Religion and Violence: Religion, Terrorism and Public Goods Testing the Club Model

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Prime Minister’s Office, Algeria – 4/11/07
1 Al Qaeda suicide bomber, 12 dead, 112 injured
The Global War on Terrorism

Fatalities due to Terrorist Attacks Worldwide 1998-2006

<table>
<thead>
<tr>
<th></th>
<th>Fatalities</th>
<th>Fatalities / month</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Pre 9/11</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>January 98 –</td>
<td>4,800</td>
<td>109</td>
</tr>
<tr>
<td>August 01</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Post 9/11</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>October 01 –</td>
<td>10,000*</td>
<td>167*</td>
</tr>
<tr>
<td>September 06</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Source: Memorial Institute for the Prevention of Terrorism, Oklahoma City, [www.tkb.org](http://www.tkb.org)

- Excluding casualties in Iraq and Afghanistan. Including those fatalities the 10/01 – 9/06 figure is 447 rather than 167.

- Note change in organizations threatening civilians and governments.
Hamas 2006
Taliban
Hezbollah
Jewish Underground
Muqtada al-Sadr’s Mahdi Army
A Violent Puzzle Among Religious Sects

The Violent Puzzles:

• Why are radical religious militias and terrorists so efficient at violence?
  - Hamas
  - Hizbullah
  - Taliban
  - Al Sadr
  - Al Qaeda

They make the secular terrorist organizations of the 60s-90s look lame

• Why Suicide Attacks?

• Our approach: Draw on
  a) insurgency literature in IR,
  b) economics/sociology of religion,
  c) agency and collective action in organizations
Outline

0. Introduction: The Violent Puzzles
1. Background: Hamas, Hezbollah, Taliban, Insurgency and Suicide Attacks
2. Framework: Terrorist Clubs vs. Hard Targets
3. Testing: Clubs, Hard Targets and Suicide Attacks
4. Policy Implications: Counterterrorism, Economic Development and Nation Building
5. Street Lights: Some results from Iraq
What Motivates Terrorists?  
The Afterlife and Other Myths

• Is the advantage of radical religious terrorists due to the *superior motivation that stems from theology and beliefs*?  
  - An ideology of hate?  
  - Promises in the afterlife?

• Israeli psychiatrist Ariel Merari has spent years interviewing suicide attackers, their families and friends.

• He finds that:  
  - Hamas and Jihad suicide attackers *never* mention religion or virgins in heaven as their primary motivation

• Consistent with experience in other countries  
  - many suicide attackers worldwide are *not religious radicals*, including the Tamil “Tigers” and the majority of attackers in Lebanon in the 1990s.
So what does motivate suicide attackers?

• Merari finds that there is no specific primary motivation
  - not economic depravity,
  - not depressed or suicidal or mentally ill
    - consistent w/ research on Bader-Meinhoff, Red Brigade, ETA
  - not ignorant
  - generally not seeking revenge
• Might be best thought of as well adjusted altruists, who truly believe that their courageous act will help their communities
  - combination of altruism and delusions of self-importance
  - close to profile of rational recruits to sects; triage needed
• Now that’s a frightening thought, because the world is full of self-motivated altruists who are willing to give their lives for some cause
  - and indeed there seems an ample supply of suicidal terrorists
 Organizations

• A reassuring fact: Suicide terrorists, and terrorists in general *almost never act alone*
• Only a *small number of groups* in any given conflict successfully conduct coordinated violence
• Grievances, ethnic diversity, religious diversity do not predict civil wars

• If it isn’t for lack of recruits who want to liberate their countries, then..
  A) Why are there *so few* successful militias and terrorist organizations?
  B) *Why are religious radicals such effective terrorists?*
  C) *Why suicide attacks?*
Suicide Attacks as a Rebel Tactic

- Civil wars 1945-1999 (Fearon-Laitin)
  127 in 69 countries
directly account for 16m fatalities
- Rebel tactic is usually rural insurgency
- Suicide attacks are very rare, but becoming more common
Table 1: Suicide Attacks by Country of Perpetrator

<table>
<thead>
<tr>
<th>Panel A: Civil Wars and Suicide Attacks</th>
<th>1945-1999</th>
<th>2000-2003</th>
</tr>
</thead>
<tbody>
<tr>
<td>Countries with new Civil War</td>
<td>69</td>
<td>na</td>
</tr>
<tr>
<td>Countries whose residents perpetrated Suicide Attack</td>
<td>9</td>
<td>7</td>
</tr>
</tbody>
</table>
Table 1: Suicide Attacks by Country of Perpetrator

<table>
<thead>
<tr>
<th>COUNTRY</th>
<th>SUICIDE ATTACKS 1946-1999</th>
<th>SUICIDE ATTACKS 2000-2003</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sri Lanka</td>
<td>66</td>
<td>21</td>
</tr>
<tr>
<td>Lebanon</td>
<td>44</td>
<td>0</td>
</tr>
<tr>
<td>Israel / Palestine</td>
<td>23</td>
<td>123</td>
</tr>
<tr>
<td>Turkey</td>
<td>14</td>
<td>0</td>
</tr>
<tr>
<td>Saudi Arabia</td>
<td>3</td>
<td>6</td>
</tr>
<tr>
<td>Egypt</td>
<td>1</td>
<td>0</td>
</tr>
<tr>
<td>Algeria</td>
<td>1</td>
<td>0</td>
</tr>
<tr>
<td>Pakistan</td>
<td>1</td>
<td>0</td>
</tr>
<tr>
<td>Syria</td>
<td>1</td>
<td>0</td>
</tr>
<tr>
<td>Iraq</td>
<td>0</td>
<td>20</td>
</tr>
<tr>
<td>Russia</td>
<td>0</td>
<td>20</td>
</tr>
<tr>
<td>India</td>
<td>0</td>
<td>5</td>
</tr>
<tr>
<td>China</td>
<td>0</td>
<td>1</td>
</tr>
<tr>
<td><strong>TOTAL</strong></td>
<td><strong>154</strong></td>
<td><strong>196</strong></td>
</tr>
</tbody>
</table>
TABLE 2: PREDICTORS OF CIVIL WARS AND SUICIDE ATTACKS BETWEEN COUNTRY REGRESSIONS

