We Know:
Tracking Terrorist Attacks In Israel, the West Bank And Gaza**

By

James Steward
2nd Lieutenant / Indiana Army National Guard
Indiana State University
Department of Criminology
243 Holmstedt Hall
Terre Haute, IN 47809
sidwisc@yahoo.com
812-237-2162

DeVere D. Woods Jr., Ph. D.
Indiana State University
Department of Criminology
241 Holmstedt Hall
Terre Haute, IN 47809
crwoods@isugw.indstate.edu
812 237-8832

Our thanks to Amanda Gilman for her comments on a previous draft of this manuscript.

ABSTRACT

The activity of terrorist groups in the Middle East from January 1, 2001 through December 31, 2002 was examined to test six published assumptions about terrorism. Using existing data from the Anti Defamation League/International Policy Institute for Counter-Terrorism database, we found that aggregating reports of terrorist attacks skew the results due to outliers in the data. Our data show the increase in deaths from terrorism is a result of suicide bombings and the activities of one particular group.

INTRODUCTION

When acts of terror become commonplace, both our safety and understanding suffers. Our perception of terrorism is colored by poorly developed assumptions from untested inferences. Conflicting concepts and definitions skew research results. Recently, U.S. Secretary of State Colin Powell expressed his regret and embarrassment when acknowledging that the 2003 report on global terrorism incorrectly reported the number of terror incidents (NBC, 2004). Unfortunately, this problem is not unique but highlights the difficulty in studying terrorism.

We identify six common assumptions on terrorism and evaluate them using terrorist attack data from 2001 through 2002 in Israel the West Bank, and Gaza. This was a very troubled time for the region. According to the RAND Corporation, two-thirds of all Israel suicide attacks occurred between September 2000 and June 2002, and suicide bombings were responsible for 50 percent of all deaths from terrorism during that time (Hoffman, 2003).

Our study demonstrates that overall terrorist attacks are becoming more lethal. We determined that one terrorist group is responsible for a majority of the deaths because of the tactics and methods they employ. Published reports based on aggregated data on terrorist attacks, therefore, are skewed by the activities of one terrorist organization. Furthermore, we question the

usefulness of attempts to link radical Islamic fundamentalism to suicide terrorism when explaining the motivation for the attacks.

COMMON ASSUMPTIONS

Our review of the literature on terrorism produced six commonly held assumptions on terrorism, terrorist groups, and terror attacks. We present the assumption and its supporting documentation.

Assumption 1: *Since the 1990s, worldwide terrorist attacks have been declining but are increasingly lethal. This is true for Israel, the West Bank and the Gaza Strip.*

Many predict that terrorist acts will become more deadly even if attacks become less frequent. The National Intelligence Council (2000) predicts that terrorists will become more sophisticated and more lethal. During the 1990s terrorists became more effective with more casualties and fatalities than ever before (Chalk, 2000). At the same time, a recent U.S. Department of State (2002) report cites a 44 percent decline in terrorist attacks worldwide. Muller (2003) labels this trend “mega terrorism.”

Increase in religiously motivated attacks

Cronin (2002/03) argues that while the overall number of terrorist attacks have decreased, religiously motivated attacks are increasing and are more lethal. A growing number of religiously motivated attacks are targeting Americans. These attacks are producing more casualties per incident.

Deutch (1996) suggests the principle sources of terrorism are radical Islamic fundamentalist groups such as Hezbollah, al-Garnaat, and Hamas. These groups use terror to advance their goal of crushing democratic institutions. Religiously motivated terrorists are more

interested in killing large numbers of adversaries than in drawing attention to their cause (Leader, 1997).

Johnson (2001), however, found that terrorist groups were turning from violence. During the 1990s, incidents of terrorism and fatalities fell to their lowest levels, although some groups still sought to cause mass casualties. Extremist Islamic groups are responsible for very few incidents, but they cause a disproportionate number of casualties.

Assumption 2: *Suicide bombings have been increasing since the mid 1990s.*

Ariel Merari (2002) defines suicidal terrorism as attacks in which the perpetrators deliberately killed themselves while killing others. This form of terrorism emerged from the conflict in Lebanon in 1983. It is an organizational phenomenon, planned and coordinated by someone other than the perpetrator.

Pape (2003) reports that even as the number of terrorist attacks decline, terrorists are becoming more self-destructive. He found more than 25 incidents of terrorists killing themselves in both 2000 and 2001, but only 10 per year in the 1990s and three per year in the 1980s.

Oppression, social conflicts, and the suicide bomber

Some argue that terrorists are driven to suicide by perceived policy injustices. Suicide bombers and their supporters in the Middle East are striking out against historical injustice, political subservience, and social humiliation (Atran, 2003). Suicide terrorism is a strategy used by terrorist organizations to punish their enemies (Pape, 2003). Common enemies have been found in international Zionism and capitalism. Terrorists use violence, not to achieve certain demands, but to punish the common enemy (Raman, 2001). Economic strangulation by Israel, and harassment and humiliation of the Palestinians motivate groups like Hamas and Islamic Jihad to engage in terror (Blanche, 2003).

