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Comparing Role-Specific Terrorist Profiles

Paul Gill
Penn State University
International Center for the Study of Terrorism

and

Joseph K. Young
American University
School of Public Affairs

Abstract

While research on who and why individuals engage in terrorism has moved a long way since psychopathological and psychoanalytical approaches dominated, there remain gaps and shortcomings in our knowledge and approaches to understanding who is likely to engage in this form of political violence. Conventional wisdom posits that terrorists are typically male, uneducated, impoverished and between the ages of 18 and 23. Studies and emerging patterns over the past decade have refuted many of these stereotypes. Of the existing empirical research in the literature, single-case studies dominate. Although highly informative, they are also context-specific and thus their findings may not easily translate to other conflict areas. To address these shortcomings, the socio-demographic and role profiles of 219 Palestinian suicide bombers are compared with 510 terrorists indicted within the United States. These cases allow us to simultaneously compare the profiles of two very different contexts. More importantly, we are able to evaluate and compare the profiles of suicide bombers with more conventional terrorists.

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The lack of data-driven analyses on who joins a terrorist movement and why people do so has been a long-standing problem (Silke, 1998; Horgan, 2005). To date, three research paradigms attempted to clarify who becomes a terrorist and why. First, psychopathological and psychoanalytical interpretations proliferated through the 1970s and 1980s despite their lack of methodological rigor and empiricism. Second, theoretical models, often scantily supplemented by illustrative examples, also flourished. However, these models were often divorced from important policy questions because many modelers disregard empirical observations in their research (Magouirk et al, 2008:2). Over the past few years a small number of empirically informed and methodologically rigorous studies represent an exciting new third paradigm. Prominent examples include Reinares' (2005) analysis of 600+ ETA militants, Sageman's (2005) analysis of over 400 global Salafi Jihadists, Magouirk et al's Global Transnational Terrorism (GTT) project on 300+ Southeast Asian militants, Merari's study of Palestinian suicide bombers and their organizers and more recently Horgan and Gill's (2011) study of 200+ violent dissident Republicans in Northern Ireland between 1998 and 2010. This form of study provides the basis for hypothesis testing concerning those who join terrorist movements such as when, where, and how they became involved, the activities they took part in, how they fit into a wider networked structure and how they ultimately disengaged. Collectively these studies largely refute the conventional wisdom that most terrorists are male, uneducated, impoverished, and between the ages of 18-23.

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This paper contributes toward this new wave of studies by comparing the socio-demographic and role profiles of 219 Palestinian suicide bombers with 510 individuals indicted by the U.S. court system on terrorism-related offences. In the wider literature, there is little systematic study of the many role types that occur within a terrorist movement. Instead, terrorists are largely treated homogeneously.[1] This is the first study of its type that specifically compares a large-N sample of suicide bombers with a large-N sample of members of terrorist organizations who took part in more conventional role types. Alongside descriptive statistics outlining the contours of each group, we estimate econometric models to look at how demographic characteristics, such as age and marital status, influence the likelihood of someone being a suicide bomber as opposed to more conventional terrorist roles. The conclusion expands upon the implications for counterterrorism practitioners and suggests further avenues for the academic data-driven study of who joins terrorist movements and the types of roles they engage in.

Why Compare?

Despite the third wave's early promise, a number of important aspects remain unexplored. First, apart from Della Porta's (1996) seminal work comparing Italian and German left- and right-wing militants, there is no systematic large-N comparative study of terrorists from different conflicts. Although single-case studies are highly informative, they are also highly context-specific and their findings may

[1] This is especially true in the rationalist tradition of studying terrorism. See, for example, Lake (2002). More recently, work by Kydd and Walter (2006) and Bueno de Mesquita (2005) offers models that differentiate between moderates and extremists within organizations or movements but does not consider specific role-profiles.

not easily translate to other conflict areas and time periods. Second, when we analyze large datasets of active or previously active terrorists, we are not capturing an adequate picture of who wants to become a terrorist but oftentimes rather, who organizational elites actively recruit or allow to become members. The variables hypothesized affect many more people that do not engage in violent activities than those who do. By focusing on the underlying conditions that may create a large pool of potential recruits, these studies often ignore the impediments to membership. Organizational leaders carefully choose who can join. This is essential due to the secretive nature of their work. The risk of any new recruit becoming a state informant or reneging on their task is too large. We should be looking to explain this disparity in participation. This insight is very relevant for a number of reasons. Organizational elites may recruit different types of people for different types of roles. For example, it may make sense for Palestinian groups to recruit individuals with clean records to operate within Israel as opposed to a seasoned militant with previous criminal convictions who would be very likely to emerge on the radar of the Israeli security community. Therefore, depending on the type of terrorist attack in question, the profile of the terrorist may change dramatically. Also, different roles within a terrorist movement require different training and conditioning processes. Certain roles (particularly violent ones) may require a deep immersion within the group and its constituent norms while other more mundane tasks may be entrusted to those with relatively little exposure to, or experience within, the group. In other words, there are two types of selection effects. First, who gets chosen to become a member. Second, which members are chosen for which tasks.

Who Becomes Terrorist?

As we discussed above, the study of who becomes a terrorist has been undertaken from psychopathological perspectives, using psychoanalytic tools, developing theoretical or formal models, or using data driven empirical models. In this section, we discuss the costs and benefits of each and argue for how a data-driven approach can explain the variance in role-profiles.

Psychopathological Approaches

This research analyses the individual actor. The role of group processes and the social environment receives no attention. Instead, these approaches argue that the terrorist is born and not made. An underlying assumption in this research strand is that compulsion to join the militant organization, or the vulnerability to recruitment, is inherent in those who become engaged in militancy. Motivation to participate is therefore situated within the individual in isolation. To this end, researchers postulate deviant characteristics of the terrorist. For Victoroff, this field is largely characterized by theoretical speculation based on subjective interpretation of anecdotal observations (2005: 3). Several researchers claim there is an identifiable terrorist personality that is spoiled, disturbed, cold and calculating, perverse, excited by violence, psychotic, maniac, irrational and fanatical (Brynjar, 2000: 9). Hubbard's (1971) analysis of hijackers show they typically possess a violent often drunken father, a deeply religious mother, a personality that is sexually shy and passive, a protective feeling towards younger siblings, poor achievement,

suicidal tendencies, and limited chances of high wages in the future. Ferracuti and Bruno (1981) assert nine commonalities amongst their sample of 908 right-wing Italian militants. These are (1) ambivalence toward authority, (2) defective insight, (3) adherence to convention, (4) emotional detachment from the consequences of their actions, (5) sexual role uncertainties, (6) magical thinking, (7) destructiveness, (8) low education, and (9) adherence to violent subculture norms and weapons fetishes. They also assert that right-wing militants are more likely than their left-wing counterparts to possess psychiatric personalities (cited in Victoroff, 2005: 9). Piven (2002) views terrorist behavior as psychotic, lacking empathy and full of malignant rage. Hacker's (1976) typology of terrorists included the ideal type 'Crazies' who were motivated by false ideas arising from mental illness. Similarly, Hamden's (2002) typology includes the ideal type Psychopathic. Pearce (1977) viewed terrorists as sociopaths due to gaps in self-monitoring. Pearce based his conclusion on an analysis of the tattoos adorning one particular militants' body. Cooper (1978) argued that terrorists possess psychopathic or sociopathic personalities and if it were not for engaging in political violence, they would find another outlet for their violent impulses. Tanay (1987) agrees and argues that the acts of terrorists are merely psychopathic tendencies hidden behind political rhetoric to provide the militant with an excuse to aggress. Adigun Lawal (2002) views terrorists as dogmatic and having a major sense of helplessness caused by low self-esteem, lack of independence and a lack of assertiveness. Lester, Yang and Lindsay (2004) suggest suicide bombers possess authoritarian personalities created by Islamic child-rearing practices. Without providing empirical evidence, Martens

(2004) argues that numerous terrorists share many of the traits of antisocial personality disorders.

Silke (1998) likens the above studies to the circular thinking of the Cheshire Cat from Alice in Wonderland. The Cat thinks that only mad people can inhabit Wonderland, so therefore anyone he met in Wonderland must be mad. Silke argues that empirical support for the pathology model remains elusive. Empirical research refuting these diagnoses, on the other hand, is more frequent and of better quality. For example, research carried out on the IRA, loyalist militants in Northern Ireland, Hezbollah, German militants, the FLN, ETA, Colombian militants, global jihadists and captured Palestinian militants has provided evidence that militants are psychologically quite normal (Crenshaw, 1981; Post, Sprinzak, and Denny, 2003; Heskin, 1984; Ferguson, Burgess, and Hollywood 2008; Merari, 1998; Rasch, 1979; Reinares, 2007; Sageman, 2005; Sanchez-Cuenca, 2007). Typically the population of recruited militants does not tend to be psychopathological, or for that matter highly uneducated and impoverished because of a selection effect. Organizational elites seek to recruit those most capable to undertake assigned tasks. Most tasks require an element of secrecy, calibrated violence and technological know-how. Educated, psychologically healthy and normal volunteers tend to be preferred for this particular reason.

