HAMAS, TALIBAN AND THE JEWISH UNDERGROUND:
AN ECONOMIST'S VIEW OF RADICAL RELIGIOUS MILITIAS

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ABSTRACT

Can rational choice modeling explain destructive behavior among the *Taliban*, Hama and other
radical religious militias? This paper proposes a club good framework which emphasizes the
function of voluntary religious organizations as efficient providers of local public goods in the
absence of government provision. The sacrifices which these groups demand are economically
efficient (as in Iannaccone (1992)) and make them well suited for solving the extreme principal-
agent problems present in militia production. Thus the analysis can explain why religious radicals
create such effective militias. Seemingly gratuitous acts of violence by group members destroy their
outside options, increasing the incentive compatibility of loyalty. The analysis has clear implications
for economic policy to contain militias.

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"We must examine the costs and benefits of continued armed operations."

M. Al Zahar, a *Hamas* leader,
quoted in *Al Quds,* (East Jerusalem: October 1995).[2]

I INTRODUCTION

The *Taliban*, *Hamas* and other radical Islamic groups present a challenge to behavioral scientists who assume rational choice in individual decisions. How do we explain destructive acts from which individuals derive no direct benefit such as subjugation and institutional abuse of women, minorities and homosexuals, closing of schools and hospitals, enforcement of general strikes, abuse and murder of prisoners, or desecration of holy sites? Why do radical religious sects so often turn to militia activity, and why are their militias so effective?

Members of these radical religious groups are hardly your typical "bad guys." They exhibit productive, constructive and noble behaviors: acts of piety, charity and self-sacrifice. The same organizations are also remarkably efficient providers of valuable local public goods. The *Taliban* restored law and order to Afghanistan, halting poppy cultivation (for opium) and reducing crime. By securing trade routes they restored commerce (both legal and illegal) in Afghanistan. Both the *Taliban* and *Hamas'* parent organization, the Muslim Brotherhood reduce drug addiction among members. The Muslim Brotherhood provides health care, schooling, welfare and community services to needy communities in Gaza and the West Bank. The Brotherhood is so efficient and honest that it was often used by humanitarian agencies to distribute aid in the West Bank and Gaza.

Are these extreme, violent, behaviors due to powerful entrenched ideologies which form preferences? That argument is weakened by sharp *shifts* in declared ideology and behavior. The *Taliban* in 1994 were nonviolent clerics concerned with personal piety and replacing violent warlords with local Islamic government. By 1996 they were a militia bent on conquering Afghanistan and by 2001 they were so committed to international *Jihad* that they destroyed their accomplishments in a doomed effort to protect Al Qaeda. The Muslim Brotherhood in Palestine was a nonviolent group dedicated to an agenda of personal piety and local Islamic government till they created *Hamas* and embarked on a violent, nationalist territorial struggle. More generally, the sanctification of political violence as *Jihad* by radical Islam is a recent phenomenon, a break with mainstream Muslim theology (Black, 2001, p. 338).[3]

Also remarkable is that, once formed, both *Hamas* and *Taliban* became remarkably efficient militias. The *Taliban*, who were not experienced fighters, managed to conquer and hold

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[2] Mishal and Sela (2000), p. 71.

[3] Political violence with a religious justification by sects has a long history in Islam, as in other monotheistic religions (see below). It was widely denounced when it reappeared in Egypt in the mid 20th century.

most of Afghanistan, an accomplishment unmatched by even the Soviet military. The *Hamas* quickly evolved into an effective terrorist organization, difficult to infiltrate and more effective than its secular rival, the PLO's *Tanzim*, or than the more experienced *Islamic Jihad.[4]*

This paper attempts to resolve all those puzzles at once, using an approach which assumes rational choice by individuals. Rationalization is not merely a methodological goal but has a practical implication. If we cannot explain these destructive behaviors in a model in which individuals respond to incentives, what policy solutions could we recommend that are not themselves inherently destructive?[5]

I use a "club-good" approach to model radical religious groups. Imagine a community for which neither government nor markets function well. Local public goods usually provided by government such as public safety, law and order and welfare services are poorly provided or absent, while neither public nor private sectors efficiently deliver education, health services or insurance. It would not be surprising for individuals in such a place to band together into communities which provide public safety, education, welfare services, and other local public goods through mutual insurance (as documented by Townsend (1994), for instance).