Suicide bombing is effective because there are many large groups to target. Potential bombers are plentiful, and suicide bombing is very hard to predict or detect beforehand (Atran, 2003). Terrorists see violence, even if it involves indiscriminate killing, as their only effective response to oppression and social conflict (Laqueur, 1998). Laqueur once argued that terrorists were shifting from specific targets, such as public officials, to more indiscriminate killing (Laqueur, 1997). However, later Laqueur changed his view, stating that suicide bombers, reacting to real oppression, aim at assassinating rulers and officials and go to great lengths to avoid hurting bystanders (Levine, 2003).

Ethnic expressions, religion and economics

Several scholars discount the effect of poverty and religious extremism on terrorism. It is not religion but the expression of ethnicity and nationalism that turns people to martyrdom, argues Morris (1996). Pape (2003) agrees and finds no connection between Islamic fundamentalism (or any other religion) and suicide attacks. Others use religious themes to strengthen the bomber's resolve but religion does not precipitate terror attacks (Merari, 2002). Some, however, contend that suicide bombers are religiously motivated (Atran, 2003; Cronin, 2003/03). Blanche (2003) identifies Hamas and Islamic Jihad as religiously motivated operations involved in terror.

While agreeing that ethnic expression plays an important role, John Thompson argues the importance of economic factors (Morris, 1996). Terrorism does not require extensive resources. Suicide bombings are relatively inexpensive and do not require an escape plan (Atran, 2003).

Suicide attacks are organized, not isolated or random

It has been argued that organized groups carefully orchestrate suicide attacks. Robert Pape (2003) documented 187 acts of suicide terrorism (not including instances explicitly

authorized by a state) occurring between 1983 and 2001. Ninety-five percent of these incidents were part of "organized, coherent campaigns" by terror groups. When the groups' leaders announced an end to attacks, they ceased. Laqueur points out that suicide terrorism needs someone to manage the recruits (Sinai, 2003). Organizations, such as Hamas Brigades, seek out specific candidates for suicide missions (Morris, 1996).

Ripley (2002) agrees that suicide bombings are sponsored by organizations. These organizations pay the bomber's funeral expenses, provide a pension, health care, and educational expenses for the bomber's family, as well as document and distribute the bomber's last words to the media. Furthermore, former Iraqi President Saddam Hussein paid \$20,000 to the family of suicide bombers (Ripley, 2002). Suicide attacks allow the attackers to become martyrs and financially reward their families (Van Natta, 2003).

Suicide bombers are part of a "well-organized infrastructure of Islamic militants that operate in Gaza and the West Bank." (Emerson, 1997) Emerson notes that in 1996, Yasser Arafat allowed Hamas to attack Israelis if done from areas not directly under Arafat's control. Israel then sought an international treaty to ban financial support from states or organizations to the families of suicide bombers (Blanche, 2003).

According to Goldsborough (2002), the Oslo Accord of 1993 exchanged land for peace and froze new Israeli settlements in the West Bank and Gaza Strip during negotiations. When Palestinian support for the Oslo Accord peaked at 80 percent in 1996, suicide bombings declined. By 2000, suicide bombing resumed when Arafat failed to deliver Palestinian independence and good governance.

Bruce Hoffman (1997) argued that terror attacks are generally carefully planned and designed to communicate a message. Attacks reflect the terrorists' motivations, resources, and

the “target audience.” The tactics, targets, and choice of weapons are determined by the terrorists’ ideology and are designed to avoid alienating their constituency.

Terrorists are opportunistic. Falouii states that Ariel Sharon's visit to the Temple Mount was not the cause of the subsequent uprising (intifada). The intifada was a planned, rather than a spontaneous action, to reject American demands after peace talks failed (Lahoud, 2001).

Assumption 3: *In terms of casualties, suicide attacks are the most effective form of terrorism.*

Suicide attacks kill more people than any other lethal form of terrorism (Bacon, 2003; Cronin, 2003; Sinai, 2003). According a Rand Corporation study, suicide attacks on average kill four times more people than other acts of terrorism. Two-thirds of all suicide attacks on Israel occurred between September 2000 and June 2002, with 50 percent of deaths from suicide bombings (Hoffman, 2003).

Suicide attacks are effective at creating mass casualties

Suicide attacks are particularly effective in creating large numbers of casualties (Cronin, 2003). In the last two decades of the twentieth century, suicide attacks accounted for three percent of all terrorist attacks but resulted in nearly half of all deaths from terrorism. In Palestine between 2000 and 2002, suicide attacks comprised one percent of all acts of terror but caused 44 percent of Israeli casualties (Cronin, 2003).

