

The background of the cover is a dramatic painting. The upper portion shows a dark, stormy sky with a blue-grey hue. Below, a large wooden sailing ship is engulfed in bright orange and yellow flames, with thick black smoke billowing from its deck. In the foreground, a small wooden rowing boat is filled with several people, some appearing to be in a state of panic or distress. The water is dark and turbulent, reflecting the fire and the dark sky. The overall mood is one of chaos and tragedy.

# Causes & Explanations of Suicide Terrorism: A Systematic Review

By Vanessa Harmon, Edin Mujkic, Catherine Kaukinen, & Henriikka Weir

# Abstract

The frequency of suicide terrorist attacks has increased dramatically since the year 2000, creating a renewed interest in this area of study, as well as an increase in the importance of understanding individual and organizational motivations behind engagement in suicide terrorism. The following is a systematic review of current research in the field of causes and explanations of suicide terrorism, limited to research articles in peer-reviewed journals and grey literature, excluding published books by single authors. This essay provides a brief background into the issues surrounding suicide terrorism and the evidence currently available concerning causes and motivations. It describes the strengths and limitations of currently available academic research and the conclusions that this literature presents both in terms of policy and future research efforts.

## Suggested Citation

Harmon, Vanessa, Edin Mujkic, Catherine Kaukinen, and Henriikka Weir. "Causes and Explanations of Suicide Terrorism: A Systematic Review." *Homeland Security Affairs* 14, Article 9 (December 2018). <https://www.hsaj.org/articles/14749>

## Introduction

The terrorist attacks of September 11, 2001 were not the first time a terrorist organization used suicide terrorism to achieve their objectives. Instances of suicide tactics are evident throughout history. As early as 400 B.C.E., Greek sailors set ships on fire and steered them into enemy forces, a tactic that has become so common throughout history that it inspired the coining of the term 'fireship.'<sup>1</sup> Another example includes suicide attacks executed by the Islamic Order of Assassins during the early Christian Crusades.<sup>2</sup> Modern history has been no less influenced by the use of suicide tactics, the most well-known example being the Japanese Kamikaze pilots of World War II. Despite the wide variety of tactics each individual suicide attacker employed, one notable similarity can be discerned: suicide tactics tend to be used when a weaker force believes that less drastic measures will be ineffective against a materialistically superior opponent.<sup>3</sup> The origins of modern suicide terrorism can also be linked to this asymmetry between opposing forces. It was not until the 1980s that the world experienced suicide terrorism in its modern form. The first major contemporary suicide terrorist attacks were the 1981 bombing of the Iraqi embassy in Beirut, and Hezbollah's attack on the American Marine barracks in Lebanon.<sup>4</sup> The apparent success of suicide tactics, especially against a force of significantly superior numbers, provides the basis for the strategic argument as explanation of suicide terrorism's evolution. The strategic approach, however, is only one of the many proposed causal explanations that researchers have considered.

This article explores research on the various explanations and causes for suicide terrorism that have been proposed in recent academic literature. Although modern suicide terrorism has been a threat since the 1980s, there was limited research conducted prior to 2000 that differentiated suicide terrorism from terrorism in general.<sup>5</sup> The study of suicide terrorism specifically has been concentrated primarily in the years following 2000.

The purpose of this study is to conduct a comprehensive systematic review of current research on the causes and explanations of suicide terrorism. This systematic review will contribute to the progression of future research and the development of effective policy. The adoption of counterterrorism policy based on perceived causes can have limited impact if research has not substantiated those perceptions. Understanding the intricate interactions between different causal factors and determining promising research directions will prompt renewed focus in areas that can have the greatest impact on policy development and identification of potential courses of action to limit the risk of future attacks. This review will contribute to the field of suicide terrorism research by providing a comprehensive overview of current literature and the way ahead.

## Background

Terrorist violence is employed to convey a message to whichever target audience has been identified by the organization responsible. The violence and randomness of the act instills fear even in those not directly affected and directs attention to the cause.<sup>6</sup> Often perpetrated against unarmed civilians, suicide terrorism creates a sense of horror and fragility throughout the affected society. The dawn of contemporary suicide terrorism was not that long ago. However, the prevalence, tactics, and perceptions of terrorists and terrorism have changed and evolved continually. Since the beginning of modern suicide terrorism in the 1980s, counterterrorism analysts have anticipated gradual adaptation and an increase in events as terrorists become more familiar and more comfortable with these tactics. Contrary to this expectation, suicide terrorism has not undergone a gradual increase in popularity among terrorist strategists. There were more suicide attacks worldwide from 2003 to 2005 than there were in the entire preceding quarter century.<sup>7</sup> Both researchers and policy makers alike have noticed this spike in the use of suicide attacks by terrorists worldwide. The Chicago Project's Suicide Attack Database has shown this striking observation, demonstrating the astounding shift in frequency of attacks beginning after 2001.

The systematic analysis of attacks from 2001 to 2014 illuminates the continued increase in the use of suicide attacks throughout the world. The progressive increase emphasizes the importance of understanding motivations behind suicide tactics. The slight decrease after 2007 could potentially be interpreted as progress in counterterrorism, but it is important to note that even in 2011, the low point in the last ten years, there were 254 attacks in one year, more than the 220 attacks over the 20 year stretch from 1982-2001.

## History and Examples

The birth of the modern age of suicide terrorism in the 1980s marked a turning point from a fairly steady rate of suicide attacks as military tactics throughout history. Prior to the 1980s, suicide tactics had been integrated into military operations to create an advantage over an enemy of superior material strength. Whether through crashing a vessel into another ship to counter a rival's greater numbers or using suicide pilots in a surprise attack on enemy forces, some sacrifices create advantages for other allied combatants. Beginning in the 1980s, adaptive use of suicide-terrorist tactics and strategies allowed small, non-state and pseudo-state actors to achieve their objectives against larger, more formidable opponents, thus creating a perceived strategic advantage for suicide terrorism. The 1983 Marine Barracks Bombing in Beirut demonstrates the effect that a few willing to give their

lives can have against many. In this case only two truck bombs killed almost 300 American and French servicemen and injured many more; the sacrifice of only a few lives enabled the attackers to ensure the death of hundreds of their targets. In the next decades leading up to the turn of the century, suicide tactics were adopted and adapted by nationalist and extremist groups around the world.

The Chicago Project<sup>8</sup> identifies more than 40 organizations that conducted suicide attacks between 1982 and 2013 as part of 25 separate campaigns.<sup>9</sup> Between 1982 and 2000, the Liberation Tigers of Tamil Eelam (LTTE) were responsible for more suicide attacks than any other individual organization. They conducted 72 suicide terror attacks in their separatist campaign against Sri Lanka and India, resulting in more than 1000 deaths and 2500 injuries.<sup>10</sup> Although members of the LTTE were among the most prolific suicide attackers of the time, they were not the only group to use the tactic. The Chicago Project identifies 174 suicide attacks and 2702 deaths that occurred during the 1980s and 1990s.<sup>11</sup> The majority of attacks were directed at security targets with only 17.2% of targets being civilian and 14.9% political. Often cited as the first terrorist organization to use suicide terrorism, Hezbollah launched a campaign against Israeli forces in Lebanon that is second only to the LTTE in terms of the number of suicide attacks initiated. Other Palestinian, Chechen, and Islamic militant groups also engaged in suicide terror as part of 10 separate campaigns during this time. The car bomb, first used by Hezbollah in the 1981 Iraqi Embassy bombing in Beirut, and the belt bomb, invented and perfected by the LTTE, monopolized suicide terror tactics as the weapon of choice until 2001.<sup>12</sup>

The turn of the century saw an even greater increase than that observed in the 1980s and the use of suicide terrorist attacks spiked. There were more suicide attacks between 2001 and 2005 than in the thirty years prior. Analysts have largely attributed this spike to the Palestinian-Israeli conflict and the de-Baathification of the Iraqi government in conjunction with the disbanding of the Iraqi security forces in 2003. Between 2000 and 2014, Iraq was first in the number of suicide attacks by location, with Israel coming in fifth.<sup>13</sup> Sissons and Al-Saiedi noted that de-Baathification largely contributed to the creation of the insurgency and the increase in violence that resulted. The disbanding of the Iraqi military left more than 700,000 armed and trained Iraqi security force members unemployed, disenfranchised and hostile towards the United States, now seen as occupiers in Iraq.<sup>14</sup> Consequently, there was an increase in suicide-terror attacks beginning in Iraq in 2003. Although seven of the 35 attacks in 2003 occurred from February to April of that year, 80 percent occurred after the official de-Baathification orders were issued.<sup>15</sup> Despite the fact that United States military leadership had intended to employ the Iraqi security forces to help restore security and order in post-war Iraq, the reality of the de-Baathification orders left disbanded security forces with the perception of broken promises and betrayal by the U.S. forces.<sup>16</sup> Given these sentiments, it was not surprising to see increased hostilities and the development of the insurgency within Iraq.

The phrase 'one person's terrorist is another person's freedom fighter' epitomizes many of the explanations for this spike in suicide terror. Several explanations for suicide tactics that focus on the fact that a suicide attack can be an effective asymmetrical tactic against hardened targets provide some insight into why those who see themselves as freedom fighters may engage in these activities. The attacks on the World Trade Center and the Pentagon in 2001 demonstrated the potential effectiveness of these tactics to prospective future attackers.

The attacks of September 11, 2001 prompted not only an increase in the use of suicide attacks as a terrorist tactic but also a greater international impact for this approach. In the aftermath of September 11, the NATO Alliance invoked, for the first time, Article Five of the Washington Treaty, which states that an armed attack against one of its members is an attack against them all.<sup>17</sup> Not only is the international response more elaborate now than in the 20th century, but travel, media, and technology have changed the attacks themselves, beginning a new phenomenon that some researchers call the “globalization of martyrdom.”<sup>18</sup> Islamic extremist suicide attacks have reached countries all over the world, establishing the perception that suicide terror is a predominantly Islamic activity, and giving many the impression that religion is a causal factor in the activity itself. Even in Muslim countries, this perception seems to be verified. During the wars in Iraq and Afghanistan there was an average of one suicide attack per day.<sup>19</sup> Although Western governments will argue justifiably that Islamic militant groups are a principal threat in today’s security environment, it is important to recognize that it is only recently that Islamic militant groups have surpassed other terrorist organizations as the leading perpetrator of suicide terror and that they are not the only terrorists to engage in suicide attacks.

Between 2001 to 2014, 3,802 attacks occurred resulting in 37,562 deaths and 96,644 injuries.<sup>20</sup> The largest number of attacks in a single year occurred in 2007 and while the majority of targets remain security-oriented, a greater percentage of civilian targets have been selected.<sup>21</sup> As was the case during the previous 20 years, car-bombs and belt-bombs monopolize the weapon selection. However, September 11, 2001 established the hijacked airplane as the deadliest suicide-attack weapon. Although these statistics are somewhat staggering and the various definitions used by individual researchers show slight variations in reported numbers, the trends remain the same and the notable spike in attacks after 2001 is universally acknowledged among subject matter-experts.<sup>22</sup> It is also important to recognize that, although suicide attacks make up a small percentage of terrorist attacks around the world, the importance of understanding their impact cannot be underestimated. Suicide attacks make up only three percent of terrorist attacks, but are responsible for 48 percent of the fatalities as a result of terrorism.<sup>23</sup> This statistic proves that although suicide terrorist attacks account for only a small percentage of all terrorism, this tactic has some of the most detrimental and fatal effects. Therefore the influence and power of suicide terrorism need to be considered in order to better understand terrorist motivations and to progress toward effective preventative programs.

This essay provides a systematic review of academic peer-reviewed research in the area of causes of suicide terrorism. Several researchers have conducted literature reviews in the area of suicide terrorism. Martha Crenshaw analyzed 13 different books on the subject written by current leading experts in the field, comparing theories, perspectives, and policy suggestions.<sup>24</sup> Grimland, Apter, and Kerkhof conducted a review of currently available research to build on our understanding of psychological perspectives and their importance.<sup>25</sup> For the most part, previous reviews, critiques, and studies have focused on a single causal theory, a single work, or on validating a model of interconnectivity among theories.<sup>26</sup> This paper uses a systematic review to compile existing research in a comprehensive and straightforward manner to demonstrate where modern research stands and the potential for developing more effective counter-terrorism approaches.

