DOES THEOLOGY MATTER?
A THEORETICAL LOOK AT RELIGIOUS TERRORISTS AND THEIR ORGANIZATIONS

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What do religious terrorists believe?

What behavior is consistent with such beliefs?

Do we observe such behavior?

If not, why not?
Notes on Terrorism

**Individuals**
- Agents are rational, given their beliefs and preferences
- Typically not driven by poverty, rage, revenge, or ethnic differences, illness
- Many view martyrdom as altruism
- Religious doctrine or fervor not obviously a key element, nor is afterlife reward

**Terrorist Groups**
- Few solo attacks; group support is important
- Radical religious groups that require service and sacrifice particularly effective
- Suicide terrorism chosen for efficacy against hard targets
Key Questions

- Why does religion not seem a significant motivator for individuals?
- What is the effect of religion on radical religious terrorist groups?
- Does the model suggest that policies to counter terror by religious agents might be feasible?
1. **Terrorism**
   - Berman (2009), Berman and Laitin (2006, 2008)
   - Iannaccone (2003): The Market for Martyrs

2. **Economic models of suicide**
   - Hamermesh and Soss (1974): An Economic Model of Suicide

3. **Impact of expected afterlife on current behavior**
   - Azzi and Ehrenberg (1975): Household Allocation of Time and Church Attendance
   - Pyne (2008): An Economic Model of Religion and Death
Belief in afterlife with heaven and hell
Perceives natural benefits for religious capital accumulation
Anticipates reward in afterlife for religious capital
Altruistic and other natural benefits for suicidal terrorism
Believes martyrdom ensures salvation and pays reward in afterlife
Specified a dynamic model of a religious agent

- Consumption and savings
- Investment in religious capital for personal and community benefit
- Availability of martyrdom with perceived altruistic benefits
- Belief in afterlife with reward for capital and martyrdom
The Agent’s Optimization Problem

\[ W(c, s, K, t) = \theta c - \frac{c^2}{2} + \gamma s - \frac{1}{2}s^2 + \sigma K \]

\[ V^B(s, K) = B + \omega s + \Sigma K \]
\[ V^D(s, K) = -D \]

\[ p^B(K_t) = \begin{cases} \pi & : K = 0 \\ 1 & : K = 1 \end{cases} \]

Budget Constraint: Expected Solvency

\[ s_t = i_t + \delta s_{t-1} \]
The Multi-Agent Model: Terrorist Organizations

- Extend to multi-agent model of terrorist groups.
- Considered agents in club model (incomplete)
- Establish religious parallels to secular components of club model (Berman and Laitin)
- Characterize conditions for admittance to group
  - Group will exclude agents with weak religious beliefs and preferences
  - Religious capital might provide a visible and sufficient indicator for strong belief
  - Strong religious beliefs may enhance loyalty and preference for martyrdom
- Characterize the selection of martyrs
- Derive individual’s equation for whether to be loyal to a religious group if defection destroys capital
- Consider the effect on loyalty of improved outside options
Model Solutions

- Derive functions to provide behavioral rules for
  - Consumption
  - Savings
  - Investment in religious capital
- Decision rule for whether and when to die as a martyr
- Derive and analyze expected lifetime utility given optimal behavior
- Characterize group selection, loyalty, and selection of martyrs
- Establish points of indifference between martyrdom and survival
- Determine how these points change according to belief, conditions, and values
Model Solutions: Utility and Martyrdom

![Lifetime Utility Graph](image)
Why Is Afterlife Reward Not A Strong Motivator for Martyrdom?

- Decreasing MU limits appeal of additional treasure in afterlife
- Confidence in salvation lessens appeal of martyrdom
- Doubt lowers expected value of afterlife reward
- Immediate earthly concerns dominate religious concerns
Religious sacrifice - capital accumulation - could signal strong belief.

Strong belief leads to loyalty if defection requires loss of religious capital.

These may reinforce findings for secular motivations.
Natural policies may be effective except for extreme beliefs
Punishment suicide terrorism may counter perceptions of altruism
Encourage investment in religious capital?
Increase future income?
Critique and Future Work

- Technical concerns
  - Quadratic utility is troublesome
  - Unlikely capital accumulation function (in levels)
  - Extreme simplifying assumptions

- Simplistic characterization of religious beliefs

- Need to examine empirical evidence
Findings for religion may reinforce findings for secular motives
Many initial results seem intuitive, but work remain incomplete
Empirical work needed to establish relevance of findings and the roll of religious belief