Suicide attacks drive out the forces of democratic government

Pape argues that suicide terrorism is effective in defeating Western style democracies. Of 188 suicide terror events between 1980 and 2001, Pape found that 95 percent were part of an organized political campaign against a democratic government (Wolfson, 2003). Suicide terrorism has been used by Hezbollah and Hamas against Israel, by Tamil terrorists against the Sri Lankan government, and by Hezbollah to force the U.S. and France from Lebanon in 1983

(Wolfson, 2003). Terrorists do not restrict their attacks to government forces and seem to be engaging in more indiscriminate killing (Laqueur, 1997).

Why are suicide attacks effective?

Although terrorists use both guns and bombs, it is easier to inflict mass casualties with bombs (Chalk, 2000). According to Ranstorp, suicide bombers assimilate into the population and attack with surprise to shock and cause disproportionate impact (Van Natta, 2003). Bombs are the easiest way to kill a large number of people in a single attack (Parker, 2003). Terrorists have embraced the suicide bomb attack, observes Van Natta (2003), because random and gruesome violent acts produce devastating psychological effects that command attention.

Stern noted that suicide bombers are financially cost-effective in terms of the number of terrorists' lives put at risk (Van Natta, 2003). Spending billions of dollars on defense provides no realistic protection against suicide bombers (Blanche, 2003). A suicide mission, observed Hassan, entails only a willing man and some cheap supplies (Atran, 2003; Also see Van Natta, 2003). Bombers are expendable and generate public support and potential recruits, while interdicting bombers and rooting out their leaders is extremely difficult (Atran, 2003).

Assumption 4: *Suicide attacks worldwide are increasing, while other types of terrorism are declining.*

The frequency and violence of suicide bombings has escalated with more bombings in February 2002 than there were from 1993 to 2000 (Atran, 2003). Terror attacks have decreased almost fifty percent, from 666 attacks in 1987 to 348 attacks in 2001, but suicide terrorism rose rapidly in recent years as terror groups achieve their political objectives (Pape, 2003). Pape contends that six of the eleven suicide campaigns from 1980 to 2001 produced significant policy change (Wolfson, 2003).

Assumption 5: *Most terrorists are content with firearms and bombs.*

Bombs and guns are the conventional weapons of terrorists. Guns are often easier to obtain, but bombs are the easiest way to kill a large number of people in a single attack (Parker, 2003). Shanab observes that bombings do not require a lot of training, while using firearms takes training, time, and some luck (Van Natta, 2003). Bombs inflict mass casualties with fewer obstacles, and their sporadic use makes them unpredictable (Chalk, 2000). From 1988 to 2002, bombs were used in 87 percent of the 776 attacks against U.S. interests here and abroad (Parker, 2003).

Assumption 6: *Terrorists want attention, not a lot of deaths.*

”Terrorists want a lot of people watching and a lot of people listening and not a lot of people dead.” (Jenkins, 1975) Before September 11th, fewer than 20 percent of terror incidents involved fatalities; of fatal attacks, two-thirds involved only one death. Fewer than two percent of terror attacks involved 10 or more fatalities. The low fatality rate is derived from both moral and political considerations. Terrorists try to avoid provoking public revulsion and alienating their constituents. There is always a trade-off, though. Terrorist incidents with many victims are more likely to get media coverage (Johnson, 2001). It is the violence and surprise that gets headlines (Dyer, 2003).

Terrorists seek publicity through violence, and a conventional attack receives less unfavorable publicity (Laqueur, 1997). Terrorists shy from unconventional weapons and overkill because guns and conventional bombs are sufficient to achieve their aims (Laqueur, 1997). The death toll from terrorism rarely exceeds dozens a day (Dyer, 2003). Terrorists seek a political victory and rely upon the mass media to exaggerate the drama and violence of their acts (Dyer, 2003). Levine (2003), however, disputes this notion and contends that terrorists are not selective in their killing and do not worry about killing bystanders.

Hoffman points out that from the 1960s to 1980s, politico-ideological, ethno-nationalist, and separatist organizations dominated terrorism. These groups sought independence from colonial rule or a new social order. They avoided causing mass casualties for fear of undermining political support and risk government retaliation. The end of the Cold War brought the emergence of groups with less comprehensible nationalist, ideological, and religious motivations. These groups show little concern for public image or causing mass civilian casualties. Religious groups that declare a Jihad, or holy war, against another nation consider its people, not just its officials, as the enemy. Moreover, religious terrorist groups seek to satisfy their own goals (e.g., ascend to heaven) rather than to win favor with an external constituency (Enders, n.d.).

Limitations of Available Data

While information on terrorism is plentiful, the inconsistency of reported incidents of terror is problematic. The following discussion illustrates the difficulties in measuring terrorism.