# Method

Progress is made continually in a variety of disciplines of academic research. More than two million articles are published in academic journals every year.<sup>27</sup> Even with an extremely narrow focus, it is difficult to stay apprised of all the developments in the literature over time. A systematic review is designed to help organize and assess current research in a specific area in order to address limitations associated with current literature. It is an in-depth literature review that locates, appraises and synthesizes available research relating to an explicit research area.<sup>28</sup> A systematic review should provide evidence-based answers that help to change practices or improve policies. By following a systematic methodological process and by explicitly explaining this process, the review can provide a comprehensive examination of research associated with the topic area and be reproducible by others in the future, providing the greatest advantage to the field of research.<sup>29</sup> Systematic reviews cover both published academic journal articles and 'grey literature'. Grey literature encompasses unpublished studies or studies with limited distribution including research reports from government agencies, reports from scientific research groups, working papers, doctoral dissertations, and conference proceedings, to help avoid publication bias.<sup>30</sup> Articles and research were collected from a variety of sources in order to amass the most representative sample of current literature available. Research was drawn from search engines such as Google Scholar, Air University Library's Index to Military Periodicals, Bielefeld Academic Search Engine, Directory of Open Access Journals, JSTOR, and PubPsych. This essay is supported by credible sources in combination with varied perspectives and media, through which information was gathered to develop an objective, well-researched systematic review.

Key words in research included: "causes of suicide terrorism," "religion and suicide terrorism," "social influence in suicide terrorism," "psychology and suicide terrorism," "suicide terror," "logic of suicide terrorism," and "strategy and suicide terrorism." Accommodating for different terminology, similar keywords were researched replacing "suicide terror" with "martyrdom." Articles were found through the previously-mentioned search engines as well as the reference sections of applicable articles, and were reviewed to ensure that the greatest amount of applicable information was analyzed. It should be noted that only articles written in English were considered for this systematic review.

## Selection Criteria

To be included, research was required to differentiate between suicide and non-suicide terrorism. It was required to address root causes of suicide terrorism and/or explanations of suicide-terrorist activities. This may have been done through a description of preventative or responsive programs on the condition that they address a specific element believed by the author(s) to contribute to suicide terrorism. Research was limited to peer-reviewed articles and grey literature. Books written by subject-matter experts were also considered for information that was presented throughout the paper, but not in the analysis tables.

## Resources Excluded

The research included peer-reviewed journal articles and grey literature (there is a dissertation included for example). It does not include reviews of published books on

the causes of suicide terrorism. An exception to this is made for chapters of edited books written by multiple authors. There are several experts in this field who have published books on the topic, and further investigation into this material would benefit future reviews of this nature. Many researchers also included newspaper and magazine articles written by subject-matter experts among their sources. This research excluded these articles due to the type of publication. However, given the popularity of the subject matter in recent years, a significant number of articles fall in to this category. Because of the subject-matter expertise of their authors, these articles, although not peer-reviewed, can provide more information on the state of research in this field and potentially significant details that could be useful in subsequent research.

Throughout the course of research, several books by subject-matter experts were found that went into great detail about the potential causes of suicide terrorism. As this systematic review focused on peer-reviewed articles, these books were excluded from the systematic review. We also found some articles that critiqued and compared the aforementioned books. Some of these articles were also excluded from the systematic review as they did not present a potential cause for suicide terrorism, but instead discussed the strengths and weaknesses of previous research. The arguments of these articles are extremely useful to the development of future research but were outside the scope of this review. Finally, any articles that did not distinguish in their research between suicide terrorism and terrorism in general were excluded. It remains a topic of debate as to whether suicide terrorism should be considered a separate form of terrorism, but for the purposes of this review, suicide terrorism was assumed to be a unique form of terrorism deserving of independent research.

The authors compiled the list of articles that were included in this systematic review. The table is organized by year to highlight the growing interest that researchers took in determining the causes of suicide terrorism after 2000. This may have been a direct result of increased interest and visibility of the new threat of suicide bombers after the attacks of September 11, 2001 or a reflection of the financial support provided to research in this field following a realization of the vulnerability of powerful governments to the tactic. A total of 47 articles were found that analyzed the causes and motivations of suicide terrorism and ranged in focus from individual-level motivations to social forces to organizational strategies. The table that describes research articles that were found during the course of the data collection process but were excluded from the review is included in this essay as Appendix A. It explains briefly the purpose of each article and why it was not applicable to this systematic review. For reasons outlined above, books written by a single author are not described.

## Results

After noting the spike in suicide terrorism incidents, it is not difficult to explain the corresponding increase in the interest that researchers have paid to suicide terrorism research. Much of the research available concerning modern day suicide terrorism has been published since 2001 with a significant amount of focus on Islamic Jihadists and religious extremism. This may be a result of the world's current perception of Islamic terrorist groups as a significant threat to Western societies and subsequent funding increases or it may simply be due to the recent increase in Islamic extremist violence, providing significantly more data to be analyzed in this area. Many researchers recognize this as a limiting factor to

the understanding of suicide terrorism. Some researchers continue to focus on the rise of Islamism as a contributory factor behind the increase in incidents. In contrast, others take varying approaches to determine the root causes of suicide terrorism in order to explain the use of suicide tactics by Jihadist and non-Jihadist movements alike. Studies in this area are difficult as suicide terrorism represents a relatively small portion of global terrorist attacks, an estimated 2.16%, and therefore most research does not differentiate between causes of non-suicide and suicide terrorism.<sup>31</sup> Despite restrictions, researchers have made continual efforts towards understanding terrorism in general, and furthermore, understanding suicide terrorism as a distinct practice.

## Theorized Causes of Suicide Terrorism

One cannot deny that suicide terrorism is often perceived as successful in achieving the immediate objectives of the terrorist organization. Following the Marine Barracks Bombing in Lebanon in 1983, President Reagan ordered the withdrawal of American troops within four months.<sup>32</sup> This is one of many examples of the perceived success of suicide attacks that support the strategic argument for suicide terrorism. Considering the ratio of terrorists killed to their enemy victims often associated with suicide terrorism, the justification for this tactic against a superior combatant force is clear. Pape notes a correlation in his research between foreign military occupation and an increase in suicide terrorist activity that lends itself to this school of thought.<sup>33</sup> This approach is closely related to the theory that organizational and institutional motivations are the most contributory elements to suicide terrorism. Where the former approach argues that the strategic effects of suicide terrorism justify these actions, the latter relies on the views of those within the organization or institution to agree with this argument. Atran goes so far as to suggest that changing the institutionally-held morals and values of terrorist cells is essential to changing the prevalence of the practice itself.<sup>34</sup>

Propaganda that draws people to the group begins with the morals and values of the individual citizens within a society. Convincing the population of the moral logic of martyrdom is the first step to recruiting new members and justifying the actions of the group to their civilian supporters. Conversely, changing this perception could very well be the first and most important step away from suicide terrorism and terrorism in general.<sup>35</sup> The influence of society is, therefore, essential to not only the success of a suicide attack, but also to the initial perpetration of that attack. One popular theory suggests that the government regime will influence whether a nation falls victim to perpetrators of a suicide attack; however, several researchers have found that government type is irrelevant in this scenario.<sup>36</sup> Additionally, Piazza does suggest that regime type was related to the perpetration of suicide attacks.<sup>37</sup> Other societal elements such as economy, education, religion and culture have also been included in theories about the causes of suicide terrorism.<sup>38</sup> While environmental and societal influences would provide a more manageable explanation in terms of preventative and responsive programs, there is also the possibility that individual factors are more important to suicide terrorism than these more convenient elements. Even if they are not among the most significant causal factors, understanding psychological aspects of those who perpetrate suicide attacks can help society to counter them. Post, Ali, Henderson, Shanfield, Victoroff, and Weine suggest that psychological aspects of individual terrorists will make them more or less likely to engage in suicide terrorism with emphasis on collective identity and social psychology.<sup>39</sup> This perspective, even if it concerns an individual, once again relates back to societal influences.

It is important to note this interconnectivity of causes. As is the case in the study of the causes of crime, there are many potentially influential causal factors related to suicide terrorism. A better understanding of all contributing factors, as well as the relationships among the factors, governments, and law enforcement, will enable the global community to address properly the rising phenomenon of suicidal terrorism.

The articles analyzed are used to identify the root causes of suicide terrorism specified in the literature. The data are grouped by the theorized cause that an individual author proposes. Although each theory varies slightly from others in the same group, theorized causes can be broadly limited to four categories: individual-level motivations, organizational-level motivations, theories of societal influence, and some combination of those three approaches. Tables that contain summaries of reviewed articles by theory are provided in Appendices B, C, and D of this essay.

## Individual-Level Motivations

The desire to understand why and how individuals can decide to sacrifice themselves to kill others is natural. For many this mentality is unfathomable. Whether one has been personally influenced by an attack or one has witnessed the effects of suicide terrorism from afar, it is difficult for observers to comprehend how someone can be so dedicated to violence against others that they are willing to make that ultimate sacrifice. Individual-level theories stem from an effort to understand the individuals that engage in suicide missions. Many of the early theories employed to explain the motivations of suicide terrorists focused on the individual level, including nine of the articles analyzed in this systematic review. It is now generally acknowledged that there is not necessarily a psychological profile of those who are willing to commit what many people, cultures and religions consider to be a grave sin. The Committee of the Psychological Roots of Terrorism for the Madrid Summit on Terrorism, Security and Democracy in 2005 explicitly stated that individual-level theories that suggest a psychological abnormality of the attacker are incapable of explaining the phenomenon.<sup>40</sup> This perception has not hindered research in the area of individual-level motivations, although many theories now incorporate various levels, as will be discussed in a later section.

A common question among researchers is whether suicide terrorists can be categorized as suicidal.<sup>41</sup> Pedahzur, Perliger, and Weinberg acknowledge what others have noticed as well, that suicide terrorists do not exhibit common characteristics of individuals bent on suicide.<sup>42</sup> They suggest instead that suicide terrorists fall into a new category of suicide typology, that of fatalistic-altruistic suicides and define this typology as individuals who fit into both Durkheim's altruistic and fatalistic typologies of suicide behavior. In this case the individual sees their suicide as a duty to the group (altruistic) and has suffered from long-term political and economic oppression and has no hope for their future (fatalistic). Kimhi and Even take a slightly different approach, arguing that there is not one single profile, but that suicide bombers can be grouped into four typologies: religious, exploited, retribution for suffering, and social/nationalist, where each is attributed different prerequisite and supporting factors.<sup>43</sup> This theory suggests that every case of suicide terrorism required a motivated individual, the technical system to carry out the attack, and a condoning political leader. Beyond these similarities, the different prerequisite factors and supporting factors associated with each typology range from religious interpretations encouraging terror to political awareness and belief that armed struggle and suicide missions are vital to national

liberation. Similarly, Orbach refers to prerequisite and supporting factors as 'facilitators of suicide' and suggests that these facilitators, combined with a sociological typology of the altruistic suicide, are at the root of suicide terrorism.<sup>44</sup>

One thing is obvious: suicide terrorists do not exist in a vacuum but are consistently impacted by the world around them. Each of the individual-level theories acknowledge that events within society, family, and an individual's life contribute to the ultimate decision to engage in suicide missions. The debate concerning what is the most influential factor remains undecided. Whether suicide terrorists are completely altruistic, sacrificing themselves for the benefit of future generations, whether they experienced some trauma earlier in life that led them on this course, or they are making a rational, tactical choice under a belief that they will succeed against a hardened target for the benefit of their organization, understanding each individual's motivation is difficult. When one simply considers cultural and religious differences, it is easy to see where determining a single profile for the suicide terrorist may be impossible.<sup>45</sup> Jacques and Taylor examined suicide-terror attacks perpetrated by groups in the Middle East and Chechnya as well as Al Qaeda and the LTTE in an effort to determine common factors concerning suicide terror in general and found differences in motivations between men and women.<sup>46</sup> For women, motivations were often based on personal events, and recruitment was done through peer influence, exploitation and self-promotion. For men, motivations were based on religious and nationalistic ideologies and recruitment was done through peer influence, exploitation, self-promotion and religious persuasion.

The difficulty in determining a single individual profile brings us to theories that focus on organizational-level motivations.

## Organizational-Level Motivations

Theories focusing solely on organizational-level motivations are far more rare than other level theories encompassing only five of the articles analyzed in this paper. The obvious influence that society and the individual's organization have on the decisions of the individual lends credence to theories that stress combinations of influential factors. The idea that suicide terrorism is used as a tactic against a militarily-superior enemy has been discussed previously in various sections of this review and is an integral part of combination theories discussed in the next sections, but it has an especially important place in organizational-level theories. In her 1987 article, "Theories of Terrorism," Crenshaw proposed that terrorism could be analyzed on two different levels, both of which are centered on the organizational level and remain applicable to theories of suicide terror. From one perspective, violence is employed by an organization to affect political change, and from the other, the purpose of the organization's actions is simply to sustain the organization. Ayers suggests that suicide terrorism is used strategically by an organization to gain tactical advantage over the enemy and to aid in recruitment efforts.<sup>47</sup> Although both these strategic and promotional goals coincide with Crenshaw's framework, the concept that suicide terrorism is nothing more than a rational, strategic weapon and cannot be attributed to any irrational influence is a difficult one to accept.<sup>48</sup> If emotion and personal choice play no part in the decision to engage in suicide missions, then efforts to create policy to counter suicide attacks become inconsequential. As long as there is strategic benefit to the attacks, this theory suggests that they will continue to be used. Pape agrees, suggesting that terrorism is employed for one of two reasons: to force government to change policy and/or to mobilize additional recruits and financial aid for the organization.<sup>49</sup> Suicide terrorism is the coercive instrument

of choice for terrorist groups simply because it is perceived that it works. Ergil conducted a study focusing on The Worker's Party of Kurdistan (PKK) and determined a somewhat more palatable organizational theory.<sup>50</sup> He suggests that group dynamics and the influence of an 'omnipotent' leader contribute to the use of suicide tactics by an organization and require a significant amount of coercion and force from leadership. This suggests at least that the removal of a fanatical leader can help to eliminate the possibility of suicide attacks from a particular organization.