Iannaccone (1992) pointed out that religion is a natural organizing node for community provision of local public goods. Moreover the most puzzling features of religious sects, their propensity to limit choices (prohibitions) and to destroy resources and options (sacrifices), can be explained by the internal distortions due to a club's efficient provision of services to members. Since club members engage in joint production of local public goods during their hours of nonmarket time, market work is a distraction with a negative externality for other members. So efficient clubs should tax market wages. Lacking tax authority they might turn to prohibitions on consumption as a crude but feasible way of lowering wages. Sacrifices can be explained as a costly signal of "commitment" to the community, or (less prosaically) a signal of relatively poor economic options outside the club which are efficient in the presence of heterogeneity in economic opportunities. A sacrifice is then an initiation rite allowing membership and with it access to club goods.

Iannaccone provides supporting evidence for the club model from data on Christian denominations, showing that the more extreme the prohibitions and sacrifices, the greater the provision of public goods to members. Berman (2000) extends that argument in an application to Ultra-Orthodox Jews, showing that subsidies to sects dramatically increase distortion of incentives. Among Israeli Ultra-Orthodox Jews subsidies caused fertility to increase by over a child per woman and duration of *Yeshiva* (full time religious seminary) attendance to increase by over10 years, all within two decades. Berman and Stepanyan (2003) provide further evidence of high fertility and generally low returns to schooling among Muslim sects in five countries.

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[4] For evidence of the *Hamas'* effectiveness at suicide attacks see Berman and Laitin (2003).

[5] The late Ehud Sprinzak emphasized the importance of rational choice models of terrorism (Sprinzak, 2000) for policymaking.

This paper makes two further analytical points. First, religious clubs are well suited to running militias. Militias are crucially sensitive to defection. Thus a club which extracts signals of commitment has an advantage in militia activity. The analysis evokes Becker's theory of rational crime (Becker, 1968), in that individuals weigh the benefits of remaining loyal to or defecting from behavioral norms, with the twist that the norms may be those of an illegal militia. Second, apparently gratuitous acts of destruction can both signal commitment and reinforce incentive compatibility, extending the ability of the club to provide militia services to members. Thus, cruel and apparently meaningless destruction may be rational and efficient for a militia.

Anticipating the results, the key policy implication of this analysis is that an efficient economy and a secular state providing public goods both weaken religious sects as members become less desperate for the economic services these sects provide. That process compromises the ability of sects to run militias. This paper is not about *Al Qaeda*, but the reader might well wonder if economics can really be that important --the September 11th terrorists were educated and far from poor. Yet those terrorists were not typical members. One would hardly expect *Al Qaeda* to send some of its' thousands of semi-literate mercenaries in Afghanistan to flight school in Florida if disaffected students in Europe were available. The general point is that a club which is strengthened by its ability to provide local public goods in a failed state with a failed economy, like Afghanistan, may attract members for a number of reasons. It could then select leaders and combatants from among those members according to characteristics other than poverty.

Though radical Islamic militias motivate the discussion, there is nothing inherently Muslim about the model. Militia activity among religious sects dates back at least to the Middle Ages, when the Templar Knights and the Hospitaler Knights organized as orders to conquer the holy land during the Crusades.[6] The analysis is also applied to the "Jewish Underground," a terrorist organization of Orthodox Jewish settlers on the West Bank in the early 1980s. The model explains their demise as an example of a militia that overstepped its reach, violating an incentive compatibility condition by taking on a project too destructive for its base of support.

The next section provides background on the *Taliban* and *Hamas*, highlighting the common puzzles and drawing parallels. Section III reviews the club model for a religious sect, extending it to explain militias by developing a militia production function. Section IV applies that model to explain the jarring combination of efficiency, piety and destructiveness in these groups. Section VI considers the Jewish Underground and other radical religious militias. Section VII considers policy implications and section VIII concludes.

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[6] Like the Taliban and Hamas they had strict prohibitions and sacrifices, including vows of celibacy, for instance. These groups also underwent an agenda drift. Long after the Crusades, the Templars were still running fiefdoms in much of France, till they were finally suppressed by the King. I thank Dagobert Brito for pointing out this historical analogy.