A U.S. Department of State document, “Patterns of Global Terrorism 2001,” reported Israeli-Palestinian violence escalated in 2001, and terror attacks became more frequent and lethal.¹ The report states that nearly 200 people were killed in terrorist attacks. Missing from the report, however, were two Hamas bombings that killed 20 and injured 140 and two actions by Palestine Islamic Jihad (PIJ), a bombing that killed two and injured 11 and a shooting that killed 3 and injured 50.²

The Anti Defamation League/International Policy Institute for Counter-Terrorism (ADL/ICT) database reported 121 attacks in 2001 with 207 people killed, and the National Memorial Institute for the Prevention of Terrorism (MIPT) database reported 237 attacks and

¹ US Department of State “Patterns of Global Terrorism”, 2001 -<http://www.state.gov/s/ct/rls/pgtrpt/2001/>

² As noted by Levitt, Matthew: “Targeting Terror; U.S. Policy Toward Middle Eastern State-Sponsors and Terrorist Organizations, Post 9/11. The Washington Institute for Near East Policy, (2002, pg 20)

117 killed. If we use “Patterns” as the standard, then ADL/ICT represents an overage of about 7 more people killed and MIPT an underage of about 80 people killed. An even greater discrepancy occurs when we look at reports of Hamas activity. “Patterns of Global Terrorism 2002” states Hamas conducted over 50 attacks in 2002. The MIPT data only list 24 attacks, and the ADL/ICT data lists 26 attacks. Again if we use “Patterns” as the standard, somewhere there are 24 to 26 attacks that were not credited to Hamas in the MIPT and ADL/ICT reports.

METHODOLOGY

Data Collection

We examined terror attacks in Israel, the West Bank, and Gaza from January 1, 2001 through December 31, 2002. Our examination of existing data sources revealed little consistency in the reported number of attacks and victims. Huge discrepancies were found when any comparison was attempted. Our first task was to develop an accurate database.

We began with data from the Anti Defamation League/International Policy Institute for Counter-Terrorism (ADL/ICT) database. At present the ADL/ICT database includes selected terror attacks for the years 1986 to the present. The database is not exhaustive, but is updated on a monthly basis. We compared the ADL/ICT data to other databases, websites that report terror activity, files from an Israeli newspaper, and other published reports on terrorist activities.

TABLE ONE ABOUT HERE

Each source had its own definition of terrorism; therefore, we found discrepancies in the numbers. We examined each reported incident. When sources reported the same information, it was included in the analysis. When discrepancies were found, we examined all sources to determine the number of people involved in attacks and the number of victims. Obviously, this involved some estimation and subjectivity, but we tried to create a defensible, albeit a

conservative, database. When discrepancies prevented reasonable estimation, the event was not included in the study.

Selection of Data

Our purpose was to study terrorist groups and their methods in Israel, the West Bank, and Gaza. We used the following protocol to create a verifiable database:

- An incident was included if a terror organization(s) claimed responsibility for an attack and that organization was listed by the United States Department of State as a Foreign Terrorist Organizations (FTO).

OR

- If a terror organization claiming responsibility did not belong to the FTO list or no group claimed responsibility for an attack but the attacker(s) was described as a “Palestine gunman,” “Palestine bomber,” or “Palestine terrorist” the incident was coded as “Unknown”.

AND IF...

- Attack data was in the study area and could be confirmed as occurring in Israel, the West Bank or Gaza.

AND IF...

- The method or tactic used in the incident could be confirmed.

Exclusion

Incidents were excluded from analysis if:

- No terrorist organization claimed responsibility, or there was no description of the attacker.
- There was no description of where the attack occurred or it was not in the study area.

- The attacks that did not reach fruition (e.g. attacker was killed before the bomb was detonated or the bomb was defused by police).

In addition, actions by the victim to repel the attack were not included. Terrorists were not included in our count of the killed or injured—only the victims.

ADL/ICT SELECTION PROCESS

We found 140 attacks in the ADL/ICT database for 2001. After the excluding non-conforming data, 122 attacks (Israel, 51; the West Bank, 60, Gaza, 11) were determined usable for our study.

For 2002, the ADL/ICT website listed 227 attacks in Israel, 174 attacks in the West Bank, and 68 attacks in Gaza, for a total of 469. When we counted the number of attacks to confirm accuracy, we found discrepancies we could not correct. We determined there were 124 verifiable attacks (Israel, 57; the West Bank, 45; and Gaza, 22).

MIPT DATABASE

The National Memorial Institute for the Prevention of Terrorism (MIPT) is located in Oklahoma City and is dedicated to preventing terrorism. We found its database useful for confirming information from the ADL/ICT database but misleading as a primary source. Many of the incidents reported on the MIPT website could not be confirmed by other sources. The MIPT data greatly overstated terror activity.

METHODS AND CODING

We began with the raw data from the Anti Defamation League/International Policy Institute for Counter-Terrorism database and all applicable data incorporated into our data set. We examined six categories of data; five FTO's (Hamas, Fatah, al-Aqsa Martyrs Brigades,

Popular Front for the Liberation of Palestine, Palestinian Islamic Jihad) and one for unknown groups.

We examined three aspects of attacks. First, we defined attacks as attempts by terror groups to kill, injure, and destroy property. Secondly, we examined attacks resulting in deaths. Finally, we examined attacks causing injury but no deaths.