Psychoanalytical Approaches

Psychoanalysis has been a particularly popular tool in the quest to understand individual motivation to become engaged in political violence. Psychoanalysis

reveals the relationship between conscious and unconscious thought and focuses upon psychological development from childhood. The findings from this research trend are reasonably similar to the above assumptions of the terrorist personality being essentially abnormal but see this as determined by unconscious drives and urges originating from childhood rather than inherent personality flaws.

One particular concept in psychoanalysis, narcissism, has been very attractive to many researchers. Narcissists possess an over-inflated sense of self to the effect that they feel superior to others, possess volatile self-esteem, have interpersonal problems, and are prone to aggression in response to ego threats (Hogg and Vaughan, 2005: 136). Narcissistic injuries, caused by early emotional injuries, lead to a damaged sense of self in adulthood. Incapable of overcoming these early emotional injuries, the individual directs his/her anger toward other targets and holds them responsible for the narcissistic injuries incurred. Lasch (1979) and Pearlstein (1991) assert that narcissism is key to understanding the terrorist personality. For Pearlstein (1991), terrorists utilize their 'narcissistic rage' in undertaking their duties. He goes as far to claim that narcissism provides the most complete and intellectually satisfying theory regarding the personal logic of political terrorism. Stern (2004) alleges a link between early failure and susceptibility with engaging in terrorism. According to Akhtar (1999), terrorists' narcissistic rage stems from childhood physical abuse and emotional humiliation. She states that terrorists are deeply traumatized, suffered from chronic physical abuse and emotional humiliation as children, and now mistrust others. Similarly, Billig (1985)

correlates the inability to identify with a father figure with becoming engaged in militancy. De Mause (2002) and Hoffman Baruch (2003) offer similar analyses of Muslim militants. They assert that abusive and/or sexually repressive misogynist families set the eventual militant down the path of radicalization. Bollinger (1985) emphasizes deviance within the family system as symptomatic of militants' early life. De Cataldo Neuberger and Valentini (1996) suggest that Italian female militants' experiences of tyrannical fathers and weak mothers lead them to their career path. Berko (2007) constantly refers to the broken homes that suicide bombers grew up in. Kent and Nicholls (1997) posit that family backgrounds that create a murderous rage in the child are crucial to understanding early motivation. Crayton (1983) and Beck (2002) instead assert that group processes drive narcissism that in turn enhances collective self-image. Kaplan (1978) posits the role of low self-esteem and the sense of failure motivates individuals to join militant organizations. Membership enhances a feeling of masculinity. Crayton (1983) also argues that charismatic group leaders draw narcissistically exposed people toward militant organizations.

The psychopathological and psychoanalytical investigations of the 'terrorist personality' clearly suffer from the fundamental attribution error (Hogg and Vaughan, 2005). This error is a basic human tendency to use dispositions as an explanatory variable for behavior while underestimating the powerful impact of the situational context within which the individual behaves. This type of research focuses too much on the actions of the militant rather than the processes through which the individual became a militant. By focusing upon the drama of the act, these

researchers seek heuristic dramatical explanations. By focusing upon the individual in isolation, the above-mentioned research risks neglecting the powerful and omnipresent influence the immediate social environment has upon the individual (Berger and Luckmann, 1966). Social psychologists believe that because of this, personality variables alone hold little explanatory or predictive value. Also, these approaches likely overpredict who will become a terrorist. Many people have unfulfilled unconscious urges, overbearing fathers, and similar issues that do not lead them down the path of terrorism. Finally, these approaches also overlook the crucial selection effects mentioned in the opening paragraphs.

Theoretical Models

Whereas the psychoanalytical, psychopathological and macro-level approaches outlined above focus on 'why' individuals become members of militant groups, theoretical models (particularly pathway or process models) mostly focus on 'how' individuals become members This shift in focus should be more informative for counter-terrorism policy. A small number of these theoretical models remain particularly strong given that they are supplemented with in-depth case studies or first hand interviews. Identifying a number of recurring processes that facilitate membership into militant groups, may lead to a development of phase specific intervention points (Horgan, 2005). Horgan (2005) argues that it is analytically and operationally more useful to look at terrorist careers. This type of approach involves "an explicit effort…to consider involvement in terrorism as a process comprising discrete phases to 'becoming' a terrorist, 'being' a terrorist and disengaging from

terrorism" (2005). Each phase consists of different operational intervention strategies. Horgan offers a number of unstructured antecedent qualities that frequently emerge in the first-hand accounts obtained in interviews of how individuals 'become' a terrorist. They include; 'catalysts as primary involvement features', 'identification as an attraction and byproduct of other positive features of involvement', and 'timing, opportunity, pacing and progression'. Taylor and Horgan (2006) further expanded upon this line of argument in a more structured manner. According to their model, understanding the full picture of becoming involved entails understanding multiple facets such as the setting in which the pathway occurred (family, early experiences, culture, socialization process, dissatisfaction with current personal circumstances), cognitive-social factors (risk taking, reduced social contact, increased empowerment, sense of purpose, validation and normalization, increased acceptance of ideology), non-offending behavior (access to propaganda, engagement in non-violent political activism) and access to a facilitating community through personal contacts or a Community of Practice.

McCauley and Moskalenko (2008) also offer a number of radicalization mechanisms across the individual, group and mass public levels of analysis. At the individual level, they posit five key mechanisms; radicalization through personal victimization, radicalization through political grievance, gradual engagement in group activities ("slippery slope"), engagement through personal connections, and radicalization in like-minded groups. There is little theorizing apparent within McCauley and Moskalenko's approach that seeks to identify any inter-relationships amongst these

variables. The mechanisms identified by Moghaddam (2005) are broadly similar but are offered in a highly structured manner. Moghaddam views gradual engagement in terrorism activities as a narrowing staircase of choices. At the ground floor, individuals psychologically interpret their material conditions. If a perception of unfairness is salient, the individual may escalate to the first floor – "perceived options to fight unfair treatment". Here, the individual weighs different options that are open to him/her in fighting the unfair treatment. If an aggressive approach is chosen, the individual escalates to the second floor; "displacement of aggression". The next floor involves morally engaging with the justness of your cause. If this develops and is accepted, the fourth floor is climbed to. Here, the individual has joined the terrorist group and solidifies categorical thinking and the perception of how legitimate the terrorist organization is.

Data-Driven Studies

A small number of empirically driven studies emerged over the past ten years that provide single-case study snapshots of a terrorist organization/movement's cadre. They include; Reinares' (2005) analysis ETA militants, Sageman's (2005, 2008) research on global Salafi Jihadists, Florez-Morris' (2007) work on Columbian militants, Magouirk et al's Global Transnational Terrorism (GTT) project on Southeast Asian militants (2008), Fair's (2008) research on Pakistani militants and more recently Horgan and Gill's (2011) study of 200+ violent dissident Republicans in Northern Ireland between 1998 and 2010. Collectively, these studies dispel much conventional wisdom about who becomes a terrorist. Although many individuals

join terrorist groups at a very young age, there exists a wide diversity intra- and inter-organizationally concerning when people typically join groups. For example, Florez-Morris' (2007) sample of Colombian militants average 20 years of age at recruitment. Sageman's (2005) sample of global jihadists showed an average age of 25.7. Reinares' (2005) sample of convicted ETA members shows that between 1970 and 1995, 84.3% of recruits were between 18 and 26 years of age at recruitment. Over 6.2% were over 30. Similarly, 85% of Fair's (2008) sample of Pakistani militants were between 12 and 25 at the time of recruitment. Horgan and Gill's (2011) sample of dissident Republicans in Northern Ireland (1998-2010) show that those accounted for average 35 years of age at first time of identifiable dissident activity. Similarly, Magouirk et al's (2008) project on Southeast Asian jihadists reveals that approximately 3/8's of the sample were in their 30's and an additional 1/3 were in their 40's.

Gambetta and Hertog's (2007) research, in particular, dispels many of the common myths surrounding poverty and lack of educational opportunities as a driver to join terrorist organizations. Gambetta and Hertog undertake a meta-analysis of international salafi jihadists (contributed by Sageman), Hamas militants, the Takfir Al-Hijira and Military Academy Group's in Egypt, Palestinian Islamic Jihad members, and sundry cases from Afghanistan, Pakistan, Egypt and Iraq. Of the sample (N=404), 284 educational backgrounds were accounted for. An impressive 69% had obtained some form of third-level higher education, while less than 10% failed to complete secondary education.

Finally, not all terrorists are male. There are countless examples of females holding prominent roles within terrorist organizations and their numbers are on the increase in conflict theatres such as Iraq, Afghanistan, Pakistan and Chechnya (see Bloom, 2011).