<table>
<thead>
<tr>
<th>Dependent Variable</th>
<th>Civil War Onset (indicator) 1949-1999</th>
<th>Suicide Attacks 1949-1999</th>
<th>Suicide Attacks 1949-2003</th>
<th>Mean of RHS variable 1949-99 (std. dev.)</th>
</tr>
</thead>
<tbody>
<tr>
<td>log(GDP/capita)</td>
<td>-0.011 (-0.003)</td>
<td>-0.004 (-0.011)</td>
<td>-0.003 (-0.011)</td>
<td>0.01 (0.02)</td>
</tr>
<tr>
<td>log(Mountains)</td>
<td>0.0044 (0.0016)</td>
<td>0.005 (0.007)</td>
<td>-0.0003 (-0.0139)</td>
<td>2.18 (1.40)</td>
</tr>
<tr>
<td>R²</td>
<td>0.11</td>
<td>0.15</td>
<td>0.001</td>
<td>0.004</td>
</tr>
<tr>
<td>N</td>
<td>6575</td>
<td>6575</td>
<td>6575</td>
<td>7172</td>
</tr>
<tr>
<td>Countries</td>
<td>161</td>
<td>161</td>
<td>161</td>
<td>161</td>
</tr>
</tbody>
</table>

Note: Heteroskedasticity-robust standard errors in parentheses. The mean of civil war onset is 0.017. The mean number of suicide attacks is 0.018 from 1949-99, and 0.046 from 1949-2003. The suicide attacks variable counts suicide attacks in a country-year, where the country is that of the perpetrators. Palestinians are coded in Israel. Results are qualitatively robust to the exclusion of Israel.
Religious Differences between Insurgents (Suicide Attackers) and Targeted Victims (Table 3)

Unlike civil wars, this is the only consistent predictor. Why? Because coreligionists are soft targets.
2. Terrorist Clubs vs. Hard Targets

Militia activity - Coordinated rent captured involving violence.
• e.g. attacking occupying army, providing law and order, organizing and carrying out a clandestine activity (like terrorism).
• often involves personal risk.
• Key aspect is sensitivity to defection.
A. Securing a Trade Route

Convoy

Checkposts

Destination

1  2  3  4...

..N-1  N  $B
Securing a Trade Route

\[ C(\{R_i\}) = C(\prod_{i=1}^{N} R_i) \]

Convoy will choose to set out only if all \( R_i = 1 \).

Payoffs: Club extracts surplus \( B \) and shares it equally among members, who buy goods at price \( P \).
Benign local public goods provided by govt., \( G \) and club, \( A \).
Defector’s outside option is \( w_i \), but no access to \( C \) or \( A \).

Incentive compatibility: Member loyal iff

\[(ICC) \quad U\left(\frac{B}{N}, 1, G + C(1) + A(R)\right) \geq U\left(B + w_i, 0, G\right)\]
Securing a Trade Route

\[ C(\{R_i\}) = C(\prod_{i=1}^{N} R_i) \]

If ICC fails this is an N player prisoner’s dilemma, resulting in an unsafe route, no convoy and no rents.

Adverse selection:

Imagine two unobserved types (as above), such that ICC holds if \( w_i = w^H (> w^L) \) for all \( i \).
A club with a costly sacrifice as an initiation rite which successfully excludes all low wage types can secure the route and extract the rent.

E.g., The Taliban

\[ (\text{ICC}) \quad U(\frac{B}{N}, 1, G + C(1) + A(\bar{R})) \geq U(B + w_i, 0, G) \]
Figure 2: Selecting Low Wage Membership Allows Larger Projects
B. Capturing a Hill
3. Clandestine Violence

Defection – The reason so few militias and terrorist organizations survive. *defection is common.*

How do successful militias and terrorist organizations prevent defection?

They have an *organizational advantage.*
An analogous problem: Reducing free riding in Religious Sects

- Sect – a religious group that:
  - imposes extreme **prohibitions** and requires distinctive **sacrifices**
  - views secular society as corrupt, dangerous, and threatening
  - economic life: high levels of **mutual aid**, and local public goods provided through **volunteer work**, e.g. education, health care, law and order, welfare services, orphanages, day care, soccer clubs

How can you trust members to apply full **effort**?