II *TALIBAN* **AND** *HAMAS*: BACKGROUND

Radical Islam
The *Taliban* and *Hamas* are both highly ritualistic, extremely conservative Muslim groups. They belong to a family of radical sects whose religious behavior represents a clear break from traditional practice. They augment the prohibitions of traditional Islamic practice, such as dress codes and shaving. They tend to segregate themselves from other Muslims and to be extremely intolerant of deviation, in contrast to the tolerance of traditional Islam. Though often termed "fundamentalist" – as if returning to some historic norm of practice, these groups actually practice norms unprecedented in their extremism. Radical Islam dates back only to the 1920s with the establishment by al-Banna of the Muslim Brotherhood in Egypt and Mawdudi's subsequent founding of the *Jamaat-al-Islami* in Pakistan.

Radical Islamists are an example of a group whose core beliefs clash with those of Western liberalism in their view of an individual's place within society. In the Western liberal approach individuals have rights and obligations in a direct relationship with the state.[7] In contrast, Radical Islam emphasizes a more historic approach in which an individual's primary relationship is with a clan, sect or tribe, and through that with the state [Black (2001), p. 309]. Ties that might undermine that relationship are viewed with suspicion.

Those strong historical affiliations with clans, sects and tribes are not surprising if government is a poor provider of local public goods such as health care, education and public safety and if the market is an inefficient provider of income and insurance. In that environment, group affiliation is a source of mutual insurance, providing protection, health care, income, food, clothing and the like. Though money need not change hands that insurance relationship is nonetheless economic.[8] Such relationships with a group much smaller than the state government must have been ubiquitous historically. They survive in the West in the form of radical religious sects like Ultra-Orthodox Jews and Christian Anabaptists (such as Hutterites and Mennonites) who provide extremely high levels of community mutual aid to members.

An efficient market economy and a functioning secular state are both threats to these affiliations as they reduce the need for the services which these groups provide and reduce the nonmarket hours available to members to provide services to others. Like Radical Islam, radical Christian and Jewish sects often seek to distance members from market economies.

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[7] Public Finance, in this tradition, designs policy for states in relationship to individuals, not groups.

[8] Ben-Porath [1980] emphasizes nonmarket exchange in his "F-connection" approach to Sociology.

Taliban
Afghanistan is a famously ungovernable country which has suffered 23 years of civil war at an appalling cost of one and a half million lives.[9] [10] The *Mujaheddin*, a loose tribe-based alliance of Islamic militants conducted a successful insurgency which eventually expelled a Soviet occupation. They had U.S. and Saudi aid, administered by Pakistani intelligence (ISI). Those subsidies were remarkably effective in expelling the Soviets, but radicalized Afghani society

> "Prior to the war the Islamicists barely had a base in Afghan society, but with money and arms from the CIA pipeline and support from Pakistan, they built one and wielded tremendous clout." [Rashid (2000), p. 19].

By the mid 1990s, the *Pashtun* south had collapsed economically.[11] It was run by former *Mujaheddin* warlords in warring fiefdoms ranging in size from a few provinces to single villages. During this particularly chaotic period, the *Taliban* emerged in Kandahar, the largest city in the *Pashtun* south. Rashid (2000) emphasizes economic factors contributing to their formation.

> "International aid agencies were fearful of even working in Kandahar as the city itself was divided by warring groups. Their leaders sold off everything to Pakistani traders to make money, stripping down telephone wires and poles, cutting trees, selling off factories, machinery and even road rollers to scrap merchants. The warlords seized homes and farms, threw out their occupants and handed them over to their supporters. The commanders abused the population at will, kidnaping young girls and boys for their sexual pleasure, robbing merchants in the bazaars and fighting and brawling in the streets." [Rashid, (2000), p. 21]

Banditry on the roads was an expensive obstacle for smugglers. Truckers based in the Pakistani border city of Quetta had a long tradition smuggling goods through Afghanistan to Iran, Turkmenistan and the rest of Central Asia. Their route from Quetta passed north through Kandahar then west through the Afghan city of Herat, which was controlled by the militia of Ismael Khan. With alternate routes in northern Afghanistan blocked by heavy fighting, this route seemed the best chance for trade from Pakistan to Iran and Turkmenistan and on into Turkey. By

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[9] Rashid (2000), and Davis (1999) describe the Afghan civil war and the rise of the *Taliban*.