We are aware of only one such published study exists on suicide bombers. In 2010, Merari published his long-standing research on suicide bombers from Palestine. Merari's sample ranges from 16-57 with a mean of 22 years of age. Female suicide bombers typically tended to be older, averaging 25 years. 8.6% of his sample were married. Palestinian suicide bombers also typically were much more educated than the Palestinian society as a whole. 21% of his sample graduated from university. A further 36.2% of Merari's sample had some partial form of university education. Merari operationalized 49 of his sample on their social class. 61% were deemed to be middle-class.

In sum, the worldwide universe of who becomes a terrorist is far from a homogenous field. Differences emerge within and between groups quite regularly along a number of key socio-demographic indicators. There are obvious knock-on effects for counter-terrorism policies that rely upon profiling style techniques (discussed below). While the above studies treat a terrorist organization at an aggregate level, we argue it may be more instructive and thereby operationally

relevant to disaggregate groups into smaller more specific role categories. By doing so, we may be able to tease out role-specific terrorist profiles.

Issues Surrounding the 'Profiling' Approach

As mentioned above, the search for the 'terrorist profile' or 'terrorist personality' has been largely a failed long-term pursuit consisting of various unempirically informed psychopathological or psychoanalytical approaches. The ability to discern a 'terrorist profile' of who joins a terrorist is often validly downplayed by evoking a number of arguments. First, the search assumes that a perfect profile of a terrorist/suicide bomber exists based on our familiarity of past perpetrators. Oftentimes, researchers and analysts evoke outliers to counter this approach and label profiling as being overly deterministic/reductionist (Horgan, 2008). For example, worldwide suicide bombers have ranged from 15 to 70 years of age, been very well educated and uneducated, male and female, and from all socioeconomic classes, Christian, Hindu, Sikh and Muslims, religious and secular, single and married, white and black (Gill, 2008). The argument follows therefore that a perfect worldwide profile of suicide bombers does not exist. Second, it is argued that even if a perfect profile is constructed – knowledge of which will push a terrorist organization to innovate and recruit individuals that don't fit the pattern. This is a form of competitive adaptation to counter-terrorism policies employed (Kenney, 2006). Third, the argument that the variables hypothesized effect many more people who do not become engaged in terrorism than those who do is also extremely valid. Fourth, according to Horgan (2008:84): "in assuming the existence of a profile, we

tend to miss several critical features associated with the development of the terrorist" including the gradual nature of recruitment, the pull factors/allure of recruitment, role migration and the importance of role qualities.

These arguments are valid but do not necessarily mean that the profiling approach is an invalid one. We suggest that this approach, if used at the correct stage in the pathway of terrorist involvement, potentially contains significance for counter-terrorism efforts. The profiling approach, admittedly, can not pinpoint with specificity who becomes a terrorist but it may provide insight into what roles individuals migrate to (due to elite selection effects) upon recruitment into a terrorist network. Current efforts to understand who becomes a terrorist often make one major categorization error. The category 'terrorist' overlooks the variety of specific role types that are present within a terrorist organization.[2] For a profiling approach, it may be more helpful to disaggregate what being a 'terrorist' means and this involves delineating the plethora of roles (Horgan, 2005). For example, the suicide bomber is just one node within a wider network of militant group members and affiliates (Pedazhur and Perliger 2006). Without the wider network, suicide bombings would be far more difficult to engage in. There are a number of identifiable role types within a suicide bomber network. For example, militants attacked two Jakarta hotels in coordinated suicide bombings in July 2009. The

[2] The term terrorist is also quite contentious. Is someone a terrorist if they use terrorism once? If they do so for an extended period? What are they when they desist? Juergensmeyer (2000), for example, shies away from using this word and only adopts the term in a similar manner as one would for a murderer. In other words, a murderer by law is one who has been convicted of the crime and is serving a sentence for that offense. For our purposes, we conceptualize a terrorist in a similar manner. All of the individuals in our study have been indicted, convicted, or killed themselves and implicated themselves in the event.

investigation centered around the mastermind behind the attack, Noordin Mohammed Top and one of his main associates who recruited the suicide bombers, Saifuddin Jaelani. The police raid in which Top was killed uncovered a number of videos and documents on his laptop. One letter written by Jaelani to his family discussed the compartmentalized structure of Top's group. He details how; "There are those who manage the funds, there are those who recruit, there are those who are giving fatwas and directions. There are those who guard the mujahid families, there are those who source cars, source explosives, source weapons. There are also political minds, filmmakers and couriers. And there are those who become volunteers for martyrdom" (Gartrell, 2009). In effect, Jaelani's letter identifies at least nine role types and at least one more could be added to the list:

- Recruiters
- Fatwa issuers/Religious leaders
- Operations director
- Security
- Materials acquisition
- Bomb-maker
- Political leaders
- Filmmakers
- Couriers
- Suicide bombers

Each role type plays its own key part in the suicide bomber process and also entails their very own intervention strategies. Recruiters ease the passage of the individual into the group setting upon which martyrdom norms become internalized. Religious leaders offering justifications for suicide bombers by portraying them as suicide bombers offer two functions: (a) it aids community support (b) it aids in the internalization of martyrdom norms. Political leaders also offer these two functions but in a secular fashion. Operations directors choose the broad parameter of a

suicide bombing's target and timing. It is unclear what exact role "those who guard the mujahid families" play. It could be either a security function preventing family members from informing on their relative's intentions or it could be a social function providing better access to key social services for the suicide bomber's family. Without explosives and the means of delivery (car bomb, belt bomb, boat bomb) there would be no suicide bombing. In theory, there could be a number of individuals charged with sourcing different aspects of the explosive device. These different aspects may be pooled with a specialized bomb-maker. The efforts of filmmakers who record the last will and testament videos and the bombings themselves all work toward continuing the culture of martyrdom. Couriers facilitate the transition of martyrdom materials to a wider audience and provide a key link between operations directors, organizational elites, recruiters and dispatchers. There is little systematic study in many of these role types in comparison to the suicide bombers, political strategists and religious leaders. Given this variety of roles in just a suicide network and given the importance of selection effects, it is very surprising that little systematic research has investigated the various profiles of people according to their specific role within terrorist networks. Now that the data-driven study of who becomes a terrorist has begun to proliferate, statistical approaches to the profiling approach are now possible and may confidently (with statistical significance/probabilities) dispel or confirm skeptics that rely upon pinpointing illustrative examples of outliers. To our knowledge, this is the first study of its type that specifically compares a large-N sample of suicide bombers with a

large-N sample of members of terrorist organizations who took part in more conventional role types.

Data

The data consists of 219 Palestinian suicide bombers (1994-2008) and 510 individuals indicted and convicted of terrorism related offences in the United States (1980-2002). The former data was collected as part of the first author's doctoral thesis and the latter data is taken from Brent Smyth and Kelly Damphousse's American Terrorism Study (details and data of which can be found at the following web address http://www.icpsr.umich.edu/icpsrweb/ICPSR/studies/4639). The American Terrorism Study database is largely based off of FBI lists of persons indicted as a result of investigation under the FBI's Counterterrorism Program and the subsequent court transcripts that emerged at local or federal level.

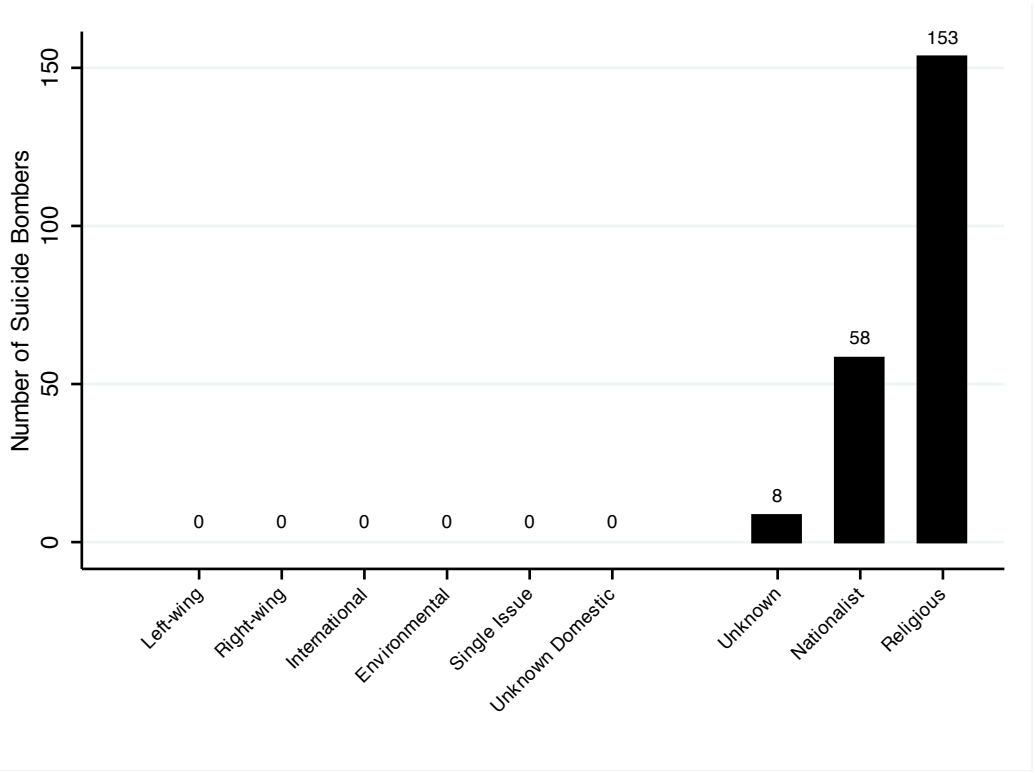
The suicide bombers data integrates four types of sources (in order of relevance): (1) media articles on specific suicide bombing events including biographically oriented human interest stories (2) media statements from militant and government sources (3) online terrorism incident databases (MIPT, ICT, GTD), (4) general chronologies of incidents.