We found thirty-one methods of attack used by terrorists. Four factors were used to consolidate the data into useable categories. Each method was evaluated as to:

- Weapon Severity. Weapon Severity examines both the power (the ability to inflict mass injuries and death) and efficiency (amount the time and ability to quickly regenerate/reload the weapon).
- Weapon Lethality. Weapon Lethality examines the potential to cause multiple deaths by using a specific weapon.
- Weapon Attack/ Kill Ratio. Weapon Attack/Kill Ratio is the statistical average of people killed per attack by a specific weapon. The kill ratio formula is based on the number of attacks and people killed.
- Weapon Accessibility. Weapon Accessibility reflects the availability of the terrorist “weapon of choice” for a specific attack. State sponsorship, corporate financing, political causes, and religious beliefs sometimes determine weapon accessibility.

We applied these factors to three methods of delivery.

Light Method. Light Methods include small arms fire, stabbing, lynching, physical beatings, bludgeoning, stoning, or running over with a vehicle.

TABLE TWO ABOUT HERE

Heavy Method. Heavy Methods involve rockets, grenades, missiles, and car/truck/building bombings.

TABLE THREE ABOUT HERE

Suicide Bombing. Suicide bombing is the use of explosive devices to kill yourself and others.

TABLE FOUR ABOUT HERE

RESULTS

During the study period, there were 246 terrorist attacks that produced 4,341 victims; 621 people were killed and 3,720 injured in Israel, the West Bank, and Gaza. Eighteen of these attacks killed 10 or more people (7% of all attacks). In 2001, there were 121 attacks that killed 207 and injured 1,356. In 2002, the number of attacks increased slightly to 125 attacks but the fatalities (414) and injuries (2,364) increased significantly.

When attack data are aggregated, extreme cases (outliers) can skew the results. We found that overall, terror attacks are more lethal than generally reported, and a single terror group (Hamas) using a specific tactic (suicide bombing) is responsible for the increased fatalities.

Terror Organizations

Hamas

During the study period, Hamas committed more suicide bombing attacks and killed more people than any other group. Half of its attacks were suicide bombings accounting for 38 percent (24) of the suicide bombing attacks and 72 percent (223) of all fatalities. Hamas is the only terrorist group that prefers suicide bombing to other means of terrorism. It used suicide bombing almost two to one over Light Methods and almost three to one over Heavy Methods. When all types of terrorist attacks are considered, Hamas committed 20 percent (48) of all terror attacks and was responsible for 50 percent (310) of the deaths. Hamas has more frequently killed 10 or more people in suicide attacks than other terror groups. From 2001 through 2002, there

were 63 suicide terror attacks with 13 of those attacks killing 10 or more people. Hamas claimed responsibility for 11 of these attacks for a death toll of 193 people.

Fatah

Fatah committed over 22 percent (53) of the terrorist attacks and was responsible for 12 percent (77) of deaths. Fatah was more likely to use Light Method attacks committing 46 or one-third of all such attacks. It perpetrated 57 percent (32) of its attacks in the West Bank and were the most active group to strike there. Fatah activities declined during the study period (2001 0.27, $p < .001$; 2002, -0.27, $p < .001$).

Palestinian Islamic Jihad

The Palestinian Islamic Jihad's (PIJ) 35 attacks (14%), that killed 72 people, were divided nearly equally divided between the two years of our study. The PIJ showed little preference in its method of attack but perpetrated 61 percent (22) of its attacks in Israel.

al-Aqsa Martyrs' Brigades

The al-Aqsa Martyrs' Brigades (Martyrs') committed 58 attacks (24%) and killed 122. It was responsible for more attacks (27) in Israel than any other group. Martyrs' use Light Methods in 72.9 percent of their attacks, and its activities increased during the study period from 15 attacks in 2001 (-0.27, $p < .001$) to 44 in 2002 (0.27, $p < .001$).

Popular Front for the Liberation of Palestine

The Popular Front for the Liberation of Palestine (PFLP) committed 13 attacks (5%) and killed 26 during the period of study. It was more active in 2001 committing nine attacks (69% of its two year total). Forty-six percent (six) of its attacks targeted Israel. The PFLP rarely used suicide bombing (two attacks, 15%), preferring Heavy Methods (six attacks, 46%) and Light Methods (five attacks, 38%).

Unknown Groups

Unknown groups committed 38 attacks (15%) resulting in 30 deaths. Even though the attacks increased over 37 percent (six) in 2002, the number of deaths (14) declined by over 12 percent. Light Methods were used most frequently (71%) to produce 80 percent (24) of the deaths.

Methods of Attack

Light Methods were used in nearly 60 percent (147) of attacks and caused 41 percent of the casualties (256). Heavy Methods were used in only 14 percent (36) of attacks and causes less than one percent (36) of casualties. Suicide Bombing attacks were employed over 25 percent (63) of the time and resulted in 49 percent (307) of casualties.