- Internal economies of sects rely on trust-based transactions
  - **sacrifices** are elicited early in life to signal commitment e.g., education, missionary work, jail time
  - prohibitions distance members from market culture
Rational choice approach to religious sects
Iannaccone (1992)

Formally..

\[(1) \quad U_i = U(S_i, R_i, C(\{R_j\})), \text{ where } \begin{align*}
S &\quad \text{consumption}, \\
R &\quad \text{religious activity}, \\
C &\quad \text{local public good}.
\end{align*} \]

\[(2) \quad C(\{R_j\}) = \overline{R} = \sum_{j=1}^{J} \frac{R_j}{J} \quad \text{for } j=1 \text{ to } J. \]

\(C\) could be mutual insurance, health care, education.

\[(3) \quad R = T - H. \quad \text{Budget constraint for time.} \]
\[(4) \quad wH = S. \quad \text{Budget constraint for money.} \]

Figure 1 illustrates optimal religious prohibitions.
Analogy: Seminar as a Club

- A seminar (like this one) is a club, where participants benefit from their own effort “R” and the average R of colleagues.
- A good citizen comes prepared, asks questions, provides good answers, all because she studies.
- Lacking a way to subsidize R, the club would like to tax outside activity of members.
- In principle, a research club should tax, or tithe, if it can. But it typically lacks tax authority.
Optimal Prohibitions for Seminar Participants

- Efficient proxy taxes on outside options might be:
- Prohibit alcohol with nonmembers
- Prohibit beach on Sabbath
- Dress strangely
- Limit eating with nonmembers through dietary restrictions
- Limit communication with outsiders by speaking arcane language

- With enough prohibitions seminar participants would have nothing better to do with their time than study
- Enforcement could be through threat of expulsion or through peer pressure

If this example doesn’t work for you, think of a fraternity (or a team), where $R$ is partying (training) and helping out other members.
Fig 1: Optimal Taxation Through Prohibition

Work hours

Wages

W' / P

W' / P**

W / P

W / P*

Social Planner

Competitive Equilibrium

H

R*

R

R**

R'

R

Religious activity

A

B

C

A'

B'

C'
Maimonides Rationale for Circumcision

- Twelfth century philosopher Rav Moses Maimonides explaining circumcision.
- “It gives to all members of the same faith, i.e., to all believers in the Unity of God, a common bodily sign, so that it is impossible for any one that is a stranger, to say that he belongs to them. For sometimes people say so for the purpose of obtaining some advantage ... ....It is also a fact that there is much mutual love and assistance among people that are united by the same sign when they consider it as [the symbol of] a covenant.

- [The Guide for the Perplexed, late 12th century, translated 1904. Chapter XLIX. Brackets are those of the translator. Italics are my own.]

- Signaling theory won a Nobel Prize in Economics, 9 centuries later
Rationalizing Sacrifices

Imagine heterogeneity in participants’ outside options, \( w_j \), (call them “wages).

Members would prefer that other members have low wages \( w_j \), since that implies higher \( R \) and larger externalities.

Low \( R \) members are free-riders who it would be efficient to exclude, but \( w_j \) is unobserved.
Rational Sacrifice (cont.)

- Voluntary sacrifices of time might exclude high wage individuals but include low wage for an efficient separating equilibrium.

  e.g.s  Insist on an arcane language that takes years to learn

  Religious education with no market value
Figure 1: Rationalizing Sacrifices
## TABLE 2

**DENOMINATIONAL CHARACTERISTICS: NATIONAL DATA, 1984–87**

<table>
<thead>
<tr>
<th></th>
<th>Most Church-like</th>
<th>Church-like</th>
<th>Sect-like</th>
<th>Sects</th>
<th>T</th>
</tr>
</thead>
<tbody>
<tr>
<td>Household income</td>
<td>38.9</td>
<td>31.7</td>
<td>30.8</td>
<td>27.4</td>
<td>6.8</td>
</tr>
<tr>
<td>($1,000/year)</td>
<td>(18.4)</td>
<td>(17.4)</td>
<td>(17.6)</td>
<td>(17.2)</td>
<td></td>
</tr>
<tr>
<td>Respondent education</td>
<td>14.0</td>
<td>12.6</td>
<td>12.0</td>
<td>11.1</td>
<td>10.3</td>
</tr>
<tr>
<td>(years)</td>
<td>(3.00)</td>
<td>(2.82)</td>
<td>(2.59)</td>
<td>(3.10)</td>
<td></td>
</tr>
<tr>
<td>Sunday attendance</td>
<td>21.6</td>
<td>23.0</td>
<td>26.7</td>
<td>33.2</td>
<td>5.6</td>
</tr>
<tr>
<td>(services/year)</td>
<td>(22.2)</td>
<td>(22.3)</td>
<td>(22.9)</td>
<td>(23.3)</td>
<td></td>
</tr>
<tr>
<td>Weekday attendance</td>
<td>3.1</td>
<td>7.8</td>
<td>14.5</td>
<td>37.9</td>
<td>10.8</td>
</tr>
<tr>
<td>(percentage attending weekday meetings)</td>
<td>(17.3)</td>
<td>(26.8)</td>
<td>(35.2)</td>
<td>(48.6)</td>
<td></td>
</tr>
<tr>
<td>Church contributions</td>
<td>663</td>
<td>551</td>
<td>725</td>
<td>738</td>
<td>.4</td>
</tr>
<tr>
<td>($/year)</td>
<td>(1,072)</td>
<td>(914)</td>
<td>(1,068)</td>
<td>(1,004)</td>
<td></td>
</tr>
<tr>
<td>Church contributions</td>
<td>1.63</td>
<td>1.98</td>
<td>2.24</td>
<td>3.11</td>
<td>2.3</td>
</tr>
<tr>
<td>(percentage of yearly income)</td>
<td>(2.46)</td>
<td>(4.35)</td>
<td>(3.21)</td>
<td>(4.42)</td>
<td></td>
</tr>
<tr>
<td>Prays</td>
<td>7.42</td>
<td>7.89</td>
<td>9.27</td>
<td>11.59</td>
<td>4.9</td>
</tr>
<tr>
<td>(times/week)</td>
<td>(7.90)</td>
<td>(8.01)</td>
<td>(8.24)</td>
<td>(8.66)</td>
<td></td>
</tr>
<tr>
<td>Strength of affiliation</td>
<td>25.1</td>
<td>28.8</td>
<td>36.2</td>
<td>49.4</td>
<td>4.2</td>
</tr>
<tr>
<td>(100 = strong, 0 = weak)</td>
<td>(64.0)</td>
<td>(66.5)</td>
<td>(65.0)</td>
<td>(63.2)</td>
<td></td>
</tr>
<tr>
<td>Belief in afterlife</td>
<td>83.2</td>
<td>85.9</td>
<td>91.5</td>
<td>86.9</td>
<td>1.0</td>
</tr>
<tr>
<td>(100 = strong, 0 = weak)</td>
<td>(37.5)</td>
<td>(34.8)</td>
<td>(28.0)</td>
<td>(33.9)</td>
<td></td>
</tr>
<tr>
<td>Beliefs about Bible</td>
<td>5.6</td>
<td>29.3</td>
<td>54.0</td>
<td>65.7</td>
<td>6.9</td>
</tr>
<tr>
<td>(100 = strong, 0 = weak)</td>
<td>(65.3)</td>
<td>(65.0)</td>
<td>(57.5)</td>
<td>(59.2)</td>
<td></td>
</tr>
<tr>
<td>Number of respondents</td>
<td>260</td>
<td>695</td>
<td>353</td>
<td>234</td>
<td></td>
</tr>
</tbody>
</table>