The dataset catalogues various socio-demographic and role specific behaviors of each individuals. For each individual, the database supplies 13 pieces of information captured in as many fields. Basic information such as the individuals name/identifier number, gender, race, age (at time of conviction/suicide bombing), marital status and highest education level attained and employment status covers

seven such fields. Group type the organization is affiliated to covers an additional field. Palestinian suicide bombers associated with Hamas or Islamic Jihad were assigned to the religious group type category. Palestinian suicide bombers from PFLP or Fatah were assigned to the nationalist group type category. The individuals main role was treated as a binary variable (0=suicide bomber, 1=conventional role type) and a second field further disaggregated the conventional terrorists into further role types (leader, financier etc). Length of membership, and the channels through which they were recruited (i.e. friend, relative, internet etc) cover two additional operationally significant variables. Finally, the individuals were designated as either domestic or international terrorists. If the individual either planned or took part in attacks outside of his/her country of birth (e.g. crossed a border and engaged in illicit activity) – they were designated as an international terrorist. For example, Palestinian suicide bombers who detonated in Jerusalem were categorized as international terrorists whereas those bombers who attacked convoys close to refugee camps were categorized as domestic.

Unfortunately, missing data for the suicide bombers made it difficult to use a number of these variables – employment status, length of membership, and recruitment channels. This is particularly unfortunate given Felter and Fishman's (2009) findings that those foreign fighters recruited into Iraq were less likely to become suicide bombers if they were recruited through blood ties. For future research, we plan to enrich this data and add other groups into the analysis that include conventional members of Palestinian terrorist organizations and Palestinians convicted of criminal activities.

Figure 1--Ideology of Suicide Bombers



Ideology

We first investigate some descriptive statistics about our samples of suicide bombers and terrorists. Figure 1 displays the ideology of the bombers in our sample. As the figure shows, most suicide bombers are either nationalists or religiously motivated. This comports with casual observation as well as recent arguments that remind us that suicide bombing often occurs by nonreligious groups (Bloom 2005, Pape 2005).

Figure 2 compares the ideology of the sample of terrorists with suicide bombers. Our sample of terrorists includes left-wing, right-wing, international, regligious, nationalist, environmental, and single-issue motivated individuals. Some of these categories could be combined (i.e. single issue and environmental) but are

kept separate in the original operationalization by the American Terrorism Study. The reasons why are unclear..

Figure 2--Comparison of Ideologies Between Suicide Bombers and Terrorists

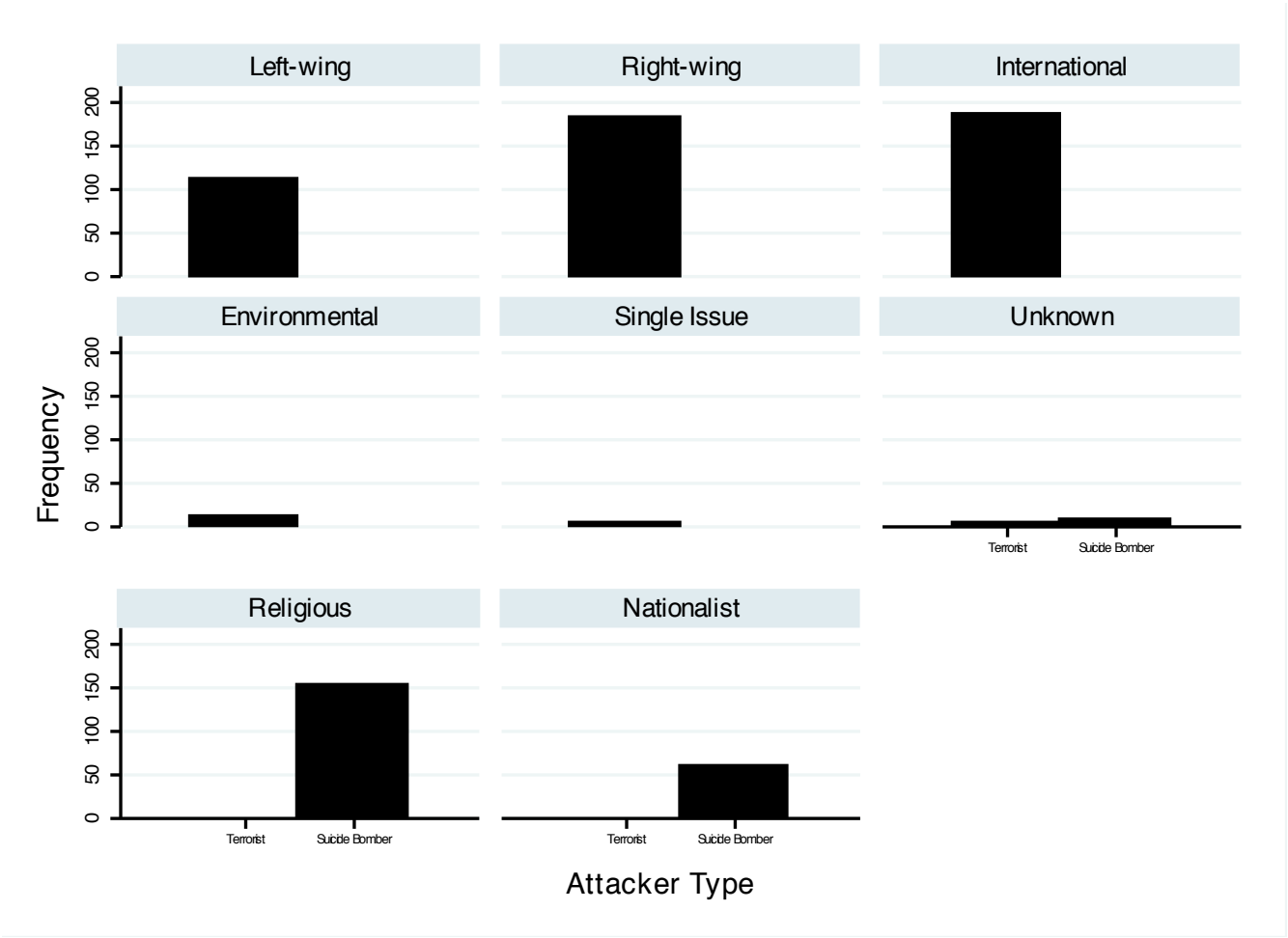
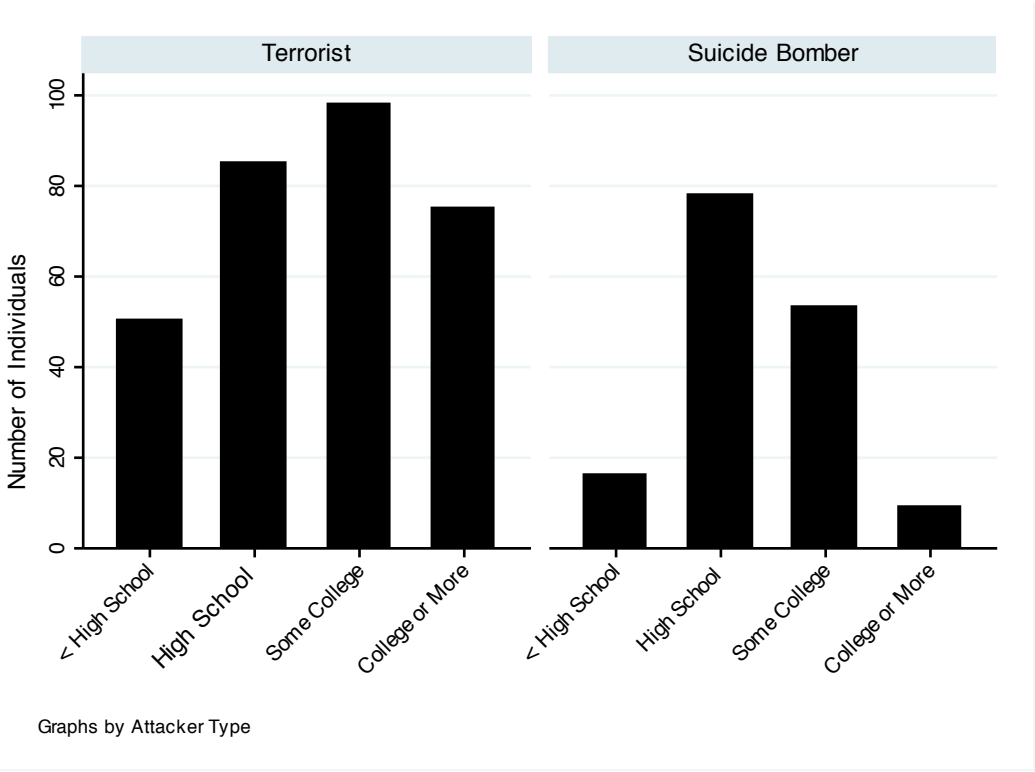