[10] In 1978 a Marxist coup from within the army overthrew a Soviet backed government. Rural tribes declared a holy war against the coup leadership. A violent power struggle within the coup culminated in the assassination of the new President and in the Soviet invasion of December 1979. Over the next ten years the *Mujaheddin* conducted a successful guerrilla war which eventually forced a Soviet retreat, despite a $45B military effort. The *Mujahheddin* received about $10B in military support, mostly from the U.S. and Saudi Arabia, in an effort largely administered by Pakistani intelligence (ISI). (Cost figures from Huntington [1996]).

[11] The Soviet-backed president was overthrown in 1992 when Kabul, the capital, fell to an alliance of *Mujaheddin* from northern Afghani Tajik and Uzbek tribes. This set off a bloody internal war with a coalition of *Pashtun* tribes over Kabul, which had been under *Pashtun* control for 300 years. In 1994 General Dostum, leader of the northern Uzbeks, defected to join these *Pashtun* and their leader, Hikmetyar. Yet even with Pakistani backing Hikmetyar could not seize Kabul.

the fall of 1994 the Pakistani government backed an effort by the ISI to reconstruct roads and create alliances along the Kandahar-Herat route.[12]

In October 1994 the ISI sent a trial convoy loaded with medicine from Quetta to Ashkabad, in Turkmenistan. When the convoy was held up by warlords south of Kandahar, a small, largely unknown group of radical Islamists, the *Taliban*, conveniently emerged to free it. The *Taliban* were well-armed with rifles, mortars, ammunition and vehicles they had ostensibly acquired by raiding an ammunition dump two weeks earlier on the Pakistani border. By December the *Taliban* were operating a safe single-toll road through the Kandahar region. Precisely what the Kandahar warlords had previously failed to offer the ISI. Convoys safely passed from Turkmenistan to Quetta and back for the first time in years.

The same evening the convoy was liberated, those few hundred *Taliban* captured Kandahar with minimal casualties. The second biggest city in Afghanistan was taken by simply bribing the local warlords to surrender. By December they had recruited 12,000 students from the religious schools of the radical Islamic Juma'at al Islamiya (JUI) of Pakistan, mostly from Afghan refugee families. Within three months the *Taliban* had efficiently conquered 12 of 31 provinces of Afghanistan, largely through a series of Coasian bargains with local warlords. They collected arms, imposed law and order, and opened roads.[13] The resulting increase in commerce immediately lowered the price of food.[14]

The rest of the story is familiar: The *Taliban* proceeded to conquer and control some 90% of Afghanistan, a feat unmatched by the Soviet Union. Smuggling prospered so much that it caused a $400m drop in Pakistani customs revenue between 1993 and 1997. (Rashid, p. 192). The *Taliban* protected most of the $1B Afghan-Pakistani drug trade. Their control was so complete that they could eventually ban the cultivation of opium in 2000. (Note that the *Taliban* banned *cultivation* but allowed *trade* in opium and heroin to continue.)

The puzzle of gratuitous destruction
Beyond effectively providing law and order the *Taliban* instituted a set of extreme policies so destructive that they challenge the notion of rational choice:

> "The *Taliban* immediately implemented the strictest interpretation of Sharia law ever seen in the Muslim world. They closed down girls' schools and banned women from working outside the home, smashed TV sets, forbade a whole array of sports and recreational activities and ordered all males to grow long beards." (Rashid, p. 30.)

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[12] Rashid (2000) reports that In October 1994 Pakistani Prime Minister Bhutto met with Ismael Khan of Herat and Uzbek warlord General Dostum, to negotiate a secure route (p. 27). Davis (1999), relying on several sources, also emphasizes the role of Pakistani economic interests in the formation of the *Taliban*.

[13] The *Taliban*'s version of their movements' birth stresses not safe roads but public safety of another kind. They claim to have been a group of seminary students, led by Mullah Omar, a *Mujahhedin* veteran, who were enlisted by the local population to prevent the rape of teenage girls and boys by warlords.

[14] Rashid 2000, p. 35.

These practices are inconsistent with traditional Islam. Mohammed is known for emancipating women. They were also much more extreme than restrictions imposed on women in the Taliban's home communities in the *Pashtun* region around Kandahar.