## Societal-Level Theories

In addition to organizational-level forces influencing the engagement of a particular group in suicide missions, many scholars have noted that while some groups are willing to use suicide tactics, other groups with similar ideologies and characteristics will refrain. Many analysts attribute this in large part to societal-level factors, and six of the articles analyzed below examine these societal influences. From conditioning and education to community support, theorists have been drawn to societal influences to explain both individual and group actions with respect to suicide terrorism. Upon analyzing the education system for Palestinian children between 1980 and 2000, Burdman found that literature, media, and educational faculty contributed to a conditioning campaign that infused children with the idea of becoming martyrs.<sup>51</sup> An authoritarian society, religious and nationalist learning, educational techniques, group processes, programming and conditioning, indoctrination, and emotion all had significant and negative effects on the individual mental health of the children exposed to these influences. Learning from the earliest ages to see suicide terrorism as an honorable endeavor solidifies the notion for the rest of one's life, making it a cultural mentality and especially difficult to change. Although Burdman's study was limited to the Palestinian-Israeli conflict, this trend in societal and cultural marketing and belief can be seen in other areas as well.<sup>52</sup> Post suggests that even second and third generation emigrants that are now joining the global Salafi jihad experience the feelings of loss and deprivation commonly attributed to causal theories of suicide terrorism.<sup>53</sup> In the case of the LTTE, suicide terrorism was framed in a light such that it was marketed as heroism. Ramasubramanian suggests that the fear of death, on a societal level, can motivate people to heroism.<sup>54</sup> With cultural beliefs that adhere to the martyrdom-equals-heroism concept, it is easier to understand how individuals would be influenced to engage in suicide-terror attacks.

The LTTE's fear of death, as Ramasubramanian refers to it, can be related to a cultural frustration that is noted by several researchers within the Palestinian population.<sup>55</sup> Khashan suggests that a combination of Palestinian collective frustration, Political Islam, and extreme poverty leads to the use of suicide terror as a tactic.<sup>56</sup> Although poverty has been disqualified as a causal factor in the number of suicide terror attacks, researchers have not disqualified the influence of poverty on individual and community stressors.<sup>57</sup> Benmelech, Berrebi, and Klor suggest that poor economic conditions, especially high unemployment, allow terrorist organizations to recruit better educated, more mature suicide terrorists to their cause and improve the quality of potential targets.<sup>58</sup>

The current targeting of Western democratic countries by terrorist organizations, often originating from non-democratic nations, has led some researchers to analyze the question of whether regime type effects the likelihood of being targeted for suicide terrorism as well as the likelihood of producing suicide terrorists. Jackson, Wade and Reiter hypothesized

that democracies and especially mixed regimes would be more likely to experience suicide terrorism.<sup>59</sup> This hypothesis was not supported by their research. However, they did find nation size, Islam, and national and global experience with suicide terrorism to be correlated to suicide terrorism. The study found that regime type is uncorrelated with suicide terrorism but was marginally correlated to the number of religious minorities at risk within the nation. The society we live in and the culture that we grow up a part of have an astounding impact on our lives and how we interact with the rest of the world. These societal-level theories consider these impacts to be the root causes of suicide terrorism, however even more theories have emerged that consider them to be a significant part of the cause while maintaining the importance of individual and organizational influences to the process as well.

## Combination Theories

The vast majority of theories in the last decade, along with some of the earliest studies, have suggested a combination of factors at the individual, organizational, and societal levels. In fact, 25 of the 45 articles take this combination approach. Often listed as one of the three pre-eminent studies of suicide terrorism causal theories, Merari's "The Readiness to Kill and Die: Suicidal Terrorism in the Middle East" posits that four distinct groups of factors influence an individual's decision to participate in a suicide terror attack: "cultural factors, indoctrination, situational factors, and personality factors."<sup>60</sup> He suggests that if the person is suicidal, the organization simply provides the excuse necessary to commit suicide. Although the idea that suicide terrorists are suicidal has been refuted by more recent research, the combination of individual, organizational, and societal-level forces to explain suicide terrorism is a lasting concept.<sup>61</sup> Atran suggested that suicide terrorism was used as a weapon of psychological warfare against the greater population while putting strong emphasis on organizational and institutional roles in motivations.<sup>62</sup> At the individual level, a combination of psychological and cultural elements makes individuals more susceptible to recruitment. Atran later argued that analyzing the individual terrorists and attempting to develop a profile of the suicide terrorist is inconsequential.<sup>63</sup> The focus should be placed on society's perception of global Jihad and the organizational and group dynamics of the greater terrorist networks but specifically of the cells involved in suicide terrorism. Similarly, Pape argues that a combination of strategic, social, and individual logic supports suicide terrorism as an effective form of terrorism; however, the strategic element unifies the others and ultimately enables the terrorists' agenda.<sup>64</sup>

Berman and Laitin's theory of hardened targets coincides with the idea that strategic advantage is at the forefront of the motivation.<sup>65</sup> They argue that suicide terrorism is a rational decision; it incorporates an assessment that a successful attack on a hard, well-protected target that could withstand a conventional insurgency attack outweighs the cost of losing one member. Moghadam also agrees, arguing that a combination of individual and organizational-level motivations contributes to the use of suicide terror as a tactic.<sup>66</sup> At the individual level, several factors influence the potential suicide bomber, but they are not always the same combination of factors. At the organizational level, organizational goals and strategies are integrated in recruitment, training, and indoctrination to support the use of suicide terror as a tactic.

While some researchers place the greatest part of the motivation squarely with organizational strategy, others consider it to be only one element of the motivation behind a suicide attack.

Brym and Araj argue that often revenge and retaliation are among the most important elements at both an individual level and an organizational level.<sup>67</sup> Gill places emphasis on political and social psychology and group dynamics as the root causes of suicide terror.<sup>68</sup> Post, Ali, Henderson, Shanfield, Victoroff, and Weine argue that from a psychological perspective, collective identity and normality have the greatest bearing, but that economics, history, politics and anthropology contribute as well.<sup>69</sup> Pedahzur considers the organizational-level motivations and individual-level motivations to be of equal importance and developed a three-stage model for explaining suicide terrorism involving organizational leadership decision-making, individual motivations, and organizational recruitment, socialization, and employment.<sup>70</sup>

Regardless of which level of motivation is considered most important to a specific researcher, the number of articles that follow this combination model demonstrates a new trend towards acknowledging the complicated and unique motivations for suicide terror.

## Research Methods

Current research focused on explaining suicide terrorism has been largely conducted using three distinct methods: review and critique of other theories and research; psychological autopsies using interviews and open source data; and empirical analysis of data compiled on various suicide attacks. Table 1, located below, shows how many of the documents analyzed as part of this systematic review used each method. Most of the articles on the topic fall into the first category and take on a narrative form discussing the merits or limitations of other research.<sup>71</sup> Commonly included in these narratives are models presented by Robert Pape, Mia Bloom, and David Laitin and Eli Berman.<sup>72</sup> The second method, although far less common than the first, has significantly more potential to be able to analyze individual-level motivations. Psychological autopsies are interviews conducted with close family and friends and, for perpetrators of successful suicide missions, they are the closest thing to first-hand accounts that are available to researchers.<sup>73</sup> Although not without limitations, this method provides a unique approach to data collection. Some researchers took a different approach to the psychological autopsy, collecting their data from literature published about various attacks, attackers and the groups to which they belong.<sup>74</sup>

The third method is characterized by researchers using various databases of suicide attacks to conduct empirical analysis on different aspects of each attack.<sup>75</sup> The variety of databases included Lexis Nexis' online database of world news media, Freedom House and Polity data, Israeli Security Agency's reports on Palestinian suicide terrorists that attacked or attempted to attack in Israel, the West Bank and the Gaza Strip, and the online database of the International Policy Institute for Counter-Terrorism (ITC) in Herzliya, Israel, among others.

In a few cases, the methods used did not fit neatly into any of the three aforementioned categories of methods. For instance, Azam uses literature on economics in conflict and economics of terrorism as well as other microeconomic theories in order to show changes to individual investment in suicide bombing as it relates to increased wealth and education.<sup>76</sup> Moghadam created a framework of analysis that examined the process of the suicide attack from initial motivation to execution at both the individual and organizational level and applied it to various theories of motivation for the bomber and aspects of the organization.<sup>77</sup> Gill used examples of various suicide attacks and the actions of suicide bombers to describe a common progression through the life of a suicide bomber in an effort to establish the

contributions of individual, group and societal factors to suicide terrorism.<sup>78</sup> Burdman reviewed 31 educational textbooks published prior to 2000 and used by the Palestinian Authority's Ministry of Education as well as various media programs and publications in order to analyze the conditioning of children in Palestine.<sup>79</sup> Each of these studies helped to improve the quality of research and the understanding that we have of the field of suicide terrorism in their own way.

**Table 1:** Types of Research Methods Used

Research Method	Number of Articles Using this Method
Review and Critique of other theories and research	21
Psychological Autopsies	2
Empirical analysis	14
Other (Including combinations of the above methods)	8

## Limitations

Suicide terrorism is not a topic that is easily studied. Fortunately, suicide attacks constitute a very small percentage of terror attacks and insurgency efforts worldwide. The nature of suicide terrorism elicits limitations, especially concerning the current preoccupation with Islamic Jihadists and in developing adequate research methods.

## Religious Extremist Focus

The focus on Islamic Jihadists in today's media and Western defense structure is a result of not only the recent increase in the use of suicide tactics by these groups but also the sheer magnitude of destruction resulting from the attacks of 9/11. Unfortunately, this preoccupation has been reflected unavoidably in academic research. Some would argue that this pre-occupation with Islamic Jihadist attacks is justified by the prevalence of such attacks in current statistics. In addition to Islamic jihadist attacks on Iraq and Afghanistan, individual articles also focus on the Palestinian-Israeli conflict, the LTTE and Chechen terrorists, as well as attacks that take place within oppressive regimes throughout the world.<sup>80</sup> Several articles focus specifically on Islamic militant groups and Middle Eastern suicide terrorism.<sup>81</sup> The majority of research considers all suicide attacks in one dataset. While this seems the most effective way to diminish any potential bias towards the influence of religious extremism, the statistical difference between the number of attacks perpetrated by groups with no religious motivation and those with extreme religious views skews the available data. Researchers that have used global suicide terrorism within their dataset unfortunately have significantly more data for these groups. Interestingly, this may be a limitation, but few have indicated that religion is a cause for suicide terrorism. Many suggest that religion is helpful to an organization to recruit suicide terrorists and to justify their involvement in suicide attacks, but that religion is not significant as a causal factor.

The very nature of suicide terrorism does not lend itself to academic research. Researchers are limited in their potential methods by the success of a suicide attack. Some authors attempt to overcome this by conducting psychological autopsies as their primary data collection

method. However, the psychological autopsy is dependent on the memories, opinions and openness of the families and friends of the bombers. Others rely on statistical data surrounding the suicide attacks themselves, but this approach has the potential to ignore important individual-level elements. Interviewing failed bombers discounts the differences between these individuals and those that succeeded in carrying out their attack. Every individual research method has its limitations, but in the case of suicide terrorism, these limitations have so far hindered the academic community from establishing an accepted causal theory. The recent trend towards theories that suggest a combination of individual, organizational and societal influences has begun to incorporate the evidence presented by prior research suggesting that combining several different research methods may be a way to diminish the limitations of a single method and incorporate the combined evidence of the past.

## Discussion

Academic research to explain the foundation of suicide terrorism has, in recent years, greatly expanded. Since the attacks of September 11, 2001, suicide terrorism has been at the forefront of both media attention and security concern all around the world. During development of any security policy, defense and government officials understand the need to address the root causes of the issue in order to develop effective and lasting response programs. Unfortunately, in the early days of modern suicide terrorism when causal research was limited, without accurate research, policy was developed based on perceived elements that have since proven to be less impactful than originally anticipated. Recent research has begun to improve our understanding of the root causes of suicide terrorism, but with the growing popularity of suicide terrorism as a terrorist-organizational tactic, there remains a need to continue expanding our knowledge in the area.