Figure 3--Comparison of Education Levels

Between Suicide Bombers and Terrorists



Education

As the figure (Figure 3) of education and indicted terrorist shows, the amount of education is somewhat normally distributed. About 40% of terrorists have either less than a high school education (16%) or at least a college education (24%). The other sixty percent either have a high school education (28%) or some college (32%). In contrast, the majority (84%) of suicide bombers are clustered in the high school (50%) or some college (34%) range. Only 6% of bombers have at least a college degree while about 10% have less than a high school diploma. A simple cross-tabulation between the probability of being a suicide bomber vs. a terrorist given different levels of education suggests that this bivariate relationship does not occur by chance (Pearson Chi^2=37.292, Pr =0.000). A simple comparison of these

descriptive statistics shows that we might expect suicide bombers to be less educated than other people involved in different roles in a terrorist network or organization.

Leadership

Table 1--Count of Leaders Among Suicide Bombers and Terrorists

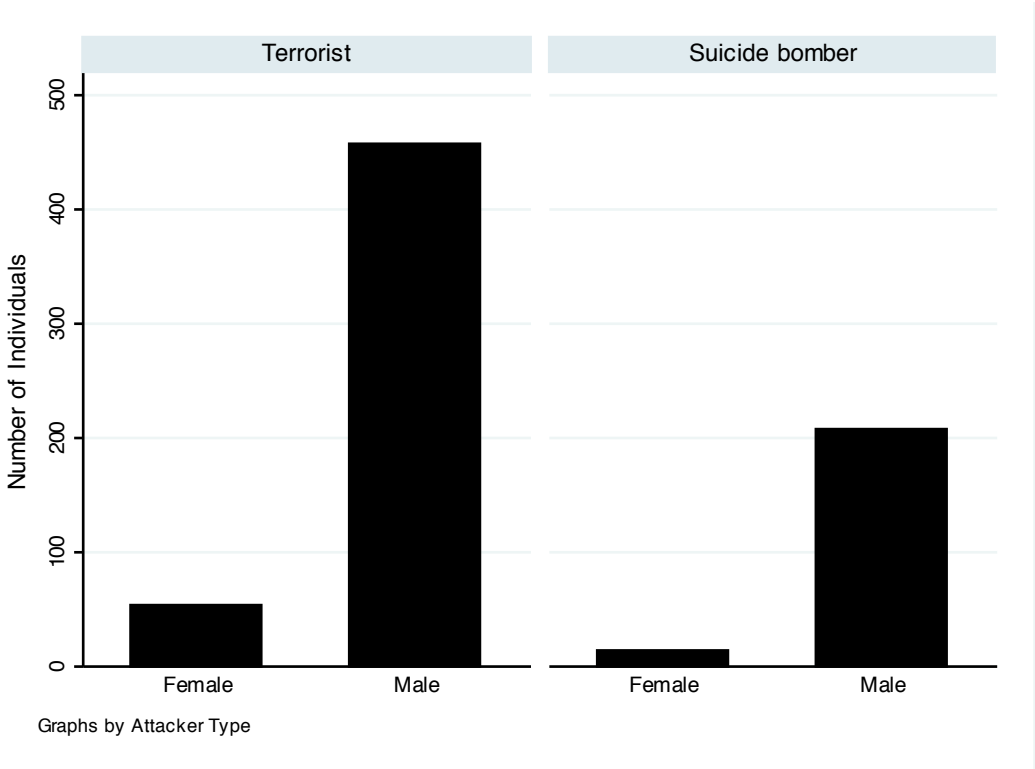
	Not a Leader	Leader	Total
Terrorist	338	126	464
Suicide Bomber	219	0	219
Total	557	126	683

Pearson $Chi^2 = 72.9226$ Pr = 0.000

Table 1 offers a simple cross-tabulation of whether an individual in our study is identified with some leadership role in a terrorist organization and whether they are an indicted terrorist or suicide bomber. Suicide bombers never are identified with leadership positions, whereas roughly one quarter of the indicted terrorists are. This makes sense as using a leader as a human bomb is likely counterproductive for future organization goals.

Gender

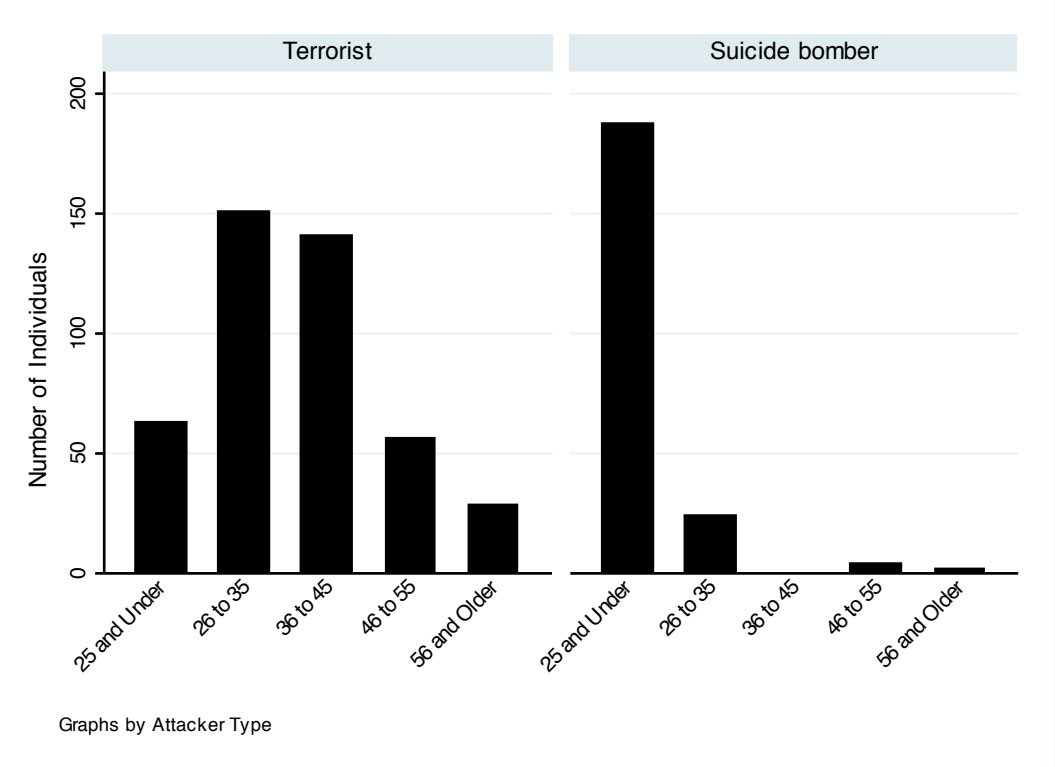
Figure 4--Comparing the Gender of Suicide Bombers and Terrorists



As Figure 4 suggests, about 10% of terrorists are women. In contrast, only about 5% of suicide bombers are women (Pearson chi^2 = 4.3129 Pr = 0.038). With that said, 12 of the suicide bombers in the data are women. Men are overrepresented among both terrorists and suicide bombers. As the Algerian conflict in the 1950s and 1960s showed, however, reliance on a strict gender profile can lead to a substitution effect as women are then used more often to subvert counterterrorist tactics.