**Source.**—National Opinion Research Center's General Social Surveys, 1984–87. Sample includes only married, nonblack respondents.

**Note.**—See notes to table 1.
Subsidizing Sacrifice

Full time in Yeshiva (right scale)

Father in Yeshiva (left scale)

Yeshiva Students and their Children: 1980-1996

Source: Berman (2000)
Evidence: Fertility and Schooling Results

• **Data**: extensive search yielded household surveys in Indonesia, India, Bangladesh, Cote D’Ivoire, Pakistan (B&S ‘04) and Israel (B ‘00)

• Women in families with Islamic and Ultra-Orthodox religious education have **higher fertility** in all 6 countries, by 2/3 to one more expected lifetime child.

• Islamic and Ultra-Orthodox education have significantly **lower rates of return** than secular education in 3 of 6 countries; insignificant results in other 3 countries

• **Prevalence** of radical religious schooling:
  2-5% of Muslims in Rural Bangladesh, Pakistan, Cote D’Ivoire,
  5% of Israeli Jews
  14-25% in Indonesia and two Indian States
  (Uttar Pradesh and Bihar)
Fig 1: Optimal Taxation Through Prohibition, and Fertility
### Differential Fertility by Sect Membership

Six countries – Berman and Stepanyan (04)

<table>
<thead>
<tr>
<th>Sect indicator</th>
<th>Israel</th>
<th>Indonesia</th>
<th>UP &amp; Bihar</th>
<th>Bangladesh</th>
<th>Cote D’Ivoire</th>
<th>Pakistan</th>
</tr>
</thead>
<tbody>
<tr>
<td>Diff. fertility</td>
<td>5.34 (.30)</td>
<td>0.67 (.26)</td>
<td>0.77 (.43)</td>
<td>0.58 (.27)</td>
<td>1.34 (.46)</td>
<td>0.66 (.39)</td>
</tr>
<tr>
<td>Own</td>
<td>Any</td>
<td>Own</td>
<td>Any</td>
<td>Own</td>
<td>Any</td>
<td>Any</td>
</tr>
</tbody>
</table>
## Differential Returns to Education by Sect Membership
- Six countries (Berman and Stepanyan ’04)

<table>
<thead>
<tr>
<th>Sect</th>
<th>Israel Mean (SE)</th>
<th>Indonesia Mean (SE)</th>
<th>UP &amp; Bihar Mean (SE)</th>
<th>Bangladesh Mean (SE)</th>
<th>Pakistan Mean (SE)</th>
<th>Cote D’Ivoire Mean (SE)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Secular schooling</td>
<td>.094 (.002)</td>
<td>.116 (.005)</td>
<td>.122 (.008)</td>
<td>.097 (.007)</td>
<td>.132 (.006)</td>
<td>.175 (.010)</td>
</tr>
<tr>
<td>Religious schooling</td>
<td>-.076 (.006)</td>
<td>-.022 (.013)</td>
<td>-.051 (.229)</td>
<td>-.073 (.034)</td>
<td>-.048 (.026)</td>
<td>-.029 (.070)</td>
</tr>
</tbody>
</table>
### TABLE V

**TOTAL FERTILITY RATES OF ISRAELI SUBPOPULATIONS**

A. Source: Labour Force Survey

<table>
<thead>
<tr>
<th>Period</th>
<th>Full Population</th>
<th>Jews</th>
<th>Ultra-Orthodox Jews</th>
<th>All other Jews</th>
</tr>
</thead>
<tbody>
<tr>
<td>1980-1982</td>
<td>2.99(^a)</td>
<td>2.76</td>
<td><strong>6.49</strong></td>
<td>2.61</td>
</tr>
<tr>
<td></td>
<td>(0.04)(^b)</td>
<td>(0.04)</td>
<td>(0.31)</td>
<td>(0.04)</td>
</tr>
<tr>
<td>obs.</td>
<td>31347</td>
<td>27635</td>
<td>1040</td>
<td>26569</td>
</tr>
<tr>
<td>1995/96</td>
<td>2.66</td>
<td>2.53</td>
<td><strong>7.61</strong></td>
<td>2.27</td>
</tr>
<tr>
<td></td>
<td>(0.04)</td>
<td>(0.05)</td>
<td>(0.30)</td>
<td>(0.05)</td>
</tr>
<tr>
<td>obs.</td>
<td>27866</td>
<td>22776</td>
<td>1021</td>
<td>21755</td>
</tr>
<tr>
<td>Change</td>
<td>-0.33</td>
<td>-0.23</td>
<td><strong>1.13</strong></td>
<td>-0.34</td>
</tr>
<tr>
<td></td>
<td>(0.06)</td>
<td>(0.06)</td>
<td>(0.44)</td>
<td>(0.06)</td>
</tr>
</tbody>
</table>