The subjugation of women and non-*Taliban* worsened as they amassed power and moved into regions outside the *Pashtun* south. In the major cities of Kabul and Herat, norms and Sharia law were enforced with outrageous aggressiveness –women were beaten for wearing shoes that squeaked. Foreign aid workers were bullied into leaving, causing a shutdown of schools, clinics and humanitarian aid. Why would a movement trying to further a religious agenda among Muslims distance those same Muslims by abusing them?

Of all the allies that the ISI could have (and did) chose, why is it that the group with the most extreme religious practices was the most efficient at securing the safety of convoys and ordinary people, and at conquering and controlling Afghanistan?

Hamas

Just as the *Taliban* militia are an offshoot of the nonviolent JUI, the *Hamas* is a direct descendant of the Muslim Brotherhood, the first modern radical religious movement in Islam.[15] The Muslim Brotherhood was founded by Hasan al-Banna in Egypt in 1928 with the aim of reinvigorating Islam through individual piety and self-improvement, fighting the insidious force of assimilation into materialist Western culture, and the establishment of an Islamic state. Members met weekly in small groups, reinforcing a set of basic prohibitions on gambling, alcohol, adultery and usury. The Brotherhood established a broad network of mosques, boys and girls schools, youth groups, clinics, hospitals, charities, trade unions, night schools for workers, and even factories. These enjoyed considerable public support both as a social service provider and as a focus of religious and political expression.

In 1948 a splinter terrorist organization of the Brotherhood, the "Secret Apparatus," *(al-Jihaz al sirri)* carried out a campaign of bombing and political assassination, including the assassination of the Egyptian Prime Minister. The government subsequently suppressed the Brotherhood. Al-Banna was shot in the street, apparently by a government agent. Since then the Muslim Brotherhood has been an illegal but tolerated force in Egyptian society and politics, sometimes courted by government but often suppressed. In the 1950s an imprisoned member, Sayyid Qutb, developed the militant ideology of radical Islam. He preached that religious communities could only survive if segregated from secular culture. Moreover, Qutb preached that violent revolt was a religious duty, both against the secular West and against the secular government of Egypt.[16] His call to violence broke sharply with traditional Muslim theology,

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[15] Armstrong (2000) provides a clear account of the history of the Society of Muslim Brotherhood.

[16] This interpretation of the religious requirement of *Jihad* is controversial. *Jihad* can also mean simply a personal struggle for piety, self-improvement and the service of others (Esposito, 2002, p. 27).

which is tolerant of other cultures, permits warfare only in self-defense and rejects violence in religious matters.[17]

Branches of the Muslim Brotherhood appeared in the Gaza and the West Bank in the 1950s. In 1971 Sheikh Ahmed Yassin founded an affiliated organization called Congress (*Mujamah*) in Gaza. Muslims in the West Bank and Gaza were relatively secular at the time, but Sheikh Yassin soon gained popular support for his movement by establishing a social service network of medical clinics, schools, charities, support for orphans, drug treatment centers, youth clubs, sports clubs and mosques.[18] The Congress filled gaps in the social services provided by the Israeli occupational government, charities and international organizations, especially among refugees. Congress was financed by tithing (*zakat*) and by support from Arabs abroad.[19]

Yassin's Congress shared Al-Banna's agenda: personal ethical conduct, personal piety and the eventual establishment of a local Islamic government. In contrast to their secular rival, the Palestinian Liberation Organization (PLO), the Brothers saw the liberation of Palestine as a long term goal to be deferred till ethical conduct and local Islamic government were established. The Brothers were nonviolent, except for some skirmishes with PLO supporters. They contributed to an increase in religious practice in the 1980s in the West Bank and Gaza: dress codes were more stringently observed and outward signs of piety increased, including the frequency of prayer. The increased stringency of practice was especially evident in Gaza which is poorer and where the Brothers have more support and institutions.