Age

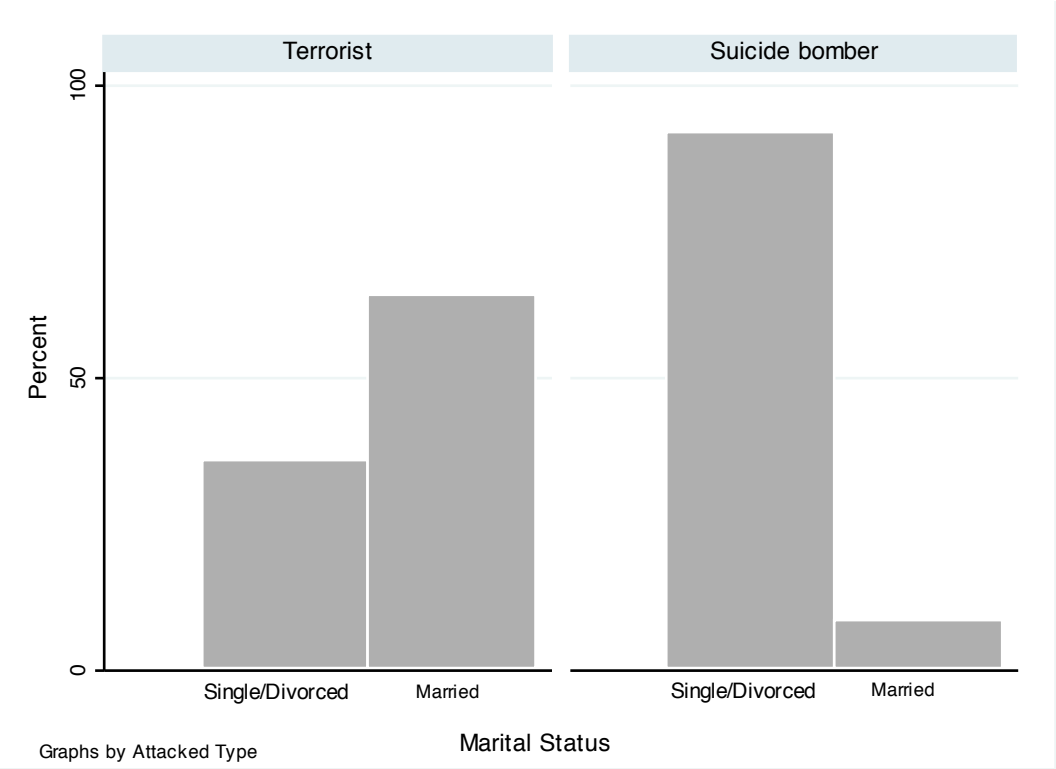
Figure 5--Comparison of Age Between Suicide Bombers and Terrorists



In Figure 5, we compare the ages of suicide bombers and terrorists. While terrorists are represented across the age categories, only four suicide bombers in the data are over 35 years old (Pearson $Chi^2 = 331.5880$ Pr = 0.000). Suicide bombers are typically picked from younger people, similar to infantry in the army.. While terrorists also skew younger, they generally are under 25 and include a broader range of age categories.

Marital Status

Figure 6--Comparing the Marital Status of Suicide Bombers and Terrorists



Similar to leadership and age, marital status seems to reliably sort terrorists from suicide bombers. Few suicide bombers are married whereas as most terrorists are. Some of this disparity might be related to societal perceptions related to who they think are *just* bombers (Bloom 2005). For example, Hamas used a married mother of two, Reem Riyashi for an operation in 2004. Her brother-in-law denounced the attack saying, "[w]e don't accept women doing such things. She has two children. It is not right."[3]

These descriptive comparisons in the tables and figures suggest some differences between these different roles in a terrorist network or organization. In

[3] Chris McGreal, "Human Bomb Mother Kills Four Israelis at Gaza Checkpoint." Guardian, 15 January 2004, accessed online (1 March 2011): http://www.fromoccupiedpalestine.org/node/1054

the next section, we investigate whether these differences maintain when we use multiple regression techniques to compare the likelihood of being a suicide bomber to a terrorist.

Logistic Regression Model

Table 2--Logistic Regression--Factors that influence the Probability of Being a Suicide Bomber versus a Terrorist

Variable	Coef/SE	P Value	Predicted Prob./SE
Domestic	-1.693 (0.335)	0.000	-23.6% (6.3)
Gender	0.819 (0.631)	0.194	--
Age	-2.450 (0.414)	0.000	-72.2% (5.1)
Marital Status	-1.150 (0.411)	0.005	-14.5% (6.0)
Education	-0.381 (0.225)	0.091	-15.5% (10.3)
Constant	5.099 (0.936)	0.000	
N=393	Pseudo R^2=0.57		

Robust standard errors in parentheses, Predicted probabilities are calculated based on a change from 0 to 1 (Domestic, Marital Status) or from the min to the max (Age, Education)

In addition to examining the bivariate descriptive statistics, we estimated a logistic regression to model how these factors influence the likelihood that an individual is a suicide bomber as compared to a more general terrorist. Table 2 provides coefficient estimates, standard errors, p values, and predicted probabilities for how each of these factors increases or decreases the likelihood of being a suicide bomber. Most of the inferences are similar to what we would expect based on examining the descriptive statistics. Domestic as opposed to international attackers are much less likely to be suicide bombers. Foreign fighters in Iraq are a good example of this phenomena. As an individual gets older, they are much more likely to have a different role in an organization instead of being a suicide bomber. If we moved from the minimum age (25 and under) category to the maximum (56 and

older), the probability that an individual is a suicide bomber, on average, decreases by more than 72%. Figure 8 displays the change in these probabilities as we move from one age category to the next. As the figure shows, most of the change in probability occurs as we move from the youngest age category to 26 to 35 year olds.

Being married also decreases the likelihood that an individual is a suicide bomber by over 14%. Increasing an individual's education from the minimum (less than high school) to the maximum (college and more) decreases the probability of being a suicide bomber, on average, by over 15%.[4] Contrary to the age effect, the predicted probability of being a suicide bomber decreases at roughly the same amount as we move up the education categories (See Figure 9).

Finally, gender, after controlling for these other factors does not help sort suicide bombers from other roles. Women are the minority of these cases in each category, but they are no less likely to be suicide bombers than perform some other role in the organization/network. To assess the in-sample predictive ability of our model, we use Receiver Operator Characteristics (ROC) curves. These curves show how well the model predicts 1s (suicide bombers) and 0s (terrorists) given different thresholds for what probability equals a 1.[5] Figure 7 displays an ROC curve estimated after the model. As the curve shows, the model does an excellent job at sorting these roles (0.9485). In sum, the model, in-sample, accurately predicts about 95% of the 1s and 0s. Since in-sample prediction can be vulnerable to overfitting. This means that we simply find that our model predicts the data we used

[4] Our confidence in this result is lower than the other estimates (p value 0.091).
[5] The standard is to assume any probability above 0.5 is coded as 1 and anything less is coded a 0.

to estimate it well, but the model will not perform as well when applied to new data. To remedy this concern, we perform some out-of-sample forecasts.