B. Source: Population Registry

<table>
<thead>
<tr>
<th>Period</th>
<th>Full Population</th>
<th>Jews</th>
<th>Christians</th>
<th>Muslims</th>
</tr>
</thead>
<tbody>
<tr>
<td>1980</td>
<td>3.14</td>
<td>2.76</td>
<td>2.66</td>
<td>5.98</td>
</tr>
<tr>
<td>1995/96</td>
<td>2.90</td>
<td>2.57</td>
<td>2.19</td>
<td>4.65</td>
</tr>
<tr>
<td>Change</td>
<td>-0.24</td>
<td>-0.19</td>
<td>-0.47</td>
<td>-1.33</td>
</tr>
<tr>
<td></td>
<td>(0.19)</td>
<td>(0.06)</td>
<td>(0.44)</td>
<td>(0.06)</td>
</tr>
</tbody>
</table>
Analogy: Military unit as a Club

• Like a sect, a unit is involved in cooperative production, i.e., participants benefit from their own effort and the average effort of other members.

• A good soldier/member comes prepared, trains, works hard, covers his/her buddies, would never defect.. because they are devoted.

• Lacking a way to subsidize devotion, the unit would like to
  a) tax outside activity of members,
  b) select devoted members.
Why are sects effective at violence?

• Recall that militias and terrorist groups are organizations extremely sensitive to defection
• Sects have a strong advantage at coordinated violence because their benign service provision activities help them
  a) select operatives unlikely to defect
  b) influence operatives through their support of friends and family
• Testable implication: a sect will be more effective the stronger its’ social service provision
Figure 2: Selecting on Low Wage Membership Allows Larger Projects
Figure 3: Benign Activity Increases a Militia’s Potential

\[
\text{(ICC)} \quad U\left(\frac{B}{N}, 1, G + C(1) + A(R)\right) \geq U\left(B + w_i, 0, G\right)
\]
Resolving the Puzzle

• *Taliban, Hamas, Hizbullah, Sadr’s Militia* are all examples of remarkably effective violent radical Islamic organizations which started out as classic sects providing social services.

• Cooperative production of social services has the same “free-rider” problem, though less extreme e.g., mutual insurance is sensitive to defection

• An organization designed to limit defection in a benign context will have a huge advantage in the cooperative production of violence

\[
(ICC) \quad U\left(\frac{B}{N}, 1, G+C(1)+A(\overline{R})\right) \geq U(B+w_i, 0, G)
\]
### TABLE 4: SOCIAL SERVICE PROVISION AND LETHALITY OF TERRORIST ATTACKS
### ISRAEL AND LEBANON: 1968-2006

<table>
<thead>
<tr>
<th>Group name</th>
<th>Attacks</th>
<th>Injuries</th>
<th>Fatalities</th>
<th>Injuries per attack</th>
<th>Fatalities per attack</th>
<th>(std. error)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Hamas</strong></td>
<td>70</td>
<td>2202</td>
<td>413</td>
<td>30.2</td>
<td>5.9</td>
<td>0.87</td>
</tr>
<tr>
<td><strong>Hezbollah</strong></td>
<td>90</td>
<td>387</td>
<td>449</td>
<td>4.3</td>
<td>5.0</td>
<td>2.82</td>
</tr>
<tr>
<td>Palestinian Islamic Jihad</td>
<td>38</td>
<td>722</td>
<td>111</td>
<td>12.7</td>
<td>2.9</td>
<td>0.81</td>
</tr>
<tr>
<td>Popular Front for the Liberation of Palestine</td>
<td>38</td>
<td>376</td>
<td>107</td>
<td>9.9</td>
<td>2.8</td>
<td>1.03</td>
</tr>
<tr>
<td>Fatah/PLO</td>
<td>131</td>
<td>1465</td>
<td>279</td>
<td>11.20</td>
<td>2.1</td>
<td>0.48</td>
</tr>
<tr>
<td>Democratic Front for the Liberation of Palestine</td>
<td>21</td>
<td>240</td>
<td>22</td>
<td>10.4</td>
<td>1.0</td>
<td>0.37</td>
</tr>
<tr>
<td>Unknown</td>
<td>427</td>
<td>1055</td>
<td>351</td>
<td>2.2</td>
<td>0.8</td>
<td>0.28</td>
</tr>
<tr>
<td><strong>Social Service Providers: Hamas and Hezbollah</strong></td>
<td>160</td>
<td>2589</td>
<td>862</td>
<td>15.8</td>
<td>5.4</td>
<td>1.62</td>
</tr>
<tr>
<td>Others: DFLP, Fatah/PLO, PIJ, PFLP</td>
<td>228</td>
<td>2632</td>
<td>519</td>
<td>11.6</td>
<td>2.3</td>
<td>0.35</td>
</tr>
<tr>
<td>Difference</td>
<td></td>
<td></td>
<td></td>
<td><strong>3.1</strong></td>
<td></td>
<td><strong>1.67</strong>*</td>
</tr>
</tbody>
</table>
Suicide attacks are so damaging that only defection proof organizations can succeed at them. Most do not try.
Efficiency of Suicide Attacks in Israel and Lebanon