Suicide attacks increased by 9.4 percent (13) and fatalities increased by nine percent (127). Failed suicide attacks increased less than two percent (three). Suicide attacks that killed 10 or more people increased by 10 percent (five), and the lethality of attacks increased 11 percent.

The data indicate that terror groups prefer to use specific methods in targeted locations. Suicide bombing were positively associated with attacks on Israel (0.37, $p < .001$) while Light Methods were negatively correlated (-0.42, $p < .001$) with attacks on Israel. Conversely, in the West Bank, Light Methods were positively correlated (0.45, $p < .001$) and Suicide Bombing was negatively correlated (-0.29, $p < .001$). Heavy Methods were positively correlated (0.21, $p < .001$) with attacks in the Gaza Strip. Based on the data, these correlations seem to suggest that the terrorist groups studied are highly organized in their choice of targets and the methods they use.

Suicide Bombings

Over 25 percent (63) of attacks were suicide bombings that resulted in 307 people killed (48% of all fatalities). Our findings were similar to a RAND study of terrorism in Israel that

found suicide bombings were responsible for 50 percent of all deaths from terrorism (Hoffman, 2003). In 2001, there were 25 suicide bombings (20.6% of all attacks) resulting in 90 deaths (43.5% of all fatalities). In 2002, there were 38 suicide bombings (30% of all attacks) accounting for 217 deaths (52.5% of all fatalities). Overall, terrorists targeted Israel with 74.6 percent (47) of all suicide bombings.

Suicide Bombings and People Killed per Attack

Failed suicide bombings can skew our interpretation of the effectiveness of terror bombing. Of the 63 suicide bombings, 27 percent (17) killed only the terrorist (seven in 2001, 10 in 2002); nearly 24 percent (15) killed one person. Fifty-one percent (32) of suicide bombings killed one or fewer victims, but suicide bombing was effective in killing at least one person 73 percent (46) of the time. About 21 percent of all suicide bombing attacks (13) killed 10 or more people; these attacks were responsible for 317 fatalities (49.5% of all the people killed).

Suicide bombing alone, however, does not account for the increase in deaths. Eighty-three percent of all suicide bombings killed three or fewer people. The normal result of a suicide bombing, therefore, consists of killing very few people but injuring many. The average (mean) death rate from 2001 through 2002 for groups engaged in suicide bombing is as follows: Unknown Groups, 0.67 people per attack, PFLP, 1.5 people per attack, Fatah Tanzim, 1.5 people per attack, PIJ, 1.69 people per attack, al-Aqsa Martyrs Brigade, 2.64 people per attack, and Hamas, 9.12 people per attack.

Suicide bombings are not more effective at creating casualties for terrorist groups. There are no data to suggest that terrorists prefer bombs to Light Methods (handguns/firearms). Table Four shows the effectiveness of terrorists in using each method, (e.g. 1/1 is one person killed in one attack; 3/7 is 3 persons killed in 7 attacks). The mean is the average number of people killed per attack.

TABLE FIVE ABOUT HERE

As Table Five shows, Light Methods were always at least 70 percent effective in killing. The most inconsistent of the methods appears to be the Heavy Methods. Hamas was 91.2 percent effective in killing by suicide bombing. The high mean (9.12) achieved by Hamas for suicide bombing distorted the overall picture when the data are aggregated with other groups.

Brian Jenkins found that fewer than 20 percent of terrorist attacks resulted in fatalities and sixty-six percent of these attacks resulted in only one death.³ We found that 190 of the 246 terror attacks (77.2%) involved fatalities (killed at least one person) and over half of these (55%) involved only one death. We also found that fewer than two percent of terrorist attacks kill 10 or more people and 22.8 percent of all attacks kill no one.

Attacks by Location

The increasing lethality of terrorism can be attributed to the location of the attacks. The number of suicide bombings and deaths decreased in the West Bank and Gaza Strip.

The West Bank

Terror attacks declined 23 percent in the West Bank in 2002 (from 60 to 46 attacks). Although attacks declined, the death toll increased nearly 35 percent (25) to 97 from 72 in 2001. Overall, 169 people died in 106 terrorist attacks in the two years we studied. Fatah was the most active group with over 30 percent (32) of the attacks. When we examined where individual terror groups focused their attacks, unknown groups committed 61.5 percent of their attacks in the West Bank compared to Fatah (57.1%) and Martyrs of al-Aqsa (44.1%).

All together, 577 people were killed or injured in West Bank terrorist attacks from 2001 through 2002. Hamas killed the greatest number of people (56) and injured 219 in their 14

³ Jenkins, Brian. "Future Trends in International Terrorism," in Slater, R.O., and Stohl, M. (Eds.), "Current Perspectives on International Terrorism." London: The MacMiillan Press. 1988.

attacks in the West Bank. These 275 injuries and casualties accounted for 47 percent of the West Bank's total killed and injured. On the other end of the spectrum, PIJ was the least active group killing or injuring only 27 people. Over 50 percent of all terror attacks were in the West Bank. August was a particularly dangerous month with 14 attacks.