Figure 7--In-sample Predictions of the Econometric Model using ROC Curves

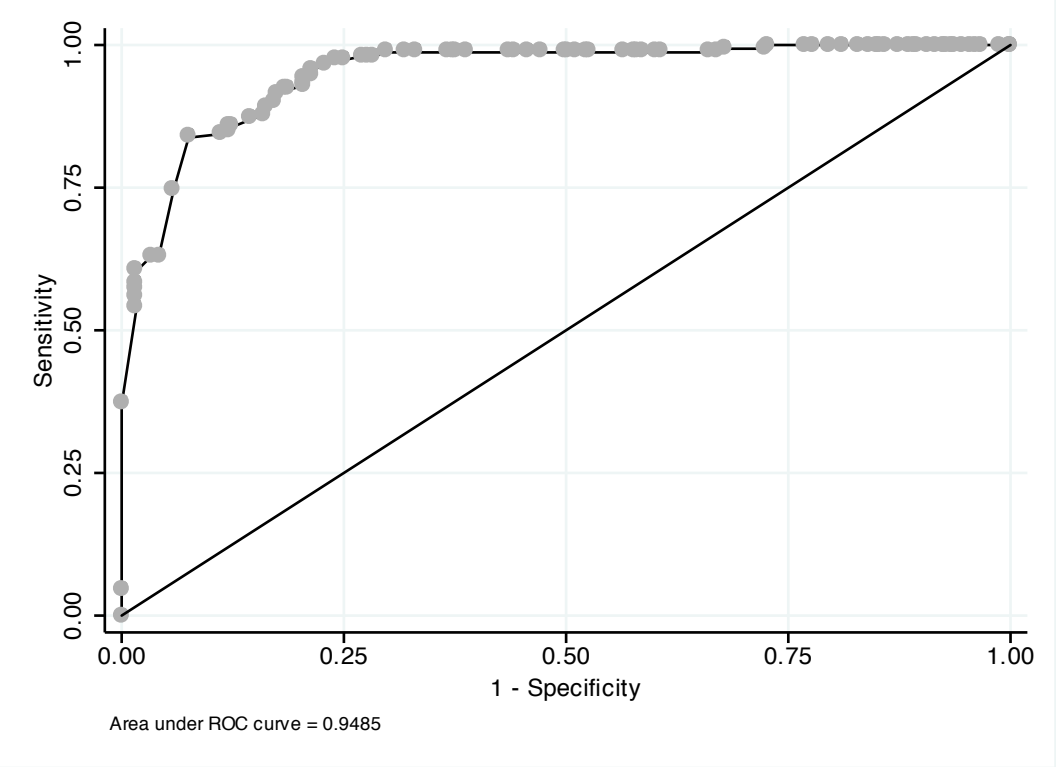


Figure 8

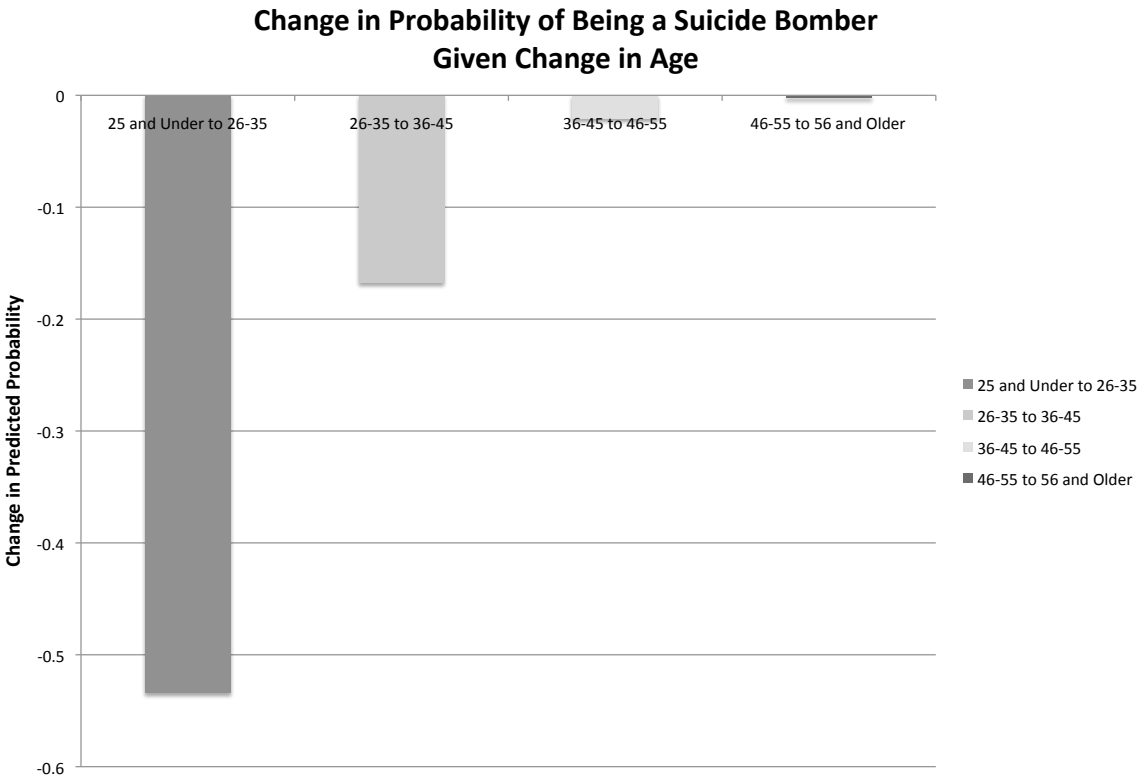
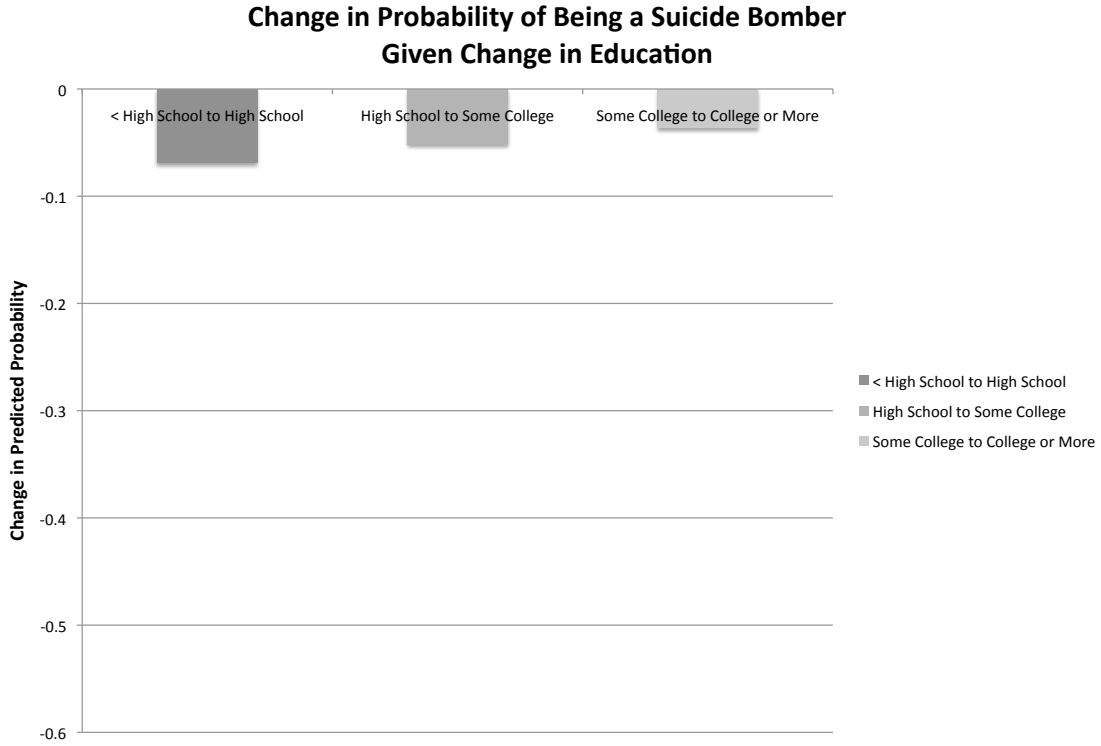


Figure 9



Out of Sample Forecasts

While the ROC curves can provide in-sample forecasts of how well our model predicts which individual is likely to be a suicide bomber or terrorist, we would like our model to be able to predict out-of-sample. In other words, we would like to test our model on data that were not used to estimate the model parameters. Since we used all available data to estimate the model, we cannot simply evaluate our model on new data. Instead, we use a procedure referred to as cross-validation. The intuition behind this approach is straightforward. We divide our data into four randomly selected groups.[6] We then use three of the groups as a *training* set. The training set is used to estimate the model. The last group, or the *test* set, is then used to predict how well the model assigns 1s vs. 0s (or a receiver operator characteristic curve is estimated only on this fourth group). Within each sample the four training sets and test sets are rotated among the data groups.[7] For each sample, four out-of-sample forecasts are generated then averaged. A total of ten samples are taken from the data. In sum, forty different models are predicted and then averaged.[8] Results from cross-validation support the in-sample predictions and the regression results. The model is able to predict over 94% of the cases accurately.

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[6] In practice, we assigned a random number to each observation, then selected the groups based upon a even dividing of data into four groups based on their random number.

[7] For example, training set 1 includes Group 1, Group 2, and Group 3, and the test set 1 is Group 4. Training set 2 includes Group 2, Group 3, and Group 4, and the test set is Group 1.

[8] Ward, Greenhill, and Bakke (2010) use this procedure for predicting civil conflict.

Conclusion

In sum, there is a clearly distinguishable difference in profiles between Palestinian suicide bombers and individuals convicted of more conventional terrorist activities in the United States. The model outlined here also possesses a predictive capability. These findings clearly have practical policy relevance. By disaggregating what it means to be a 'terrorist' into specific role types – the utility of the profiling approach is clear to see. It does not predict who becomes a terrorist but instead teases out the statistical probability of an individual becoming a suicide bomber as opposed to another conventional role based on educational attainment, age, marital status the type of group the individual joins and most significantly age upon the moment of recruitment. It also has the potential to predict role migration as the individual's life circumstances change (getting married, having kids, getting a job) while being a member of a terrorist organization.

This approach has direct implications for directing finite resources more accurately towards the specific roles counter-terrorism practitioners choose to interrupt. This approach also provides a more empirically refined way of understanding who becomes a terrorist and more particularly the selection effects of terrorist elites that guide specific types of individuals (and their particular life circumstances and skills) towards specific types of roles and behaviors within terrorist movements. Finally, much counter-terrorism policy is reactive to contemporary events and seemingly unable to predict the second-order (or substitution effects) that occur in the wake of successful counter-terror strategies.

This approach, combined with effective social network analysis, may also have predictive abilities in assessing which individuals within the group are likely to migrate toward a position made vacant (either through the death or capture of the role's former incumbent).

While our study is the first that we know of to compare the profiles of different participants in terrorist organizations, there is still much to be done. Ideally, we would like to compare within the same organization, the same culture, or the same ideology to see if these comparisons hold. Additionally, we would like to obtain demographic data of criminals held in Israel and compare their profiles to the database of suicide bombers. Recent research has compared the study of crime with the study of terrorism (LaFree and Dugan 2004). We suggest that examining the profiles of terrorists versus criminals is another fruitful way to compare these research programs. This will entail a large-scale data collection effort but luckily the advancement of automated data collection and coding processes coupled with the existence of researchers willing to share their data will make this task less onerous. The preliminary results of this study suggest such a data-driven research endeavor will be both an academically stimulating and operationally significant task.