Terrorist Organization

- Hamas: 63, 7.2
- Hizbollah: 44, 17.3
- PIJ: 37, 4
- PFLP: 31, 7, 2.9
- Al Aqsa Martyrs: 2.8
- Fatah: 2, 0.5
- SSNP: 1, 0

Suicide Attacks vs. Ave. Fatal./Attack
Lethality of Suicide Attacks in Israel and Lebanon

<table>
<thead>
<tr>
<th>Terrorist Organization</th>
<th>Suicide Attacks</th>
<th>Ave. Fatal./Attack</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hamas</td>
<td>63</td>
<td>7.2</td>
</tr>
<tr>
<td>Hizbullah</td>
<td>44</td>
<td>17.3</td>
</tr>
<tr>
<td>PIJ</td>
<td>37</td>
<td>4</td>
</tr>
<tr>
<td>PFLP</td>
<td>31</td>
<td>2.9</td>
</tr>
<tr>
<td>Al Aqsa Martyrs</td>
<td>2</td>
<td>2.8</td>
</tr>
<tr>
<td>Fatah</td>
<td>0.5</td>
<td>2</td>
</tr>
<tr>
<td>SSNP</td>
<td>0.1</td>
<td>1</td>
</tr>
</tbody>
</table>

Note: The number of suicide attacks and average fatalities per attack are shown for each terrorist organization.
Recap: Sects and Violence

• *Why so few terrorist organizations?*  
  Defection constraint.

• *Why are religious radicals effective terrorists?*  
  Solve defection constraint in benign activities.  
  Not theology.

• *Why suicide attacks?*  
  Hard targets.

• *What to do about it?*  
  Compete in providing benign services and competent governance, with muscular protection.

• *How can we be sure it will work?*  
  Need research and evaluation, just like any weapon.
## Sect Characteristics

<table>
<thead>
<tr>
<th>Sect Characteristics</th>
<th>Hamas</th>
<th>Taliban</th>
</tr>
</thead>
<tbody>
<tr>
<td>Local public goods</td>
<td>schools, hospitals, welfare, militias</td>
<td>law and order, militias</td>
</tr>
<tr>
<td>Militia activity</td>
<td>assassination of informants, attacks on Israeli civilians and Israeli military</td>
<td>guarded smuggling routes, law &amp; order, conquered Afghanistan</td>
</tr>
<tr>
<td>Increased stringency</td>
<td>dress codes, personal piety, worship,</td>
<td>personal piety</td>
</tr>
<tr>
<td>Sacrifice</td>
<td>risking arrest, injury or death</td>
<td>madrassa attendance</td>
</tr>
</tbody>
</table>

These *benign activities are the norm* among religious sects for Christians (Iannaccone 92), Muslims and Jews (Berman 00, 03)
Constructive Efficiency: [Figure 7]

If ICC does not hold it may be efficient for a club to make it hold by

- 1) raising C(1), through some other investment that augments local public goods (e.g. welfare, hospitals, etc.),

- 2) making cash payments to members (e.g. families of martyrs),
Figure 8: Govt. Provision of Public Goods Reduces Militia’s Potential

\[
U\left(\frac{B}{N}, 1, G + C(1) + A(R)\right) \geq U(B + w_i, 0, G)
\]

E.g., Malaya, Phillipines, Egypt
**Destructive Efficiency: [Figure 8]**

- 3) reducing $G$, the public good available to members and nonmembers, (assassination of public officials),
- 4) limiting $B$ (ban on heroin cultivation),
- 5) raising $P$ (general strikes, access to goods markets),
- 6) lowering $w_i$, the outside options of members, (Madrassah, jail time, secluding women, harassing nonmembers, destroying or banning access to Israeli labor markets).
Implications

Violent radical religious groups thrive where..
• a) govt. provision of local public goods is weak
  - Somalia, Nigeria, Pakistan, Algeria, Lebanon, Afghanistan, Palestine, Iraq
• b) local militias are popular..
  - Chechnya, Afghanistan during war, Kashmir, Palestine, Jordan (“Black September”), Palestine, Iraq
• c) wages are low..
  - all of the above,
• d) where outside subsidies are available,
  - Kashmir, Lebanon, Palestine, Afghanistan, Iraq
Suicide Attacks, Terrorism and Insurgency

• Why suicide attacks?
• Deadliest method of delivering explosives to a target
  - precise
  - leaves no operative to interrogate
• Method of choice vs. “hard” targets
  i.e., targets whose destruction implies a high probability of death or capture
Hard Targets

• \( p(h) \) – probability of apprehension increases in govt. investment in “hardening” target

• Expected utility, loyal operative, suicide attack..

\[
(7a) \quad [1-p(h)] \, U\left( \frac{\alpha D}{N}, 1, G + B(1) + C(\bar{R}) \right).
\]

where \( D \) is damage, benefit \( B \) is proportional to \( D \)

• Utility from defection:

\[
(7b) \quad U(D + w_1, 0, G).
\]

• Utility from conventional attack:

\[
(7c) \quad U\left( \frac{\alpha D}{N}, 1, G + B + C(\bar{R}) - Z \right).
\]

• Choose suicide attack if \( (7a) > (7b), (7a) > (7c) \)
Figure 4: Strong Governments Harden Targets, Insurgents respond with Suicide Attacks

Notes:
- a) Global decline in insurgency;
- b) Coreligionists are usually soft targets;
- c) Foreign allies of govt. are hard targets – switch to suicide attacks puts them at risk.
<table>
<thead>
<tr>
<th>Location</th>
<th>Attacks</th>
<th>Fatalities</th>
<th>(of which) Suicide Attack Fatalities</th>
<th>Fatalities/attack</th>
<th>Suicide attack fatalities / attack</th>
</tr>
</thead>
<tbody>
<tr>
<td>West Bank and Gaza</td>
<td>17405</td>
<td>341</td>
<td>8</td>
<td>0.020</td>
<td>0.00046</td>
</tr>
<tr>
<td>Inside Green Line</td>
<td>730</td>
<td>511</td>
<td>401</td>
<td>0.700</td>
<td>0.54932</td>
</tr>
<tr>
<td>Difference</td>
<td>16675</td>
<td>-170</td>
<td>-393</td>
<td>-0.680</td>
<td>-0.54886</td>
</tr>
<tr>
<td>(std. error)</td>
<td></td>
<td></td>
<td>(0.017)</td>
<td>(0.05460)</td>
<td></td>
</tr>
</tbody>
</table>

Note: Standard errors are calculated by treating the expected number of fatalities per attack as a probability and assuming that attacks are independent.