Hamas was founded in1988 as a result of the first Palestinian *Intifada*, a spontaneous revolt against Israeli occupation, led by neither the PLO nor the Brothers.[20] SheikhYassin's local organizers urged him to endorse the revolt and establish a militia, lest the Brothers lose popular support to the local leadership of the PLO, which was harnessing the outburst of nationalism. Yassin initially resisted but eventually agreed to establishing an affiliated secret militia, the *Hamas*, carefully separating it from the Congress to protect the Brotherhood's social service institutions from reprisal.[21]

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[17] See Armstrong (2000), pp. 241-243. Qutb and his supporters argue that Islam is under siege so that violent revolt is an act of self-defense. I thank Timur Kuran for pointing this out.

[18] Mishal and Sela (2000), Juergensmeyer (2000), p. 78.

[19] Armstrong (2000), p. 351. The *Hamas* would eventually have a leadership in exile in the U.S. which raised funds among the Palestinian diaspora as well. The Israel Security Agency estimated foreign support at about one million dollars per month in the Spring of 2003, following international pressure on donors to stop that support. "Only a fraction" of those funds go to the military wing (ISA director Avi Dichter, *Ha'Aretz*, July 4, 2003).

[20] Schiff and Ya'ari (1989).

[21] The Lebanese Shi'ite organization *Amal* similarly insulated itself from reprisal by establishing *Hizbullah* as a separate entity.

The *Hamas* immediately began printing leaflets calling for violent opposition to the Israeli occupation. It underwent an ideological shift, adopting a nationalist position more extreme than that of the PLO, making the immediate conquest of all of Palestine (as opposed to just the West Bank and Gaza) a religious obligation. This was an expensive change in ideology, as it predictably provoked a campaign of arrest and suppression by the Israeli army which put members at high risk of arrest. That ideological shift would eventually also put members at risk of arrest and reprisal by the PLO after the Oslo accords.

The *Hamas* soon became a singularly effective militia: hard to penetrate, disciplined, adequately funded, well trained and committed. Members regularly risked arrest and endangered their lives by confronting soldiers, assassinating collaborators, organizing and carrying out terrorist attacks. *Hamas* suicide bombings of buses in Israel in 1996 delivered a close Israeli election to the right wing Likud party, critically injuring the Oslo process which *Hamas* opposed. To this day *Hamas* boasts the highest proportion of suicide bombers who carry out their objective or at least die trying. Their attacks are also the most deadly among Palestinian terrorist groups.[22]

Besides their remarkable agenda shift and their effectiveness as a militia, the *Hamas* also present a third puzzle: a tendency to make increasing demands of members and to inflict gratuitous punishment on nonmembers which is puzzling for a populist movement. Beginning with the first Intifada, they forced a poor population to adhere to general strikes of commercial activity which prevented Palestinians from shopping, doing business and sometimes even from working. They even attempted a boycott on all work for Israelis, which would have resulted in sacrificing perhaps a quarter of Palestinian GNP.[23] They worked to cripple a peace process that was returning occupied territory to Palestinian control because the process represented in their view collaboration with the conquerors of Palestine in 1948, precisely the opposite of the patient ideology of the pre-1988 Muslim Brotherhood.

Taliban and Hamas

To summarize, the *Taliban* and *Hamas* are both radical Islamic groups that turned violent. While their geographical and theological origins are distinct, they share several functional characteristics which suggest investigating their behavior in parallel, as summarized in Table I. Both movements arose in environments with weak local government and responded by providing a local public good. Both are militias that formed as affiliates of venerable nonviolent radical Islamic organizations, the *Hamas* from the Islamic Brotherhood and the *Taliban* from the Jamiat-e-Ulema-Islam (JUI) in Pakistan. Both received generous subsidies from abroad, either for ideological reasons or in return for services. Both underwent increases in stringency of practice as they gained power. Younger members undergo some costly initiation rite of personal sacrifice

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[22] Berman and Laitin (2003).

[23] That boycott failed in 1988 though the goal was later indirectly achieved. Attacks led Israel to replace Palestinians with foreign laborers in the 1990s and to severely restrict their access to Israeli labor markets in 2001.

in each group. Both groups changed their ideologies drastically and at great cost to members. Both developed into militias which produced local public goods using violence. These similarities should not be overstated. One difference is that the *Hamas* view most Palestinians as potential members while the *Taliban* seem to see most Afghans as a conquered people.