References

Adigun Lawal, C. (2002) "Social-psychological considerations in the emergence and growth of terrorism", pp23-56 in C.E. Stout, ed., *The psychology of terrorism: Programs and practices in response and prevention*. Westport, CT: Praeger Publishers

Akhtar, S. (1999) "The psychodynamic dimension of terrorism", *Psychiatric annals* 29 (6): 350-355

Beck, A. T. (2002) "Prisoners of Hate", *Behavior research and therapy* 40 (3): 209-216

Berger, P., and T. Luckmann (1966) *The social construction of reality: A treatise in the sociology of knowledge*. London: Penguin Books

Berko, A. (2007) *The path to paradise: The inner world of suicide bombers and their dispatchers*. New York: Praeger Publishers

Billig, O. (1985) "The lawyer terrorist and his comrades", *Political psychology* 6 (1): 29-46

Bloom, M. (2011) *Bombshell: The many faces of women terrorists*. Toronto: Penguin Press

Bloom, Mia. 2005. *Dying to Kill: The Allure of Suicide Terror* (New York: Columbia University Press).

Bollinger, L. (1985) "Terrorist conduct as a result of a psychological process", *Psychiatry: The state of the art* 6: 387-390. New York: Plenum

Brynjar, L., and K. Skjolberg (2000) *Why terrorism occurs: a survey of theories and hypotheses on the causes of terrorism.* Norway: Norwegian Defence Research Establishment

Bueno de Mesquita, Ethan. 2005. "Conciliation, Counterterrorism, and Patterns of Terrorist Violence." International Organization 59(1): 145-176.

Cooper, H. H. A. (1978) "Psychopaths as terrorists", *Legal medical quarterly* 2: 253-262. Crayton

Crenshaw, M. (1981) "The causes of terrorism", *Comparative politics* 13 (4): 379-399

De Cataldo Neuburger, C., and Valentini. T. (1996) *Women and terrorism*. New York: St. Martin's Press

De Mause, L. (2002) "The childhood origins of terrorism", *Journal of psychohistory* 29 (4): 340-348.

Della Porta, D. (1995) *Social movements, political violence and the state*. Cambridge: Cambridge University Press

Fair, C. (2004) Militant recruitment in Pakistan: Implications for al-Qaeda and other organizations. *Studies in conflict and terrorism* 27(6):489-504

Felter, J. and B. Fishman (2009) Becoming a foreign fighter: A second look at the Sinjar records in *Bombers, bank accounts and bleedout: Al-Qa'ida's road in and out of Iraq*, pp. 32-65, B. Fishman (ed.). Combating Terrorism Center at West Point

Ferguson, N., M. Burgess, and I. Hollywood (2008) "Crossing the rubicon: Deciding to become a paramilitary in Northern Ireland", *International journal of conflict and violence* 2 (1): 130-137

Ferracuti, F., and F. Bruno (1981) "Psychiatric aspects of terrorism in Italy", pp199-213 in I. L. Barak-Glantz, and C. R. Huffs, eds., *The mad, the bad, and the different: essays in honor of Simon Dinitz*. Lexington, MA: Heath

Gambetta, D. and S. Hertog (2007) *Engineers of Jihad*. Sociology working paper 2007-10. Department of Sociology, University of Oxford Gartrell

Gill, P. (2008) Suicide bomber pathways among Islamic militants. *Policing* 2(4): 412-422

Hacker, F. J. (1976) *Crusaders, criminals, crazies: Terror and terrorism in our time*. New York: Norton

Hamden, R. H. (2002) "The retributional terrorist: Type 4", pp162-192 in C. E. Stout, ed., *The psychology of terrorism: A public understanding*. Westport, CT: Praeger Publishers

Heskin, K. (1984) "The psychology of terrorism in Northern Ireland", pp88-105 in Y. Alexander and A. O'Day, eds., *Terrorism in Ireland*. Kent: Croom Helm.

Hoffman Baruch, E. (2003). "Psychoanalysis and terrorism: The need for a global 'talking cure'", *Psychoanalytic psychology* 20 (4): 698-700

Hogg, M. and G. Vaughan (2005) *Social psychology.* London: Pearson Prentice Hall

Horgan, J. (2005) *The psychology of terrorism*. Oxon: Routledge

Horgan, J. (2008) From profiles to pathways and roots to routes: Perspectives from psychology on radicalization into terrorism. *The ANNALS of the American Academy of Political and Social Science* 618:80-94

Horgan, J. and P. Gill (2011) Who becomes a dissident? Patterns in the mobilization and recruitment of violent dissident Republicans in Northern Ireland in M. Taylor and P.M. Currie (eds), *Dissident Irish Republicanism*. London: Continuum Press

Hubbard, D. G. (1971) *The skyjacker: His flights of fantasy*. New York, NY: Macmillan Kaplan
Kenney, M. (2006) *From Pablo to Osama: Trafficking and terrorist networks, government bureaucracies and competitive adaptation*. Pennsylvania: Pennsylvania State Press
Kydd, Andrew, and Barbara Walter. 2006. "The Strategies of Terrorism" *International Security* 31(1): 49-80.
LaFree, G. and L. Dugan. "How Does Studying Terrorism Compare to Studying Crime?" in Mathieu Deflem (ed.) *Terrorism and Counter-Terrorism (Sociology of Crime Law and Deviance, Volume 5)*, Emerald Group Publishing Limited, pp.53-74
Lasch, C. (1979) *The culture of narcissism: American life in an age of diminishing expectations*. New York: Norton
Lester, D., B. Yang and M. Lindsay (2004) "Suicide bombers: are psychological profiles possible?" *Studies in conflict and terrorism* 27 (4): 283-295
Magouirk, J., Atran, S., and Sageman, M. (2008). 'Connecting Terrorist Networks', *Studies in Conflict and Terrorism, 31*, 1-16.Martens
Merari, A. (1990) "The readiness to kill and die: suicidal terrorism in the Middle East", pp192-207 in W. Reich, ed., *Origins of terrorism: psychologies, ideologies, theologies and states of mind*. Cambridge: Cambridge University Press.
Merari, A. (2010) *Driven to death: Psychological and social aspects of suicide terrorism*. Oxford: Oxford University Press
Moghaddam, F. (2005) "The staircase to terrorism: A psychological exploration", *American psychologist* 60 (2): 161-169
Pape, Robert. 2003. "The Strategic Logic of Suicide Terror" *American Political Science Review* 97(3): 343-361.
Pearce, K. I. (1977) "Police negotiations", *Canadian psychiatric association journal* 22: 171-174
Pearlstein, R. M. (1991) *The mind of the political terrorist*. Wilmington DC: SR Books
Pedahzur, A., and A. Perliger (2006) "The changing nature of suicide attacks: A social network perspective", Social forces 84 (4): 1987–2008
Piven, J. S. (2002) "On the psychosis (religion) of terrorists", pp119-148 in C. E. Stout, ed., *The psychology of terrorism: Theoretical understandings and perspectives*. Westport, CT: Praeger Publishers
Post, J., E. Sprinzak, and L. Denny (2005) "The terrorists in their own words: Interviews with 35 incarcerated Middle Eastern terrorists", *Terrorism and political violence* 15 (1): 171–184
Rasch, W. (1979) "Psychological dimensions of political terrorism in the federal republic of Germany", *International journal of law and psychiatry* 2: 79-85
Reinares, F. (2004) "Who are the terrorists? Analyzing changes in the sociological profile among members of ETA", *Studies in conflict and terrorism* 27 (6): 465–488
Sageman, M. (2005) *Understanding terror networks.* Pennsylvania: University of Pennsylvania Press
Sageman, M. (2008) *Leaderless Jihad.* Pennsylvania: University of Pennsylvania Press
Sanchez-Cuenca, I. (2007) "The dynamics of nationalist terrorism: ETA and the IRA", *Terrorism and political violence* 19 (3): 289-306
Silke, A. (1998) "Cheshire-Cat logic: The recurring theme of terrorist abnormality in psychological research", *Psychology, Crime and Law* 4 (1): 51-69
Smith, B. and K. Damphousse (2002) *American terrorism study: Patterns of behavior, investigation and prosecution of American terrorists.* D.C.: U.S. Department of Justice
Stern, J. (2004) *Terror in the name of God: Why religious militants kill*. London: HarperCollins
Tanay, E. (1987) "Pseudo-Political terrorism", *Journal of forensic science* 32 (1): 192-200
Taylor, M., and J. Horgan (2006) "A conceptual framework for addressing psychological process in the development of the terrorist", *Terrorism and political violence* 18: 585-601
Victoroff, J. (2005) "The mind of a terrorist: A review and critique of psychological approaches". *Journal of conflict resolution* 49 (1): 3-42Victoroff, J. (2005) "The mind of a terrorist: A review and critique of psychological approaches", *Journal of conflict resolution* 49 (1): 3–42
Ward, Michael D., Brian Greenhill, and Kristin Bakke. 2010. "The Perils of Policy by P-Value: Predicting Civil Conflicts," *Journal of Peace Research* 47(4): 363-375.

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