Sources: Attacks, fatalities and fatalities due to suicide attacks inside green line are from the Israel Defense Forces spokesperson’s office, as reported by Nadav Shragai in Ha’Aretz, September 26, 2003. Fatalities in West Bank and Gaza due to suicide attacks are from the ICT data for that period described in the Appendix.
Attacks on Israelis by Location and Tactic

Why? Because targets in Palestine are soft, whereas targets in Israel are hard.
Religious Differences between Insurgents (Suicide Attackers) and Targeted Victims (Table 3)

What about this? Coreligionists are soft targets.
Coreligionists are soft targets

- Insurgents and terrorists often target coreligionists: political rivals, members of rival militias, collaborators, targets of extortion.
- They seldom use the suicide tactic to do so.
- .. probably because it’s not necessary. A coreligionist assailant can defeat profiling.
- Exception are target well defended by means beyond profiling: e.g., Sadat, Massoud, Rajiv Ghandi.
- When members of other religions have similar appearance suicide attacks are not used: N. Ireland.
Figure 5: Strong clubs choose more suicide attacks and do more damage

Utility of Defector - weak club
Utility of Defector - strong club

Utility of Loyal Member - Suicide Attack, E
Utility of Loyal Member - Conventional Attack, high p

Note:
Most benign policies vs. insurgents will affect the high damage margin, so they will reduce suicide attacks.
**Evidence on Benign Activity and a Militia’s Potential**

**TABLE 6: SOCIAL SERVICE PROVISION AND LETHALITY OF SUICIDE ATTACKS - ISRAEL AND LEBANON**

<table>
<thead>
<tr>
<th>Organization</th>
<th>Social Services*</th>
<th>Suicide Attacks</th>
<th>Average fatalities/attack (std. error)</th>
<th>Fatalities by social service provision **</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hamas</td>
<td>Yes</td>
<td>63</td>
<td>7.2</td>
<td>11.4</td>
</tr>
<tr>
<td>Hizbullah</td>
<td>Yes</td>
<td>44</td>
<td>17.3</td>
<td>(4.9)</td>
</tr>
<tr>
<td>Palestinian Islamic Jihad</td>
<td>No</td>
<td>37</td>
<td>4.0</td>
<td>(1.0)</td>
</tr>
<tr>
<td>Popular Front for the Liberation of Palestine (PFLP)</td>
<td>No</td>
<td>7</td>
<td>2.9</td>
<td>(1.0)</td>
</tr>
<tr>
<td>Martyrs of al-Aqsa</td>
<td>No</td>
<td>31</td>
<td>2.8</td>
<td>(0.8)</td>
</tr>
<tr>
<td>Fatah</td>
<td>No</td>
<td>2</td>
<td>0.5</td>
<td>(0.5)</td>
</tr>
<tr>
<td>SSNP</td>
<td>No</td>
<td>1</td>
<td>0</td>
<td>(-)</td>
</tr>
</tbody>
</table>

**Sum**

**Difference**

185

8.1

(3.8)**

Source: Suicide attack data is described in the Appendix.

* In its review of terrorist organizations, the ICT mentions the provision by the organization of social welfare benefits to ordinary citizens, going beyond ideological, religious and military tasks.

** Standard errors allow for clusters of correlated fatalities within organizations.
### Table 7: Social Service Provision and Tactic Choice - Palestinian Organizations

<table>
<thead>
<tr>
<th>Organization</th>
<th>Social Services*</th>
<th>Attacks</th>
<th>Suicide Attacks</th>
<th>Percent suicide attacks</th>
<th>Percent by social service provision</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hamas</td>
<td>Yes</td>
<td>115</td>
<td>40</td>
<td>35%</td>
<td>35%</td>
</tr>
<tr>
<td>Tanzim</td>
<td>No</td>
<td>61</td>
<td>1</td>
<td>2</td>
<td></td>
</tr>
<tr>
<td>Al Aqsa Martyrs</td>
<td>No</td>
<td>59</td>
<td>14</td>
<td>24</td>
<td></td>
</tr>
<tr>
<td>PIJ</td>
<td>No</td>
<td>54</td>
<td>19</td>
<td>35</td>
<td>16</td>
</tr>
<tr>
<td>Fatah</td>
<td>No</td>
<td>36</td>
<td>2</td>
<td>6</td>
<td></td>
</tr>
<tr>
<td>PFLP</td>
<td>No</td>
<td>16</td>
<td>1</td>
<td>6</td>
<td></td>
</tr>
<tr>
<td>Force 17</td>
<td>No</td>
<td>9</td>
<td>0</td>
<td>0</td>
<td></td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td></td>
<td>350</td>
<td>77</td>
<td><strong>22%</strong></td>
<td></td>
</tr>
<tr>
<td><strong>Difference</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td><strong>19</strong> (5.0)**</td>
</tr>
</tbody>
</table>
• Suicide attacks are so damaging that only defection proof organizations can succeed at them. Most do not try.
• Nonsystematic evidence from Iraq, Afghanistan, Sri Lanka and Chechnya is consistent with suicide attacks being reserved for hard targets.
• Religious radicals specialize in s. attacks in Iraq, Afghanistan, Chechnya, but evidence on soc. service provision is weak.
Application: Jewish Underground