This systematic review revealed several important characteristics of current research. First, the vast majority of research in this subject consists of literature reviews and theories based on previous research, either research on suicide terrorism or research on related subjects such as suicide or terrorism in general. Causes of suicide terrorism are difficult to study by their very nature. The success of a mission requires the death of the attacker and leaves researchers with limited options for collecting data. They are restricted to after-the-fact data collection by the target state or interviews with attackers who failed or abandoned their mission, would be attackers, or family and friends, all of which may limit the applicability of their findings when applying them to successful attackers. Despite the difficulty that arises from the lack of available primary sources, there have been empirical studies conducted that make use of the data available. This type of research demonstrates the ability to conduct more robust and verifiable studies, which could benefit greatly our knowledge of causal factors.

Secondly, although earlier research considered individual elements of suicide terrorism as main contributing factors, more recent research has acknowledged the need for a multidimensional approach to both research and policy development. Both academics and policy makers have begun to see suicide terror as resulting from interacting factors at the individual, organizational, and societal levels. There may be one factor that has the greatest impact for an individual or an organization to engage in suicide terrorism, however, it is unlikely that this factor is the same in every situation. The most effective reactive and

preventative policies will address suicide terrorism from multiple directions in order to ensure the greatest level of applicability to the situation. This does not limit the value of understanding individual aspects of specific groups and societies. For instance, policies that attempt to address poverty, collective humiliation, religious fanaticism, and community support may be an effective combination of efforts within the Palestinian-Israeli conflict. In comparison, those that address exploitation, coerced participation and reciprocal violence may be more effective in situations similar to the LTTE's struggle against the Sri Lankan government.

Finally, several researchers have focused not on root causes but on the spread of suicide terrorism.<sup>82</sup> This new global phenomenon has significantly increased the number of attacks as well as the number of states directly affected, whether as targets or as perpetrators. Developing effective policy will depend on addressing the root causes of suicide terrorism using a multidimensional approach, the spread of suicide terrorism on a national and international level, and the influence of the media in both of these areas. The power of media and propaganda in today's society is overwhelming and highly prominent in both of these areas. Without effective policy that addresses the media, other efforts have the potential to be significantly less effectual. Cooperative efforts to acquire a stronger understanding of the causes and characteristics of suicide-terrorist practices, as well as researchers' increased willingness to respond to progressive research using a multidimensional approach, will help develop further preventative programs to limit the risk of future attacks.

## Limitations of Current Research

Given the inherent difficulty in studying suicide terrorism, it is not surprising to see the limitations of current research. However, researchers have been making progress in minimizing these limitations. Although suicide attacks constitute a very small percentage of terror attacks and insurgency efforts worldwide, their increasing frequency and their lethality are generating greater interest among academics, governments, and the civilian population. It is important not to let the current preoccupation with Islamic Jihadists create tunnel vision and a subsequent void in research that is generalizable to other groups. It is also essential to remember that current evidence suggests that while religion may be helpful to an organization to recruit suicide terrorists and justify their involvement in suicide attacks, it is not significant as a causal factor and we should keep that in mind. Researchers have also begun to counter the limitations that have arisen from the difficulty in developing research methods that can account for the death of the attacker. By diversifying the research methods used and beginning to move away from narrative critiques of older works, we begin to get a bigger, more complete picture that has led us to see the importance of several different levels of motivation.

## Future Research

This field can continue to be enriched by further empirical research. Diversifying the research methods will help to counter unavoidable limitations of other studies, as those studies will help to fill in gaps in future efforts. Areas that require greater consideration range from the difference between individual motivations of men and women, as well as organizational differences in employing men and women, to comparing suicide tactics to non-suicide tactics.<sup>83</sup> In our current age of technology and global media, the influence of

information sharing cannot be ignored, Although some authors have acknowledged its importance, this is a concept that has largely been left out of causal research. The role of media as an amplifier of global and individual reactions should be examined in far greater detail.<sup>84</sup> Strong research methods and frameworks need to be employed to take into account interactions among people, groups, and society as a whole while considering individual, social, and organizational factors.<sup>85</sup>

Finally, Crenshaw notes that greater distinction should be made between types of suicide attacks and between the expected outcomes of the attack.<sup>86</sup> The difficulty with fulfilling this improvement to future research is that suicide attacks are, relatively speaking, few in number. Although a distinction should be made, this may create further limitations by diminishing the sample size.

## Policy Implications

The attacks of September 11, 2001 launched renewed interest in counterterrorism around the world. The limited research that had been performed concerning the subject of causes for suicide terrorism unfortunately restricted new policies to address either identified causes of terrorism and insurgency in general or speculated causes of suicide terrorism. Research in the field has progressed substantially, and we now acknowledge the complex relationship of factors that lead to suicide-terror attacks. Although there is not a single agreed-upon cause, several elements have repeatedly been shown to have an effect and policy can now address these issues more effectively.

Societal influences have been acknowledged by many of the leading experts in this field and it is, therefore, not surprising that many suggest policy reforms that act at a societal and community level. Intelligent aid services are emphasized as the first step to combating suicide terrorism.<sup>87</sup> Improving and strengthening local organizations to be able to provide better social services and education will give the people somewhere to look for aid other than terrorist groups, reducing their importance to the community.<sup>88</sup> Creating alternative options for potential suicide terrorists can help to reduce their participation and allegiance to extremist religious terror organizations.<sup>89</sup> Additionally, addressing religious and gender inequality in areas of frequent terrorist and suicide terrorist attacks is important to both human rights efforts and counterterrorism.<sup>90</sup> Although some research has disqualified the impact of the economy on the quantity of suicide terrorism, 'the war on poverty' approach to counterterrorism can be effective provided that it follows an evidence-based approach to the actual impact of the economy on terrorism and societies that produce terrorists.<sup>91</sup>

Individually-targeted counterterrorism efforts are much more difficult to identify than those on the societal level, however, policies that prevent individuals from beginning down a pathway to suicide terrorism are essential in the long run. In the short term, focusing on the organizational level has the potential for more immediate results but also for subsequent impact at the individual level later on.<sup>92</sup> Organizationally-targeted policy that focuses on dissension within the group, facilitated exit from the group, and delegitimizing the leaders will help to reduce suicide terrorism.<sup>93</sup> Policy responses need to incorporate and address interactions among people, groups, and society as a whole, taking into account the individual, social, and organizational factors that contribute to the phenomenon.<sup>94</sup>

## About the Authors

**Vanessa Harmon** has been a member of the Canadian Armed Forces since 2003. She has a BSc in physics and space sciences from the Royal Military College of Canada and a Master's of Criminal Justice from the University of Colorado, Colorado Springs. She is currently working in Ottawa as an Aerospace Engineer in the Royal Canadian Air Force holding the rank of Major. She may be reached at [vanessa.harmon@forces.gc.ca](mailto:vanessa.harmon@forces.gc.ca).

**Edin Mujkic**, Ph.D., is an Assistant Professor in the School of Public Affairs at the University of Colorado, Colorado Springs. His work is focused on professional military education, national security and U.S. foreign policy, homeland security and emergency management, as well as the general field of public administration. His research has appeared in *Public Administration Quarterly*, *Public Integrity*, and *Democracy & Security*, among other outlets. He may be reached at [emujkic@uccs.edu](mailto:emujkic@uccs.edu).

**Catherine Kaukinen**, Ph.D., is a Professor and Chair in the Department of Criminal Justice at the University of Central Florida. Kaukinen's research interests include intimate partner violence, risk and protective factors for violent victimization, the history of Title IX and Federal initiatives to address violence against college women, and the evaluation of campus-based violence against women prevention and intervention programs. Her research has appeared in *Criminology*, *Journal of Marriage and Family*, *Journal of Research in Crime & Delinquency*, *Journal of Interpersonal Violence*, and *Trauma, Violence, and Abuse*, among other outlets. She may be reached at [Catherine.Kaukinen@ucf.edu](mailto:Catherine.Kaukinen@ucf.edu).

**Henriikka Weir**, Ph.D., is an Assistant Professor in the School of Public Affairs at the University of Colorado, Colorado Springs. Dr. Weir is also a former police officer. Her research interests revolve mainly around the intersection of childhood maltreatment, intimate partner violence, trauma, substance abuse, violence, and delinquency / adult offending. She also studies the causes, correlates, and effects of trauma among police officers. Dr. Weir's research has been published in *Journal of Criminal Justice and Behavior*, *Journal of Criminal Justice*, *Journal of Criminal Justice Education*, *Youth Violence and Juvenile Justice*, *Criminal Justice Studies*, and *Violence and Crime in the Family* among others. She may be reached at [Hweir@uccs.edu](mailto:Hweir@uccs.edu).

# Appendix A

## Articles Excluded from the Review

Karin Andriolo, “Murder by Suicide: Episodes from Muslim History,” *American Anthropologist* 104, no. 3 (2002): 736-742.

**Reason for Exclusion:** This article analyzes three different cases of ‘murder by suicide’ from history to determine historical symbolic strategies to reconcile the potential killer with his or her death, not to explain the cause or motivation to engage in suicide terrorism.

Scott Ashworth, Joshua D. Clinton, Adam Meirowitz and Kristopher Ramsay, “Design, Inference, and the Strategic Logic of Suicide Terrorism,” *The American Political Science Review* 102, no. 2 (2008): 269-273.

**Reason for Exclusion:** This article focuses on critiquing Robert Pape’s 2003 book “The Strategic Logic of Suicide Terrorism.” The authors suggest that Pape’s research design cannot be used adequately to reveal “relevant statistical associations between the use of suicide terror and its possible correlates.” (p. 269) Although critiques of research design are important for improving knowledge of a specific field, the article will not be used in the review .

Efraim Benmelech and Claude Berrebi, “Human Capital and the Productivity of Suicide Bombers,” *The Journal of Economic Perspectives* 21, no. 3 (2007): 223-238.

**Reason for Exclusion:** This article analyzes the relationship between human capital (education, experience) and suicide bombing, finding that older, more experienced attackers are assigned to more important targets and are less likely to fail.

Clara Beyler, “Messengers of Death: Female Suicide Bombers,” *Institute for Counter-Terrorism*, 2003.

Accessed September 3, 2014. <http://www.ict.org.il/Article/854/Messengers%20of%20Death%20-%20Female%20Suicide%20Bombers>.

**Reason for Exclusion:** Although this article alludes to some of the motivations of female suicide bombers around the world, the focus is on describing the history and impact of women in this role, especially the differences in use and exploitation by different groups.

Matthew B. Capell and Emile Sahliyah, "Suicide Terrorism: Is Religion the Critical Factor?" *Security Journal* 20 (2007): 267-283.

**Reason for Exclusion:** Rather than discuss explanations of suicide terrorism specifically, this article focuses on religion and suicide terrorism as explanations for the increased lethality of modern terrorism in general. It is interesting and helpful to consider suicide terrorism as a cause and not just an outcome; however, this is outside the scope of this essay.

D. Suba Chandran, "Suicide Terrorism in South Asia: From Promised Land to Presumed Land," *Institute of Peace and Conflict Studies*, (2003).

Accessed September 4 2014. <http://www.ipcs.org/article/pakistan/suicide-terrorism-in-south-asia-from-promised-land-to-presumed-1085.html> .

**Reason for Exclusion:** The focus of this article is to highlight the dissimilarities between suicide attacks perpetrated in Sri Lanka, India, and Pakistan. Although the author briefly touches on nationalistic motivations versus religious motivations, the purpose is not to discuss causes of suicide terrorism.

Martha Crenshaw, "Suicide Terrorism in Comparative Perspective," in *Countering Suicide Terrorism*, by Boaz Ganor, (Herzliya, Israel: The International Policy Institute for Counter-Terrorism, 2002).

**Reason for Exclusion:** In this article, although the author briefly outlines theorized causes of suicide terrorism at the individual, organizational and cultural levels, the focus is on relating suicide terrorism to terrorism in general, as well as outlining similarities to self-immolation and hunger strikes.

Stephen F. Dale, "Religious Suicide in Islamic Asia: Anticolonial Terrorism in India, Indonesia and the Philippines," *Journal of Conflict Resolution* 32, no. 1 (1988): 37-59.

**Reason for Exclusion:** This article stresses the importance of understanding the historical use of suicide attacks throughout the history of Middle Eastern religious conflict in order to better comprehend modern suicide terror. The author alludes to this historical use as an influence in creating a culture that supports suicide attacks, but does not specifically discuss causes of suicide terrorism.

Adam Dolnik, “Die and Let Die: Exploring Links Between Suicide Terrorism and Terrorist Use of Chemical, Biological, Radiological, and Nuclear Weapons,” *Studies in Conflict and Terrorism* 26, no. 1 (2003): 17-35.