While this paper limits itself to the *Taliban*, *Hamas* and Jewish Underground (below) whose evolution is recent and relatively well documented, that general set of characteristics may well be shared by other religious militias, a point we return to below. Concentrating on the functional characteristics of these groups avoids a discussion of their legitimacy as religious or national liberation movements. (The economic model has nothing to add to a discussion of legitimacy.)

III. EFFICIENT PROHIBITIONS AND SACRIFICE[24]

Prohibitions and sacrifices among religious groups in general
Before tackling the puzzles of radical religious groups and their militias, even mainstream religious groups constitute a puzzle for rational choice theory: these groups prohibit common pleasurable behaviors and require sacrifices. Prohibitions include dietary restrictions, Sabbath observance, dress codes, head shaving, fidelity, driving licenses, restriction of sexual practices and refusal of medical care, for instance. Sacrifices are irreversible destruction of resources, such as burnt offerings. In the recent history of European Jewry, a circumcision irreversibly labeled a child as Jewish, an act that might put his life at risk by destroying the option of pretending to be a gentile. A vow of fidelity or abstinence is also a form of sacrifice, since it represents a permanent restriction of activities. Years of volunteer activity required of Mormons can be though of as a sacrifice of time, especially considering the foregone opportunity to accumulate human capital. Years of study in a religious institution represent a sacrifice of the alternative potential use of that time, be it in accumulation of human capital in secular studies or in accumulation of earnings.

Limiting choices and destroying resources is puzzling to an economist, yet people voluntarily join groups which enforce prohibitions and require sacrifices. These groups stubbornly defy price theory, persisting in time-intensive activities like communal worship, Sabbath observance and dietary restrictions despite the historical increase in the shadow price of time. Strict sects show no sign of disappearing and those with the most demanding practices seem to be growing fastest.[25] The modern Anabaptist traditions (such as the Amish, Mennonites

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[24] Much of this discussion in this section draws on Berman [2000], which describes prohibitions and sacrifices among Ultra-Orthodox Jews in more detail.

[25] Iannaccone [1998] describes the growth of conservative sects worldwide (p. 1471).

and Hutterites) are holding their own while Ultra-Orthodox[26] Jewry, and Radical Islam are thriving, despite a multitude of time intensive requirements.

Iannaccone (1992) offered a creative solution to the puzzles of prohibitions and sacrifices, proposing that they are efficient institutions in the context of an economic club which provides services to members. This section presents a simplified version of his argument, discussing prohibitions and then sacrifices. Section IV extends the argument to cover militia activity.

Efficient Prohibitions
A social interaction model offers an explanation. Group members derive utility from (secular) consumption, *S*, and from time spent in religious activities, *R*, such as prayer and community service. They also gain utility from the level of a local public good *A*.

$$(1) \quad U_i = U(S_i, R_i, A) \quad \textit{for } i = 1 \textit{ to N members,}$$
$$U_1, U_2, U_3 > 0 \ , \quad U_{11}, U_{22}, U_{33} < 0.$$

Good *A* is nonrival and excludable, making it a *club good*. Members get *A* from either a government, *G,* or the "club," *C,* which uses hours of religious activity as an input. Public safety is an example of a pure public good which could be provided by government or by a club, perhaps as a religious obligation. Welfare services, schools, hospitals and mutual insurance are examples of excludable, partially rival activities commonly provided by religious communities.

$$(2) \qquad A = G + C(\{R_i\}) \ , \ \frac{\partial C}{\partial R_i} > 0 \textit{ for all i } .$$

Members maximize utility subject to time and budget constraints. A fixed allocation of time, *T*, is split between the religious activity, *R,* and work hours, *H,*
$$T = H_i + R_i .$$

Income is earned from wages w and spent on consumption of the secular good, *S*, at price *p*,
$$pS_i = wH_i = w(T-R) .$$

A key point is that the club good *C* is produced by voluntary donation of time by members. These donations are extremely common in religious sects. Since that voluntary activity generates positive externalities, competitive equilibrium will result in too little religious activity *R*, as illustrated in Figure 1. The labor supply curve to the right indicates the competitive equilibrium choice of work hours, *H=T-R*, at the wage *w/p*. The curve to the left indicates the efficient labor

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[26] Revealingly, the Hebrew term for Ultra-Orthodox, *Haredi*, literally means "shaker" impling trembling before the Almighty, the same way the Shakers used the term.