Gaza

In 2002, terror attacks doubled to 22 and the death toll increased 93 percent (29) in Gaza. There were three suicide bombings, two by Hamas and one by Fatah. The PFLP is the only terror group in our study that had no attacks in Gaza.

Israel

There were 107 terror attacks on Israel from 2001 through 2002 bring death or injury to 3,571 people. Hamas committed 54.2 percent and Martyrs of al-Aqsa committed 45.8 percent of their terror acts in Israel. Suicide bombing in Israel increased by 17 and deaths by 133. Hamas was responsible for 74 of the 133 deaths. Conversely, there was a significant decrease (10) in the number of terrorist attacks and only a moderate increase in people killed (28) by Light and Heavy Methods in Israel.

Evaluation of Assumptions

Assumption 1: *Since the 1990s, worldwide terror attacks have been declining but are increasingly lethal. This is true for Israel, the West Bank and the Gaza Strip.*

Our data cannot speak for levels of terrorism worldwide, but overall we found a slight increase in the number of attacks (four) and a doubling of the deaths. Assumption 1 is correct when applied to Israel and the West Bank where we found attacks declined and a moderate increase in deaths. In Gaza, however, attacks doubled and deaths increased by 93 percent.

Assumption 2: *Suicide bombings have been increasing since the mid 1990s.*

Israel was the target of 76 percent of the suicide bombings in the Middle East. Suicide bombings increased in Israel with an additional 17 attacks while decreasing slightly (two) in the West Bank and Gaza. Assumption 2 holds true only for Israel.

Assumption 3: *In terms of casualties, suicide attacks are the most effective form of terrorism.*

Suicide attacks were more effective in creating casualties. Twenty-nine percent of attacks were suicide bombings that produced 49 percent of casualties. In contrast, Light Methods were employed 60 percent of the time and produced 41 percent of casualties. Suicide attacks, however, do not always produce mass casualties. Fifty-one percent of suicide attacks killed one or fewer victims, and 83 percent of the attacks killed three or fewer victims. Hamas was particularly effective in suicide attacks and its activity had significant impact. Suicide bombing is a very effective method of attack for Hamas but less so for other terror groups.

Assumption 4: *Suicide attacks worldwide are increasing, while other types of terrorism are declining.*

Again, we cannot speak to worldwide levels of terrorism from our data, however, we did find that terrorist attacks increased slightly and suicide attacks increased by over nine percent in our study area. Assumption 4 partially describes terrorism in our study area.

Assumption 5: *Most terrorists are content with firearms and bombs.*

As stated above, Light Methods were used by terrorist 60 percent of the time resulting in 41 percent of casualties, while suicide bombing, used in 25 percent of attacks, produced 49 percent of casualties. Light Methods were 70 percent effective in killing victims. Our findings support Assumption 5.

Assumption 6: *Terrorists want attention, not a lot of deaths.*

Deaths from terrorism are increasing. Again, the activities of Hamas skew the interpretation of the data. Hamas caused 50 percent of deaths from terrorism, and perpetrated

most of the suicide bombings that killed 10 or more victims. Assumption 6 may be true for other terror groups, but Hamas appears focused on killing its victims.

CONCLUSION

While many of our findings will not surprise those who have studied terrorism in the Middle East, what does stand out is the misleading nature of much of the commonly cited terrorism data. There is no shortage of predictions of future attacks, death rates, casualties, and tactics. Why does our work differ from theirs? In part it stems from the problem of working with secondary data when definitions are inconsistent; however, most acts of terror that are claimed by a terror group are in the ADL/ICT database. Apart from that, we return to our methodological issue of ensuring we have a reliable and verifiable database for all to study.

We found that some terrorist groups prefer specific methods and tactics and that their tactics vary depending on location. This makes sense considering the tight security in Israel shapes terrorists options. Carrying a weapon such as an automatic rifle or rocket propelled grenade launcher is not feasible; however, sneaking in wearing a suicide vest may be.

We found that the current assumption that suicide attacks are the most productive form of terrorism is not supported by our data. In fact, our data show small arms (Light Methods) are a more productive form of killing.

Our data indicate Hamas tries and succeeds in killing more people than other terror groups. This makes Hamas unique. Much as Brian Jenkins described (terrorists want a lot of people...listening...not killed), four of the five terrorist groups studied seem to abide by this principle. Because it consistently attempts to kill large numbers of people in Israel and frequently engage in suicide bombing, Hamas demonstrates a different operating philosophy than other terror groups.

We support the contention that suicide bombings are on the rise, but this stems from the activities of Hamas. Israel suffers the most suicide bombing attacks but is targeted less by other forms of terrorism. Finally, failed suicide bombing attacks have increased, but over 26 percent of the time only the bomber is killed. When bombing data are aggregated, interpretation can be skewed by outliers (failed attacks).