**Reason for Exclusion:** This article considers the nuances of contemporary suicide terrorism and how they are not indicative of an increased likelihood to use mass-casualty attacks with WMDs.

Linda Butler, “Suicide Bombers: Dignity, Despair, and the Need for Hope: An Interview with Eyad El Sarraj,” *Journal of Palestine Studies* 31, no. 4 (2002): 71-76.

**Reason for Exclusion:** Although this article goes into some detail about the psychological-level motivations of Palestinian suicide bombers, the article is not included in the review because it does not include reproducible research. The dialogue between Butler and El Sarraj is included in the discussion.

Roxanne L. Euben, “Killing (for) Politics: Jihad, Martyrdom, and Political Action,” *Political Theory* 30, no. 1 (2002): 4-35.

**Reason for Exclusion:** The focus of this article is on defining and clarifying *Jihad* and explaining the role of *Jihad* in the political sense. It does not detail a theory of suicide terrorism causes.

Jeremy Ginges, Ian Hansen, and Ara Norenzayan, “Religion and Support for Suicide Attacks,” *Psychological Science* 20, no. 2 (2009): 224-230.

**Reason for Exclusion:** The authors focus on relating religion to popular support for suicide terrorism. Although there is evidence within their study showing that religion influences the willingness to participate in martyrdom, overall popular support is the intended dependent variable.

Harvey Gordon, “The ‘Suicide’ Bomber: Is it a Psychiatric Phenomenon?” *Psychiatric Bulletin* 26, no. 8 (2002): 285-287.

**Reason for Exclusion:** The author discusses whether suicide bombing can be described in psychiatric terms similar to those of ‘suicide’. Although he comes to the conclusion that suicide bombings are mostly political and there is not currently sufficient psychiatric understanding of the phenomenon, he does not get into the deeper causes of suicide terrorism.

Rohan Gunaratna, "The Post-Madrid Face of Al Qaeda," *The Washington Quarterly* 27, no. 3 (2004): 91-100.

**Reason for Exclusion:** This article focuses on the changes to terrorist ideologies after 2001 and the effects that Al Qaeda, Iraq, and Afghanistan have had on terrorism as a security threat in recent years. The author looks at the changing security environment and how counterterrorism needs to adapt to this environment.

Simon Haddad, "A Comparative Study of Lebanese and Palestinian Perceptions of Suicide Bombings: The Role of Militant Islam and Socio-Economic Status," *International Journal of Comparative Sociology* 45, (2004): 337-363.

**Reason for Exclusion:** This article examines the difference between Palestinian and Lebanese support for suicide attacks as a tactic. The author found that political Islam was the most important determinant of support and more prevalent among Palestinians than Lebanese even though approval was stronger among Lebanese.

Mohammed M. Hafez, "Dying to Be Martyrs: The Symbolic Dimension of Suicide Bombers," in *Root Causes of Suicide Terrorism: The Globalization of Martyrdom*, by Ami Pedahzur, (New York, NY: Routledge, 2006).

**Reason for Exclusion:** The author considers the individual-level motivations for suicide tactics and suggests that the symbolism surrounding 'martyrdom', largely framed by the organization and society, gives individuals the justification for their own personal motivation. The focus of this narrative is not to present a theory of individual motivations but rather to present a test that can help to evaluate rational models of explaining suicide terrorism at the individual level and to show the way ahead for researchers to understand the symbolism and social meaning of the acts themselves to the bombers (p. 56).

Mohammed M. Hafez, "Martyrdom Mythology in Iraq: How Jihadists Frame Suicide Terrorism in Videos and Biographies," *Terrorism and Political Violence* 19, no. 1 (2007): 95-115.

**Reason for Exclusion:** As the author explicitly states, the focus of the article is to show how specific groups frame their actions to achieve communication goals by manipulating their narratives. The study does not address the motivations of individual suicide attackers and is not included in the Systematic Review.

Michael C. Horowitz, “Nonstate Actors and the Diffusion of Innovations: The Case of Suicide Terrorism,” *International Organization* 64, no. 1 (2010): 33–64.

**Reason for Exclusion:** The author focuses on the spread of suicide terrorism between groups and the potential to be able to identify which groups may be open to adopting suicide terrorism as a tactic. As the focus is not on identifying the root cause of suicide terrorism, the article is not included in the Systematic Review.

Mark Juergensmeyer, “Religion as a Cause of Terrorism,” in *The Roots of Terrorism (Democracy and Terrorism)*, by Louise Richardson (New York, NY: Taylor & Francis Group, LLC, 2006).

**Reason for Exclusion:** Although this article relies heavily on studies of suicide terrorism, specifically Robert Pape’s 2005 book *Dying to Win: The Strategic Logic of Suicide Terrorism*, the focus is on discussing religious violence and religion as a cause for terrorism generally.

Martin Kramer, “The Moral Logic of Hizballah,” in *Origins of Terrorism: Psychologies, Ideologies, Theologies, States of Mind*, by Walter Reich, (Washington D.C.: The Woodrow Wilson Center Press, 1990).

**Reason for Exclusion:** Although other researchers in the field (Piazza, 2008; Pape, 2003) have cited this article as one of the few pre-2000 research documents on the subject of suicide terrorism, the article describes the moral justification that Hizballah used to sanction suicide terrorism as a tactic after the fact as opposed to the root causes of the act itself. The article was used within this research but was excluded from the comparison table.

Alan B. Krueger and Jitka Malečková, “Education, Poverty and Terrorism: Is There a Causal Connection?” *Journal of Economic Perspectives* 17, no. 4 (2003): 119–144.

**Reason for Exclusion:** Although the authors present a brief description of the economic conditions of various suicide bombers (pp. 135-137) in order to dispel the idea that poverty and education are driving factors in many forms of terrorism, the focus of the article is on terrorism in general. For this reason, the article was not included in the systematic review.

Andrew H. Kydd and Barbara F. Walter, “The Strategies of Terrorism,” *International Security* 31, no. 1 (2006): 49–80.

**Reason for Exclusion:** This article discusses motivations for terrorism in general and not motivations for suicide tactics specifically.

Assaf Moghadam, “The Roots of Suicide Terrorism: A Multi-Causal Approach,” in *Root Causes of Suicide Terrorism: The Globalization of Martyrdom*, by Ami Pedahzur, (New York, NY: Routledge, 2006).

**Reason for Exclusion:** The purpose of this article is not to describe or debate causes, but to build a framework of analysis that can be used for future research. In addition, it highlights the importance of studying suicide terrorism on multiple levels acknowledging the interactions between them.

Assaf Moghadam, “Suicide Terrorism, Occupation and the Globalization of Martyrdom: A Critique of Dying to Win,” *Studies in Conflict and Terrorism* 29, no. 8 (2006): 707–729.

**Reason for Exclusion:** The article does not present a suggested cause but argues that Pape’s conclusions in his 2001 book *Dying to Win* may have been wrongly made due to several shortcomings of the research design. Due to the focus of the article, it was not included in the review below.

Assaf Moghadam, “Motives for Martyrdom: Al-Qaida, Salafi Jihad, and the Spread of Suicide Attacks,” *International Security* 33, no. 3 (2008): 46–78.

**Reason for Exclusion:** The author focuses on the spread of suicide terrorism as a result of the increasing appeal of Taqfiri Salafism (the guiding ideology of al-Qaeda and its associates) and the evolution of al-Qaeda as a global network.

Jerrold M. Post, “Terrorist Psycho-Logic: Terrorist Behavior as a Product of Psychological Forces,” in *Origins of Terrorism: Psychologies, Ideologies, Theologies, States of Mind*, by Walter Reich, (New York, NY: Cambridge University Press, 1990).

**Reason for Exclusion:** Although other researchers in the field (Piazza, 2008; Pape, 2003) have cited this article as one of the few pre-2000 research documents on the subject of

suicide terrorism, the article refers to terrorism in general and does not specifically address causes of suicide terrorism, but does suggest a psychological cause for the extreme actions of terrorism as a tactic. The article was used within this essay, but was excluded from the comparison tables.

Joseph Pugliese, “Biotypologies of Terrorism,” *Cultural Studies Review* 14, no. 2 (2008): 49–66.

**Reason for Exclusion:** In this article, the author strives to impress upon the reader the potential negative impacts of using biometrics within the military and law enforcement to target individuals by corporeal features. Individuals who embody certain biotypologies are subjected to the fear and mistrust of the population as a result of this corporeal targeting. Although this is an important issue in terms of limiting panic and developing accurate ways of identifying terrorists, this is outside the scope of this article.

Allison G. Smith, “The Implicit Motives of Terrorist Groups: How the Needs for Affiliation and Power Translate into Death and Destruction,” *Political Psychology* 29, no. 1 (2008): 55–75.

**Reason for Exclusion:** In this article, the author shows that group dynamics, specifically affiliation and power motives, were especially significant to terrorist organizations. In-group and out-group affiliation was shown to be more impactful than power motives in a group’s tendency towards terrorism. This research is focused on terrorism in general and does not specifically analyze suicide tactics. Although many of the groups that were considered engaged in suicide tactics, due to the focus of the article it is not included in the systematic review.

Domenico Tosini, “Al-Qaeda’s Strategic Gamble: The Sociology of Suicide Bombings in Iraq,” *Canadian Journal of Sociology* 35, no. 2 (2010): 271–308.

**Reason for Exclusion:** The author focuses not on causes of suicide terrorism but on why some organizations targeted Iraqi Shi’ite civilians instead of targeting occupying military forces.

Ellen Townsend, “Suicide Terrorists: Are They Suicidal?” *Suicide and Life-Threatening Behavior* 37, no. 1 (2007): 35–49.

**Reason for Exclusion:** This article describes how empirical studies show that suicide terrorists are not suicidal but suggests that psychological autopsies will help improve our understanding of suicide terror.

Jeff Victoroff, “The Mind of the Terrorist: A Review and Critique of Psychological Approaches,” *Journal of Conflict Resolution* 49, no. 1 (2005): 3-42.

This article considers various theories of crime and personality to describe the psychology of the terrorist, but does not specifically address suicide terrorism and was, therefore, excluded from the systematic review.

# Appendix B

## Summary of Reviewed Articles that Discuss Individual-level Motivations for Suicide Bombers

Pedahzur, Ami, Arie Perliger and Leonard Weinberg. "Altruism and Fatalism: The Characteristics of Palestinian Suicide Terrorists." *Deviant Behavior* 24, no. 4 (2003): 405-423.

**Terrorist Organization Focus:** Palestinian suicide terrorists from 1993-2002.

**Research Method:** Using a database that includes both suicide and non-suicide Palestinian terrorist attacks against Israel from 1993 to 2002, the authors identified suicide (or attempted suicide) terrorists and compiled characteristics of each in order to compare them to non-suicide terrorists in the same area in an effort to determine the root cause of their suicide activities. The authors built their research framework similarly to relative-deprivation theories of collective political violence.

**Supporting Arguments:** Altruistic suicide occurs when an individual is entrenched in an organization and feels a duty to commit suicide. The individual sees himself or herself as secondary to the whole. Acute altruistic suicide specifically relates to martyrdom. The acute altruistic suicide perpetrator believes in a fantastic life after death but sees life as worthless.

Fatalistic suicide is a product of hopelessness that is often the result of continued and persistent political and economic oppression.

**Conclusions:** At an individual level, suicide terrorists fall into a new category of suicide typology, that of fatalistic altruistic suicides.

The authors' research showed that a combination of altruistic and fatalistic characteristics define the Palestinian suicide bombers. The altruistic characteristics were prominent at the organizational level and the fatalistic characteristics were prevalent at the individual level, thus addressing both levels will be key to policy development.

Lester, David, Bijou Yang and Mark Lindsay. "Suicide Bombers: Are Psychological Profiles Possible?" *Studies in Conflict & Terrorism* 27, no. 4 (2004): 283-295.

**Terrorist Organization Focus:** All (for review of previous research) but the authors used Michel and Herbeck (2001) specifically for an in-depth biography of Timothy McVeigh as a case study.

**Research Method:** Review of existing literature to determine current data and speculation about the profile of a suicide bomber, followed by the examination of cases that are similar to suicide bombers (but are not).

**Supporting Arguments:** In the case of Timothy McVeigh, the in-depth biography allowed scholars to profile him and categorize his behaviors into a specific type. Although McVeigh was not a suicide bomber, his plan included the possibility that he would be required to die in order to be successful. This suggests that other suicide bombers may be able to be profiled in a similar way.

**Conclusions:** The authors suggest a psychological cause, particularly a combination of individual-level factors such as conventionalism, authoritarian submission, authoritarian aggression, power, toughness, anti-intracception, and projection (pp. 290-291).

Profiles of suicide bombers could potentially be developed should researchers conduct in-depth analyses of individual bomber's personal histories. They do not suggest that a single profile is possible but that there may be a selection of profiles that can be applied.