- Violent militia which drew members from Gush Emumin, a messianic settler movement but a weak sect, (weak prohibitions and sacrifices).
- Began settling illegally in West Bank in mid 1970s.
  - vigilante activity had local public good aspect

- After Camp David (I) agreements frustrated settlers organized conspiracy to destroy Muslim holy sites on Temple Mount / Haram A-Sharif.
  - project aborted for lack of rabbinical authorization.
Testable Implications: Other countries

- Richer countries are less likely to have insurgencies and civil wars (Fearon-Laitin)
Why the Increase in Suicide Attacks?

• .. Because of the decrease in viable options for insurgents
• Insurgents attempt conventional tactics first, including against coreligionists. When these fail they turn to suicide attacks, generally reserving them for “hard” targets.
• As governments improve at counterinsurgency we will see more terrorism and suicide attacks - directed against both local targets and allies of govt.
4. Mosque and State – Implications for Counterinsurgency

Activity can be rationalized, so incentives matter, which implies that subtle instruments could work.

Subtle Policies: Governments, Economic Rents and Markets

A. Improve Provision of Local Public Goods by Secular Governments
   - the Kilcullen / Petraeus / SOC approach

B. Fiscally Separate Church and State if that Government is Radical Religious
   - so that it cannot lock itself into power

C. Reduce Rents Available to Militias and Smugglers
   - e.g., demand for Heroin, Cocaine and Oil

D. Improve Market provision of substitutes.
Once suicide attacks are being used, constructive intervention operates at that margin.
The Kilcullen Approach

“23. Practise armed civil affairs. Counterinsurgency is armed social work; an attempt to redress basic social and political problems while being shot at. This makes civil affairs a central counterinsurgency activity, not an afterthought.”

“You need intimate cooperation with inter-agency partners here, national, international and local. You will not be able to control these partners. Many NGOs, for example, do not want to be too closely associated with you because they need to preserve their perceived neutrality.”

“Thus, there is no such thing as impartial humanitarian assistance or civil affairs in counterinsurgency. Every time you help someone, you hurt someone else. Not least the insurgents. So civil and humanitarian assistance personnel will be targeted.”

Lt. Col. David Kilcullen, Ph.d. in Political Anthropology, Australian advising the Pentagon
DoD Policy Shifts Towards Social Science

• “Irregular warfare is about people, not platforms. IW depends not just on our military prowess, but also our understanding of such social dynamics as tribal politics, social networks, religious influences, and cultural mores. People, not platforms, and advanced technologies will be the key to IW success.”

Nonstandard Development Economics

- *Not* designed to maximize growth or social welfare, but to undermine rebels
- *Targeted* at likely defectors and likely sources of intelligence
- Focus on programs that *compete* with services offered by clubs
- Benign programs will be targeted by rebels
- Standard development programs can be *captured* by rebels e.g., -“heros village”, LTTE controlled Sri Lanka
  - Sadr city garbage cleanup
  Increased welfare, but reinforced rebels
- Includes political development
5. Conclusion

- A “rational choice” economic model can explain the behavior of violent religious radicals - it succeeds on testable implications where the conventional wisdom about theological motivation fails

- That’s a relief: it provides benign options for dealing with violent religious radicals

- Those options are practical but are poorly understood and current implementation is awful
Conclusions

• *Why so few terrorist organizations?* Defection constraint.

• *Why are religious radicals effective terrorists?* Solve defection constraint in benign activities. Not necessary theology.

• *Why suicide attacks?* Hard targets.

• *What to do about it?* Compete in providing benign services and competent governance, with muscular protection.

• *Future Work* 
Need research and evaluation

Distinguish club model from standard “rational peasant” approach to “winning hearts and minds”
Is it Ideology?

• Well.. Ideological Shifts:
  • *Taliban*: from personal piety, local Islamic govt. to international Jihad
  • *Hamas*: from personal piety, local Islamic govt. to nationalist territorial struggle
  • *Jewish Underground*: from glorifying the state to undermining it’s authority
Rational Choice Matters

- Can this fit in a rational choice model?
  - is that model helpful in predicting behavior?

- Policy implication:
  - can the shift to militia activity be reversed?
  - does behavior respond to incentives?
  - what could we recommend if it did not?
References


VI. Where Research can Help
Lessons from Pacific Special Operations Command

1. Development and counterinsurgency in poorly governed spaces
   - now a Nat. Security concern
   - directly + indirectly through allies
2. USAID alone spending at ~$4B annually on this development effort, DOD spending more
3. USAID and DOD lack capability to do economic and political
devolution in dangerous spaces.
World Bank and NGOs not much better.
Specifically, they lack
   a) basic research on counterinsurgency & development
   b) a way to evaluate their development efforts
4. Need: research and evaluation to guide development, governance
   and political violence
   - what DOD calls soc. sci research is mostly purchased validation of
   what they think is true already.
   - like Great Society project, which Moynihan fixed
   - solution is intellectually independent research:
     own core funding, university based
Nuclear Terrorism

• Defection constraints indicate that nuclear terrorism is very unlikely to come from most of the terrorists we see today
• Look for combination of state-backed expertise and terrorism:
  - Iran & Hezbollah, Pakistan (ISI) & Islamists