FURTHER STUDIES

We acknowledge the limitations of our study and that many questions remain unanswered. Questions remain about how the recent deaths of Hamas leaders may affect suicide bombings. Also, will the captured Iraq President Saddam Hussein, who some have connected to Hamas, affect the number of suicide bombings?

The issue of religion and suicide bombing needs further exploration. We did not examine the possible link between terrorism and perceived oppression. We leave for further study the question of how to define suicide attacks. Despite the decline in terror incidents, more terrorists intend to kill themselves along with their victims. Do we count all terror attempts or only successful suicide bombings? How do we deal with failed attempts, defused bombs, or captured suicide bombers? As with any new and growing area of study, we need to come to consensus on our data collection, measures, and definitions.

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Table One. Data Sources

<i>Databases</i>	
<ol style="list-style-type: none"> 1. The Oklahoma City National Memorial Institute for Preventing of Terrorism (MIPT) Database; http://www.mipt.org 2. The Anti Defamation League - The International Policy Institute for Counter-Terrorism Database; http://www.adl.org/ict/default.asp 	
<i>Terrorism Websites</i>	
<ol style="list-style-type: none"> 1. The United States Air Force Counter Proliferation Center - http://www.au.af.mil/au/awc/awcgate/awc-cps.htm 2. International Terrorism and Political Violence Incidents Database (ITAPVI) http://mastrapa.home.mindspring.com/ptd/itapvi/ 3. The Washington Post Online - http://www.washingtonpost.com/wp-dyn/world/issues/terrordata/ 4. The U.S. Department of State “Patterns of Global Terrorism Report” - http://www.state.gov/s/ct/rls/pgtrpt 5. Center for Defense and International Studies. Has 1945 to 1998 data on international terrorist incidents http://www.cdiss.org/terror.htm 6. International Relations and Security Trends Database http://first.sipri.org/index.php 	
<i>Article</i>	
<ul style="list-style-type: none"> • Erased In A Moment: Suicide Bombing Attacks Against Israeli Civilians http://www.hrw.org/reports/2002/isrl-pa/ISRAELPA1002.pdf 	
<i>Newspaper</i>	
<ul style="list-style-type: none"> • Israel Newspaper, The Ha’aretz daily http://www.haaretzdaily.com/ 	

Table Two. Light Methods

Severity	Low in severity, these methods are normally for targeted killing. Can cause masses to be wounded if more than one weapon is used. High potential for injury and limited possibility for damage to property and infrastructure.
Lethality	Normally the potential to cause multiple deaths is limited by the number of people using this method at the same time.
Attack/ Kill Ratio;	Very high ratio; one attack by one person using this method almost always equals one fatality. Mean; Killed per attack, 1.74; Mean; Casualties (Killed and Injured) per attack, 7.27
Weapon Accessibility	Weapon very accessible to the common person.

Table Three. Heavy Methods

Severity	High potential for severity could create many fatalities and wounded.
Lethality	High potential to cause mass wounded and multiple deaths. High potential for damage to property and infrastructure.
Attack/ Kill Ratio;	Medium to low ratio; one attack by this method usually equals many injuries compared to those killed. Mean; Killed per attack, 1.69; Mean; Casualties (Killed and Injured) per attack, 16.86
Weapon Accessibility	These weapons are difficult to purchase by the common person. These types of weapons are mostly held by groups or organizations that are well-financed by foreign governments. However, wealthy individuals that support resistance movements may supply many of these weapons.

Table Four. Suicide Bombing

Severity	High potential for severity could create many fatalities and wounded. The bomber usually dies in the attack.
Lethality	High potential to cause mass wounded and multiple deaths. High potential for damage to property and infrastructure.
Attack/ Kill Ratio;	Medium to low ratio; one attack almost always means the bomber is killed; however, the bomber normally ends up injuring more people than they kill. Mean; Killed per attack, 4.87; Mean; Casualties (Killed and Injured) per attack, 42.30
Weapon Accessibility	Again, these methods are hard to purchase by the common person. The “Suicide Vest” is sold mostly to groups or organizations that are well financed. Foreign governments that support resistance movements manufacture and supply many of these vests. Recruiting and indoctrinating takes time. Therefore, the act of a suicide bomber is somewhat planned.

Table Five. Effectiveness of Methods

Group	Light	Heavy	Suicide Bombing
Unknown	19/27	2/4	4/8
Effective	70%	50%	50%
Mean Killed	.89	.63	.50
Al-Aqsa	42/43	2/2	9/14
Effective	97.6%	100%	.64%
Mean	1.88	2.0	2.6
PFLP	3/3	0/3	2/2
Effective	100%	0%	100%
Mean	2.3	0	2.0
PIJ	10/13	2/10	7/13
Effective	77%	20%	53.8%
Mean	1.69	1.5	2.77
Fatah	39/46	4/4	5/6
Effective	84.7%	100%	83.3%
Mean	1.07	4.75	1.5
Hamas	13/15	6/9	21/23
Effective	86.6%	66.6%	91.3%
Mean	4.87	2.0	9.13