Kimhi, Shaul and Shemuel Even. "Who are the Palestinian Suicide Bombers?" *Terrorism and Political Violence* 16, no. 4 (2004): 815-840.

**Terrorist Organization Focus:** Palestinian Suicide Bombers

**Research Method:** Content analysis focuses on identifying patterns in the history of each bomber. The authors used a convenient sample using "details that have been published in the literature describing suicide terrorists." (p. 815) They analyzed 60 cases that they categorized into four groups: religious, exploited, retribution for suffering, and social/nationalist.

**Supporting Arguments:** The authors suggested that every case of suicide terrorism required a motivated individual, the technical system to carry out the attack, and a condoning political leader. Beyond these similarities, each typology had different prerequisite factors (PF) and supporting factors (SF).

Religious: PF: religious interpretations encouraging terror and a charismatic leader; SF: sympathetic community, groupthink, and family support for the bomber after the attack.

Exploited: PF: individuals that cannot refuse the organization and personal or family problems resulting in depression; SF: Sympathetic community and the redemption of sins upon death.

Retribution for Suffering: PF: death or serious injury to someone close, trauma related to the Israeli occupation, and continuous difficulty related to the Israeli occupation; SF: sympathetic community, and family support for the bomber after the attack.

Social/Nationalist: PF: political awareness and belief that armed struggle and suicide missions are vital to liberation; SF: organizational participation in suicide missions, sympathetic community, and international media attention.

**Conclusions:** The authors present four typologies of suicide bombers and attribute different prerequisite factors and supporting factors for each typology.

In addition to the four typologies of the Palestinian suicide terrorist that emerged from the authors' research, they also noticed some overlap and suggested that suicide terrorism is the result of both multiple factors and multiple trajectories of the terrorist. They indicate that this research examines personal psychological motivations of the suicide bomber and it is important that political and social approaches be integrated into the solution.

Orbach, Israel. "Terror Suicide: How is it Possible?" *Archives of Suicide Research* 8, no. 1 (2004): 115-130.

**Terrorist Organization Focus:** Although the author does not indicate a specific group focus, he maintains concentration on the Palestinian-Israeli conflict.

**Research Method:** Analysis of research and open-source media information on various suicide attacks.

**Supporting Arguments:** The author argues that cultural values contribute to the willingness of suicide attackers to act but only in conjunction with certain facilitators, including an "enthusiastic determination to achieve a goal, ideological rage, glorification of the post-self, heavenly rewards, materialistic benefits for families, induced dissociative processes, and linguistic mediation." (p. 115) Through his observation of the preparation phase of a suicide bomber's training, many of the elements he describes are made evident.

**Conclusions:** A combination of what the author refers to as 'facilitators of suicide' and a sociological typology of altruistic suicide is suggested as the root cause of suicide terrorism.

The author suggests a preliminary profile of the suicide bomber as possessing several characteristics: religiosity, tendency for identification, self-collectivistic perception, suggestibility, imagination, naiveté, magical thinking, and aspirations for personal fame.

Azam, Jean-Paul. "Suicide Bombing as Inter-Generational Investment." *Public Choice* 122, no. 1-2 (2005): 177-198.

**Terrorist Organization Focus:** Hezbollah

**Research Method:** The author uses literature on economics in conflict and economics of terrorism as well as other microeconomic theories in order to show changes to individual investment in suicide bombing as it relates to increased wealth and education.

**Supporting Arguments:** The author builds an economic model that analyzes the relationship between the belief of individual bombers that their actions will benefit future generations by providing some public good and the bombers' intergenerational altruism. He argues that education and wealth provide a better understanding of the importance of investment in the future and subsequently increase intergenerational altruism.

**Conclusions:** The author proposes a theory similar to those in economics suggesting that the act of suicide bombing benefits, not the current generation, but future generations

within the family, especially when applied to wealthy and well- educated suicide bombers in Lebanon.

The author suggests that in order to reduce suicide bombings either the average income in at-risk populations should be reduced (although he acknowledges that this is not an acceptable form of aid), or the cost of performing the attacks must increase (although this is difficult to influence p. 193), and further suggests that an intelligent aid policy can influence the incidence of suicide terrorism.

Speckhard, Anne and Khapta Ahkmedova. "The Making of a Martyr: Chechen Suicide Terrorism," *Studies in Conflict and Terrorism* 29, no. 5 (2006): 429-492

**Terrorist Organization Focus:** Chechen nationalist groups targeting Russian interests

**Research Method:** Semi-structured empirical psychological autopsies (interviews with close family and friends) of 34 (of a possible 112) suicide terrorists who participated in Chechen suicide attacks from 2000-2005 augmented by interviews with surviving hostages of the Dubrovka Theatre takeover. The research distinguishes between gender, types of attacks, targets, and type of target. It also includes suicide attacks where the attacker survived and notes the changing trend in target type from Russian military bases in Chechnya to civilian targets in Russia.

**Supporting Arguments:** Throughout the course of their interviews, the authors noted that each of the perpetrators of suicide terrorist attacks had experienced a significant trauma. All in the sample had experienced the death or torture of a close family member or friend and seen societal-wide trauma. The only two exceptions were those who did not carry out their suicide mission. Following this trauma, interviewees noticed a significant change in behavior, especially with regard to religion and the justification of martyrdom.

**Conclusions:** In this research sample, trauma "appears to be the strongest catalyst to deep psychological and behavioral changes that ultimately led to the choice of suicide terrorism." (p. 455)

Similar to other research, the authors found that a combination of organizational, societal, and individual factors influenced suicide terrorists towards martyrdom. However the overarching and strongest element was the presence of a significant trauma. This potential cause should be examined in other organizations to determine if it is common to suicide terrorism in general, nationalist groups in general, or solely Chechen suicide terrorists.

Berman, Eli and David D. Laitin. "Religion, Terrorism, and Public Goods: Testing the Club Model." *Journal of Public Economics* 92 (2008): 1942-1967.

**Terrorist Organization Focus:** Taliban, Hamas, and Hezbollah were the primary focus of the discussion although some other Palestinian organizations were included in the analysis.

**Research Method:** The authors analyzed radical religious rebel groups in order to explain why these groups are more likely to use suicide terror than other insurgency organizations. They used a club-good model to relate the provision of public goods and the associated self-sacrifice of members to the effective recruitment and dispatch of suicide bombers.

**Supporting Arguments:** Upon analyzing several radical religious rebel groups, the authors noted a variety of elements that supported their hypothesis: the organizations often provided public services to their communities, enforced prohibitions, and required sacrifices of their members. The authors also compared the tactical-level decisions of insurgency and suicide attacks.

**Conclusions:** The authors suggest a tactical, rational, motivation by individual terrorists to be used against hardened targets as a root cause.

The findings of the study suggest that policy changes in counterterrorism that address constructive incentives can combat suicide terror. Creating alternative options for potential suicide terrorists can help to reduce their participation and allegiance to extremist religious terror organizations.

Jacques, Karen and Paul J. Taylor. "Male and Female Suicide Bombers: Different Sexes, Different Reasons?" *Studies in Conflict & Terrorism* 31, no. 4 (2008): 304-326.

**Terrorist Organization Focus:** Terrorist groups from the Middle East, Chechnya, Al Qaeda, and the LTTE were examined for a broad analysis of suicide terrorists in general.

**Research Method:** A log-linear analysis of 30 female and 30 male suicide terrorists differentiating between method of recruitment, motivation for attack, and outcome of attack (p. 304).

**Supporting Arguments:** The authors deconstruct current literature concerning the motivations and recruitment of women to extremist terrorism organizations as compared to this thesis, developing individual hypotheses for variation between men and women in each aspect.

After testing their hypotheses, the only hypothesis not supported by their data showed that women were more motivated by revenge and women were equally likely to be proactive in their recruitment.

**Conclusions:** The authors found slight differences in motivations for men and women.

For women: motivations are based on personal events and recruitment through peer influence, exploitation, and self-promotion.

For men: motivations are based on religious and nationalistic ideologies and recruitment through peer influence, exploitation, self-promotion, and religious persuasion.

The authors suggest that this research brought to light previously unexplored theories of female involvement in suicide terrorism. Further exploration and analysis is vital to future explanatory models and typologies of suicide terror.

Kruglanski, Arie, Xiaoyan Chen, Mark Dechesne, Shira Fishman and Edward Orehek. "Fully Committed: Suicide Bombers' Motivation and the Quest for Personal Significance." *Political Psychology* 30, no. 3 (2009): 331-357.

**Terrorist Organization Focus:** All, however the media clips that they analyzed focused on the Palestinian bombers and other Islamic extremist and Middle Eastern terrorist organizations.

**Research Method:** The authors base their theory on established psychological research both in the area of suicide terrorism and general human behavior. They analyzed interviews and media clips of successful suicide attackers' statements to determine individual motivations.

**Supporting Arguments:** "The quest for personal significance has been hailed by psychological theorists as a major motivational force in human behavior." (p. 335)

The reminder of personal mortality enforces commitment and ideology of the group. This commitment may help to diminish the fear of death for individual bombers, especially if there is a belief in immortality in the afterlife.

The possibility of loss of significance can have a similar effect to the quest for significance.

**Conclusions:** The combination of personal trauma, frustration, ideology and social pressure has been determined to contribute to a decision to engage in suicide terrorism. The authors suggest that a quest for personal significance can tie these individual motivations together into one overarching framework.

They suggest that policies should address the significance that is attributed to the act of suicide terrorism as well as the sense of significance-loss that volunteers feel (p. 353).

# Appendix C

## Summary of Reviewed Articles that Discuss Organizational-Level Causes of Suicide Terrorism

Ergil, Doğu. "Suicide Terrorism in Turkey." *Civil War* 3, no. 1 (2000): 37-54.

**Terrorist Organization Focus:** The Worker's Party of Kurdistan (PKK)

**Research Method:** The author examined Turkish-language accounts about the PKK's suicide attacks as well as the culture of the organization itself.

**Supporting Arguments:** Examination of the suicide attacks conducted by the PKK demonstrated that the organization expressly ordered each individual attack. The hierarchical, leader-oriented group employed charismatic leaders in a culture that allows for suicide attacks in the service of a higher cause. This enabled the organization to justify the attacks and influence its members. The author argues that situational factors in the years leading up to 1995, including the arrest of the leader, influenced the organization to progress into suicide attacks.

**Conclusions:** The author suggests group dynamics and the influence of an 'omnipotent' leader in addition to a significant amount of coercion and force from leadership as causal factors. The importance of ethnic "difference" to the development of armed rebellion in the area provides a focus for future policy development. Addressing religious and gender inequality in areas of frequent terrorist and suicide-terrorist attacks could be an effective counterterrorism measure.

Pape, Robert. "The Strategic Logic of Suicide Terrorism." *American Political Science Review* 97, no. 3 (2003): 28-39.

**Terrorist Organization Focus:** The study considers 188 suicide attacks from around the world from 1980-2001 conducted by various terrorist groups from around the world.

**Research Method:** Using the Lexis Nexis online database of world news media, Pape identified all suicide attacks from 1980-2001 and analyzed each incident for similarities, differences, level of success, motivations, and target properties.

**Supporting Arguments:** The author suggests that every group that uses suicide-terror tactics began with less drastic methods and progressed to suicide tactics when their efforts failed to get them what they wanted (p. 350). Data analysis found three consistent properties between the attacks: timing, nationalist goals, and target selection (p. 347).

**Conclusions:** Pape suggests that terrorism is perpetrated for one of two reasons: to force government to change policy and/or to mobilize additional recruits and financial aid for the

organization. Suicide terrorism is simply the coercive instrument of choice for terrorist groups because it works. The author suggests that counterterrorism should focus on homeland security rather than offensive military action in order to be the most effective. Pape came to five conclusions: suicide terrorism is strategic in nature, is specifically designed to coerce modern democracies into concessions, has been increasing in frequency because terrorists have found it to be an effective tool, produces diminishing returns, and can most effectively be countered by reducing terrorists' confidence in their ability to succeed in their attack.

Gambetta, Diego. *Can We Make Sense of Suicide Missions?* (New York, NY: Oxford University Press, 2005).

**Terrorist Organization Focus:** All groups, organizations, and governments that have used suicide missions of any kind in recent history.

**Research Method:** This narrative discusses similarities on an organizational level between groups who engage in suicide missions.

**Supporting Arguments:** Gambetta identified several generalizations about suicide missions (SMs):

1. All suicide missions are organized and supported by an organization.
2. Various types of armed organizations use SMs including legitimate governments.
3. All organizations that use SMs also use conventional tactics.
4. All organizations that use SMs are either not rooted in a community or they have the support of their constituency.
5. The weaker side in a conflict carries out all SMs.

**Conclusions:** The author suggests that at the individual level, there are too many differences and unique characteristics to be able to identify a single individual-level motivation but that the generalizations at the organizational level help to characterize and identify those who may engage in SMs. He highlights the similarities between how governments and people will treat their war heroes and how these organizations treat martyrs, emphasizing the idea that one person's terrorist is another's freedom fighter.

Gupta, Dipak and Kusum Mundra. "Suicide Bombing as a Strategic Weapon: An Empirical Investigation of Hamas and Islamic Jihad." *Terrorism and Political Violence* 17, no. 4 (2005): 573-598.

**Terrorist Organization Focus:** Hamas and Islamic Jihad within the Palestinian-Israeli conflict.

**Research Method:** The authors perform empirical analysis of twice-yearly data collected on suicide attacks by Hamas and Islamic Jihad between 1991 and 2003. They determined

significant coefficients using a Quasi-Maximum Likelihood Ratio and checked their results using a Seemingly Unrelated Regression.

**Supporting Arguments:** The results of the empirical analysis demonstrate a reciprocal relationship between suicide bombing and Israeli operations. A reciprocal relationship between suicide bombings and violence against Palestinians by Israeli forces demonstrates the strategic, political, and physical provocation of both sides. The actions themselves and the fallout from both the suicide attacks and the Israeli operations eliminate the possibility of compromise for either side. Further analysis explained that the decision to use suicide bombing over any other method was dependent on the perceived success and the magnitude of destruction that would result (p. 589).

**Conclusions:** The reciprocal actions between Israelis and Palestinians further mistrust, hatred, and denial of potential compromise by either side (p. 509). Rational-choice theories and analysis based on game theory are not applicable to suicide terrorism due to the complexity of motivations and the presence of multiple goals. In-depth case studies and the regression that the authors conducted are better able to capture these intricacies.

Ayers, Nick. "Ghost Martyrs in Iraq: An Assessment of the Applicability of Rationalist Models to Explain Suicide Attacks in Iraq." *Studies in Conflict & Terrorism* 31, no. 9 (2008): 856–882.

**Terrorist Organization Focus:** Although there is no single organizational focus, the author restricts his analysis to attacks that occurred in Iraq.

**Research Method:** The author considers four different rationalist models that hypothesize potential strategic causes of suicide terrorism: "(1) Robert Pape's model of strategic signaling and coercive bargaining, (2) Mia Bloom's model of organizational outbidding, (3) a model of internal recruiting, and (4) David Laitin and Eli Berman's model of hardened targets." (pp. 857-858) Dividing the research conducted on the 4 models into three categories (group characteristics and goals, group claims, and characteristics of the targets) the author analyzes the applicability of the findings for Iraq specifically.

**Supporting Arguments:** Ayers' research shows support for the final two theories but not the first two. For strategic signaling, the percentage of attacks against military vs. non-military targets counters the theory that the end-goal is for the withdrawal of foreign occupiers. In terms of the organizational outbidding model, the percentage of unclaimed attacks suggests that the support of the local population is not garnered by suicide terror. In terms of recruitment, the number of Iraqi nationals engaged in suicide attacks suggest some small amount of support for global jihad. The study showed the most support, however, for the tactical tool theory.

**Conclusions:** Suicide Terrorism is used strategically by an organization to gain tactical advantage over the enemy and aid in recruitment efforts (p. 856). The author suggests that suicide attacks can generally fit into any overall terrorist strategy. It is, therefore, essential to understand the tactical-level motivations and implications for these attacks in order for military strategists to accurately determine terrorist strategies and develop effective policies and procedures.

## Appendix D

### Summary of Reviewed Articles that Discuss Societal-Level Causes of Suicide Terrorism

Burdman, Daphne. "Education, Indoctrination and Incitement: Palestinian Children on Their Way to Martyrdom." *Terrorism and Political Violence* 15, no. 1 (2003): 96-123.

**Terrorist Organization Focus:** A study based on Palestinian educational culture.

**Research Method:** Review of 31 educational textbooks published prior to 2000 and used by the Palestinian Authority's Ministry of Education as well as various media programs and publications (p. 98).

**Supporting Arguments:** The author notes several instances of incitement to martyrdom from educational texts for Palestinian children in grades 5, 6, 7, 8, and 10 as well as in *Contemporary History of the Arabs and the World* (p. 101). Teachers' guides and television campaigns also showed instances of incitement. The authors evaluated the success of this educational campaign by highlighting the suicide attacks and martyrdom resulting from insurgency actions by children under the age of 18 (pp. 105-106).

**Conclusions:** The author summarized the influences of this educational campaign by outlining the effects that authoritarian society, religious and nationalist learning, educational techniques, group processes, programming and conditioning, indoctrination, and emotion have on individual mental health. Correcting the effects of this educational campaign will require "termination of incitement, re-education and de-conditioning" (p. 118) and is the responsibility of both the international community and the Palestinian people.

Khashan, Hilal. "Collective Palestinian Frustrations and Suicide Bombings." *Third World Quarterly* 24, no. 6 (2003): 1049-1067.

**Terrorist Organization Focus:** Palestinian refugees of the Palestine-Israel conflict.

**Research Method:** Using a simple random sample of 342 Palestinian refugees in southern Lebanon, interviews were conducted to perform an empirical analysis to answer whether suicide terrorists can be profiled in terms of education, economics, and personality; whether militant Islamist ideology is pervasive in their philosophy; and whether they make up a significant percentage of the refugees.

**Supporting Arguments:** The author found that the majority of the interviewees believed that suicide missions would successfully force Israel to submit to the demands of the

Palestinian people (p. 1061). There was also a significant proportion of the respondents that were willing to act as suicide bombers against Israeli civilians (p. 1061).

**Conclusions:** The author suggests that a combination of Palestinian collective frustration, Political Islam, and extreme poverty lead to the use of suicide terror as a tactic. The author found that the Palestinian refugee camps were essentially a breeding ground for potential suicide bombers. The closed society, extreme poverty, and collective societal humiliation allowed for pervasive militant religious extremism to justify and promote both support to the suicide attacks of others and for the willingness to participate.

Ramasubramanian, R. "Suicide Terrorism in Sri Lanka." (Institute of Peace and Conflict Studies, New Delhi, India, 2004).

**Terrorist Organization Focus:** Terrorist groups in Sri Lanka, specifically the LTTE and their suicide contingent, the Black Tigers.

**Research Method:** Descriptive, research-based article that describes the state of suicide terrorism in Sri Lanka (differentiating between suicide and suicidal terrorism). The author describes the threat scenario, suicide terrorism in Sri Lanka, the LTTE, the motivations of the Black Tigers, the role of women in the suicide cadre, and the psychological and nationalistic framework of suicide terrorism.

**Supporting Arguments:** The author cites societal and community activities that paint the Black Tigers as heroic martyrs for the Tamil people to demonstrate the motivation that some will have in the face of death. He describes the support to families of suicide bombers after their missions, the commemoration of the martyrs' deaths (not the celebration of their lives) and the upbringing of individuals to believe that they can and should choose the cause over their lives.

**Conclusions:** The fear of death, on a societal level, can motivate people to heroism. In the case of the Tamils, suicide terrorism has been framed in a light such that it is marketed as heroism (p. 15). The author suggests that counterterrorism and modern technology cannot eliminate suicide bombings, but that there are steps that can end suicide terrorism in Sri Lanka: understand the aim, history and the people; teach both sides that they are part of the problem and the solution; show that it does not matter who started the war as both sides sustain it; demonstrate that the standards of 'winning' are different than in a non-asymmetric war; have each side take proposals of peace talks seriously; address the societal mindset towards suicide bombing; and address the leadership that supports the use of suicide bombing as a tactic.

Jackson, Sara Wade and Dan Reiter. “Does Democracy Matter?: Regime Type and Suicide Terrorism.” *The Journal of Conflict Resolution* 51, no. 2 (2007): 329–348. .

**Terrorist Organization Focus:** Focus on all suicide attacks from the Freedom House and Polity data combining Pape (2003) and Pedahzur’s (2005) datasets.

**Research Method:** Using Freedom House and Polity data, the authors conducted quantitative tests on the relationship between regime type and suicide terrorism from 1980- 2005. The article builds on Pape’s assertion that suicide attacks are almost exclusively perpetrated against democracies that are perceived to be occupiers.

**Supporting Arguments:** The results of the tests showed mixed results for the relationship between economic development and suicide terrorism. There was a positive correlation between larger states and an increase in suicide terrorism as well as a significant positive correlation between Muslim states and being victims of suicide terrorism. There was also a limited statistical correlation between democracies and being victims of suicide terrorism.

**Conclusions:** The authors hypothesized that democracies and especially mixed regimes would be more likely to experience suicide terrorism. This hypothesis was not supported by their research. However they did find nation size, Islam, and national and global experience with suicide terrorism to be correlated to suicide terrorism. The study found that regime type is uncorrelated with suicide terrorism but was marginally correlated to the number of religious minorities at risk within the nation. The authors suggest that further research on the relationship between suicide terrorism and non-suicide terrorism will help to improve the direction of causal research.

Gibson, Kyle Richard. “The Roles of Operational Sex Ratio and Young-Old Ratio in Producing Suicide Attackers.” (Ph.D. dissertation, University of Utah, 2011).

**Terrorist Organization Focus:** All

**Research Method:** The author collected information on individual suicide attackers using data from three studies conducted prior to this one for 1208 suicide attackers from attacks that took place from 1981 to 2007. The data were analyzed to determine if there was a correlation between age, gender, and marriage demographics in a given country and the likelihood of that country producing suicide bombers.

**Supporting Arguments:** The author found that higher ratios of marriageable men to women, higher polygyny rates, percentages of Muslims, and larger populations were correlated to greater production of suicide bombers. Also, countries with a greater ratio of young men to old were less likely to produce suicide bombers.

**Conclusions:** The author suggests a multifaceted approach to counter suicide terrorism due to the influence of individual, social, and strategic elements of motivation. Limiting the appeal of suicide attacks to groups and individuals while addressing societal feelings of oppression and humiliation can be used in the counterterrorism effort. This research suggests that

decreasing operational sex ratios, decreasing the young-old ratio, and decreasing polygyny may decrease suicide attacks.

Benmelech, Efraim, Claud Berrebi, and Esteban F. Klor. "Economic Conditions and the Quality of Suicide Terrorism." *The Journal of Politics* 74, no. 1 (2012).

**Terrorist Organization Focus:** Palestinian suicide terrorists acting against Israeli targets from 2000 to 2006.

**Research Method:** The dataset used for this research consisted of 157 suicide terrorists gathered from the Israeli Security Agency's reports on Palestinian suicide terrorists that attacked or attempted to attack in Israel, the West bank and the Gaza Strip from September 2000 to December 2006. The data cover terrorist age, education, previous terror activity, target, the economics and demographics of the target area, and security measures in place.

**Supporting Arguments:** Other research suggests a similar relationship to the one that the authors propose: that when unemployment is low, there are desirable mainstream jobs for potential suicide attackers and only low-ability attackers that cannot find jobs can be recruited. The authors' research indicates that higher unemployment is correlated with more educated, mature and experienced suicide attackers that carry out attacks on more important targets closer to the area from which they originate. The correlation between the economy and the outcome of attacks is more indirect. The research indicated that higher quality suicide attackers are less likely to be stopped and more likely to cause more fatalities (p. 122).

**Conclusions:** Although the authors acknowledge previous research that disqualifies poverty as a causal factor in the quantity of terror attacks, they suggest that poor economic conditions, especially high unemployment, allow terrorist organizations to recruit better educated, more mature suicide terrorists to their cause and improve the quality of potential targets.

Previous research has begun to disqualify the impact of the economy on the quantity of suicide terrorism, leading some to argue against maintaining 'the war on poverty' approach to counterterrorism. This, and other research that demonstrates the importance of the economy of terrorism can help to focus counterterrorism policy in a manner that will be more efficient.

# Appendix E

## Summary of Reviewed Articles that Suggest Suicide Terrorism is Caused by a Combination of Individual, Organizational and/or Societal-Level Factors

Merari, Ariel. "The Readiness to Kill and Die: Suicidal Terrorism in the Middle East." in *Origins of Terrorism: Psychologies, Ideologies, Theologies, States of Mind*, by Walter Reich and Walter Laqueur, (Washington D.C.: The Woodrow Wilson Center Press, 1990).

**Terrorist Organization Focus:** Terrorists in the Middle East active in suicide car bombings between 1983 and 1986.

**Research Method:** The author examined the facts collected on 31 cases of suicide terrorism by car bomb in the Middle East from 1983-1986 (p. 203).

**Supporting Arguments:** Suicide terrorists often engage in two levels of indoctrination: the first is at the cultural level throughout their upbringing; and the second is mission oriented (p. 199). Situational factors, including group pressures, can be seen in other suicide situations throughout history, for example mass suicides, chain suicides, and suicides for an audience. The only personality factor that the author noted with any level of certainty, due to the difficulty in profiling and analyzing psychological elements of suicide terrorists, is the common element of a broken home.

**Conclusions:** The author argues that four distinct groups of factors influence an individual's decision: "cultural factors, indoctrination, situational factors, and personality factors." (p. 196) The person is suicidal while the organization simply provides the excuse. The author suggests that the individual suicide terrorists wish to die for personal reasons and the terrorist organizations provide them with an excuse to act. Terrorist groups legitimize the violent act that would normally be unacceptable (p. 206). For this reason, terrorism should be addressed separately at the group level while suicide needs to be addressed at the individual level.

Atran, Scott. "Genesis of Suicide Terrorism." *Science* 299 (2003): 1534-1435.

**Terrorist Organization Focus:** All

**Research Method:** Narrative describing the evolution of suicide terrorism throughout history and some of the more common theories of causes.

**Supporting Arguments:** Institutional factor: the relationship between peers and the loyalty to cohorts is especially important in determining suicide-terrorism behavior. Often this relationship between members of the group, known as fictive kin, is built and strengthened by the organization through religion.

**Conclusions:** The author argues that suicide terrorism is used as a weapon of psychological warfare against the greater population by an organization. On an individual level, a combination of psychological and cultural elements make individuals susceptible to recruitment. Preventing bombers from reaching their target is likely an ineffective strategy due to high cost and low likelihood of success. Strategies aimed at literacy, poverty, and reducing military occupation have the potential to be slow, ineffective, or counterproductive. Institutional-level programs have the most promising outlook on counterterrorism (p. 1537).

Moghadam, Assaf. "Palestinian Suicide Terrorism in the Second Intifada: Motivations and Organizational Aspects." *Studies in Conflict and Terrorism* 26, no. 2 (2003): 707-729.

**Terrorist Organization Focus:** Palestinian suicide bombers that attacked in the first 21 months of the Second Intifada.

**Research Method:** The author creates a framework of analysis that examines the process of the suicide attack from initial motivation to execution at both the individual and organizational level and proceeds to apply it to various theories of motivation for the bomber and aspects of the organization.

**Supporting Arguments:** Several researchers have supported the idea that suicide terrorism is rooted in an interconnected relationship between the individual, the organization and the society. Interviews with attackers, families, and friends as well as evidence from many different suicide attacks show support for the many different individual motivations that the author proposes, with varying degrees of influence for each motivation depending on the individual. Support for the strategic and tactical benefits to the organizations, as well as the consistent presence of the orientation phase of training and preparation support the organizational level of the author's proposal.

**Conclusions:** The author argues that a combination of individual and organizational level motivations contribute to the use of suicide terror as a tactic. At the individual level, several factors influence the potential suicide bomber but they are not always the same combination of factors. At the organizational level, organizational goals and strategies are integrated in recruitment, training and indoctrination to support the use of suicide terror as a tactic. It is unlikely that a single factor, either at the individual or organizational level, is solely responsible for a suicide attack. The author's framework of analysis is designed to analyze both levels of

influence and can be applied on a larger scale. Policy and prevention strategies should also be developed along these lines, integrating individual-level programs and organizationally-targeted response. However, in the short term, organizationally-targeted policy may be more effective due to the difficulty in addressing individual motivations.

Ariel Merari. "The Readiness to Kill and Die: Suicidal Terrorism in the Middle East." in *Terrorists, Victims and Society: Psychological Perspectives on Terrorism and its Consequences* by Andrew Silke (West Sussex, England: John Wiley & Sons, 2003).

**Terrorist Organization Focus:** The focus is on Islamic terrorist groups although at the group level the author presents factors applicable to other groups as well.

**Research Method:** This article is a narrative that uses examples to show that the suicide terrorist is not suffering from any pathological disorders or mental illness and that religion is not a motivating factor in the way that is sometimes perceived in the Western world when considering Islam. He also describes group-level factors that are similar across groups. Although this seems to suggest a group-level motivational theory, with the incorporation of societal factors in the group discussion, it can be seen as a combination theory.

**Supporting Arguments:** There is no evidence that suicide bombers suffer from mental illness or psychopathology. In one instance (the PKK) there is evidence that members were coerced into becoming suicide bombers, but otherwise, bombers are generally volunteers and believe in their goal. Understanding of Islam demonstrates that many of the perceptions in the Western world about motivations for martyrdom and after-death expectations are false. There are several group-level factors that are seen across groups, including the support of the bombers' families, desperation of the group in conflict, cultural precedent for self-sacrifice, and indoctrination of the bomber.

**Conclusions:** The strategic advantage of suicide bombing over hardened targets means that the tactic will always be attractive to terrorists. The author argues though, based on previous evidence, that no group remains committed to suicide terrorism for an extended amount of time and concludes that the groups involved in suicide terrorism now will graduate to less drastic tactics in the near future.

Atran, Scott. "Mishandling Suicide Terrorism." *The Washington Quarterly* 27, no. 4 (2004): 67-90.

**Terrorist Organization Focus:** Al-Qaeda and its affiliates.

**Research Method:** The author focuses on demonstrating by example how modern counterterrorism, although focused on current theories, is ineffective due to the invalidity of these individual theories to be applied in a blanket manner. He suggests that a layered approach that addresses various contributory factors will be more successful in countering suicide attacks (p. 72).

**Supporting Arguments:** correlation between a lack of civil liberties and terrorism. Suicide terrorists exhibit no socially dysfunctional attributes or suicidal symptoms. There is correlation between U.S. involvement in international situations and terrorist attacks against U.S. targets (p. 74). Many suicide terrorists are educated, able-bodied, and committed to the cause, possibly because this type of person makes a more reliable recruit. Small cells within the organizational network allow for the development of 'fictive kin' and a strengthening of the bond between individuals – the theory of banality of evil (p. 80).

**Conclusions:** The author suggests that suicide terrorism is the result of the cumulative effect of multiple variables but puts strong emphasis on organizational and institutional role in motivations. Effective counterterrorism will be the result of a coordinated, integrated strategy with multiple layers to address a variety of contributing factors. These layers include: defense of critical infrastructure and emergency response; intelligence collection; and political, social and economic programs addressing root causes of suicide terrorism aimed at reducing potential recruits' receptivity to terrorist recruitment.

Hisham H. Ahmed. "Palestinian Resistance and 'Suicide Bombing': Causes and Consequences." in *Root Causes of Terrorism: Myths, Reality and Ways Forward* by Tore Bjørgo. (New York, NY: Routledge, 2005).

**Terrorist Organization Focus:** Palestinian-Israeli conflict.

**Research Method:** The author presents a narrative describing events throughout the Palestine-Israel conflict that seem to have instigated changes in suicide bombing frequency. Testimony from lawyers and would-be bombers is used to describe the difference between suicide and martyrdom. A study conducted by Shafiq Masalha on Palestinian children age 10-11 is also used within the research to demonstrate the state of the psychology of the Palestinian population.

**Supporting Arguments:** Peaceful protest prior to 1987 Intifada was ineffectual. Testimony suggests belief in the equivalence of suicide bombing to the tactics of Israeli troops (p. 93). The testimony of a would-be bomber suggests that Israeli occupation and repression has scarred the psyche of the Palestinian people. 15% of Palestinian children involved in Masalha's study had dreams about becoming martyrs. When military operations by Israeli forces increase, suicide operations do as well.

**Conclusions:** The author suggests a combination of conceptual, military, psychological, social, religious, and political motivations for suicide bombings. The solution is political in nature and will require action on both sides as the two act in retaliation to the actions of the other and the 'chicken before the egg' argument cannot be solved without compromise and political action.

Berman, Eli and David D. Laitin. “Rational Martyrs vs. Hard Targets: Evidence on the Tactical Use of Suicide Attacks.” in *Suicide Bombing from an Interdisciplinary Perspective* by Eva Mayerson Milgrom, (Princeton: Princeton University Press, 2004). and Berman, Eli and David D. Laitin. “Hard Targets: Theory and Evidence on Suicide Attacks.” (Working Paper, National Bureau of Economic Research, Cambridge, MA, 2005).

**Terrorist Organization Focus:** The data the authors use are limited to the Palestinian-Israeli conflict and they note that the LTTE specifically do not fit into their model. They suggest extensions to the model to make it more applicable to other suicide terrorists.

**Research Method:** The authors build a framework that fits suicide terrorists and the organizations that support them into a rational-choice model by combining data on suicide attacks and club theory.

**Supporting Arguments:** Within this model, it is necessary that the martyrs be ‘rational’, which the authors argue is easily achieved given a belief in the cause and either a belief in reward for their actions in the afterlife or a sense of altruism towards those who will survive and a belief that their lives will be bettered. Radical religious groups both demand sacrifice of their members and provide social interaction. Coreligionists are generally softer targets and can be attacked using conventional tactics if desired. “The stronger the social service provision function of the club, the greater the proportion of its attacks will be suicide attacks... [and] the more damage it will do per suicide attack.” (p. 24)

**Conclusions:** The authors argue that suicide terrorism is a rational decision that incorporates an assessment that a successful attack on a hard, well-protected target that will withstand a conventional insurgency attack outweighs the cost of losing one member and that radical religious organizations are well suited to organize such attacks. The authors acknowledge that terrorist groups out of Sri Lanka, Chechnya and Kurdistan likely do not fit into this model but suggest an extension that incorporates the threat to outside members as part of the club model. The authors suggest that their model has demonstrated that “weakening the benign activities of clubs reduces their ability to carry out attacks” (p. 28) which can be achieved directly or indirectly by strengthening competitor activities.

Elster, Jon. “Motivations and Beliefs in Suicide Missions.” in *Making Sense of Suicide Missions* by Diego Gambetta. (Oxford, England: Oxford University Press, 2005).

**Terrorist Organization Focus:** Palestine, 9/11, Lebanon, Kamikaze, LTTE, PKK, Teenage Martyrs in Iraq-Iran War, Chechnya, Kashmir, Iraq.

**Research Method:** The author divides suicide missions into two levels of actors: individual attackers and the organizations that incite and enable the attacks. It is important to note that the definition that the author uses for suicide missions encompasses much more than suicide terrorism, as many other researchers consider it and may present different results.

**Supporting Arguments:** The author suggests that peer pressure, attachment to a cause larger than the self, indoctrination, revenge, and benefit to family/friends/society/future generations all contribute to an individual's motivations. Religion is not a motivating factor, although it may act to disinhibit the attacker. Previously considered individual causes that have been discounted in recent years, such as poverty and education, may still contribute at the population level. At the organizational level, motivations can be viewed in terms of goals, which are territorial (i.e. recovery of homeland, defense of homeland or expulsion of occupiers), religious (defense of holy sites or destruction of infidels), or both.

**Conclusions:** In the Middle East and Sri Lanka especially, the author suggests that feelings of inferiority and resentment have a significant impact. For Palestinian attackers, the belief that suicide missions are effective and that Israel is evil has a significant impact.

Merari, Ariel. "Social, Organizational and Psychological Factors in Suicide Terrorism." in *Root Causes of Terrorism: Myths, Reality and Ways Forward* by Tore Bjørgo. (New York, NY: Routledge, 2005).

**Terrorist Organization Focus:** Bombers involved in the Palestinian-Israeli conflict.

**Research Method:** The author conducted interviews with family and friends of suicide attackers, failed attackers, and trainers of attackers and consulted media reports to analyze individual and organizational-level motivations for suicide terrorism.

**Supporting Arguments:** Although the author examines individual factors and psychological causes, he rules them out. Theories that consider suicide to be acts of aggression or depression cannot explain suicide terrorism. The closest explanation of this type is Durkheim's concept of Optional Altruistic Suicide, however the author does not think that suicide terrorists fit this model either. Public support will influence a group's willingness to use suicide terror as a tactic as will the number of volunteers. No case is known of an individual carrying out a suicide attack on their own without an organization supporting them.

**Conclusions:** The author suggests that perceived necessity plays a more important role in an organization's decision to use suicide attacks than culture and ideology. Given his conclusions, the author suggests that counterterrorism should focus on physical defensive measures, deterring the organization, and influencing the opinion of the terrorists' constituency.

Atran, Scott. "The Moral Logic and Growth of Suicide Terrorism." *The Washington Quarterly* 29, no. 2 (2006): 127-147.

**Terrorist Organization Focus:** Islamic extremist groups with some mention of political and revolutionary groups.

**Research Method:** This article focuses on countering the premises of Robert Pape's "Dying to Win: The Strategic Logic of Suicide Terrorism," arguing that Pape's data apply to a recently outdated form of suicide terrorism and are no longer applicable. Using examples that contradict data and conclusions made in "Dying to Win," the author argues for a different root

cause of suicide terrorism. The author also conducted individual interviews with displaced youth about their perception of martyrdom.

**Supporting Arguments:** Throughout his interviews, the author found that many of the youth with whom he interacted professed support for global jihadi movements (p. 128). Suicide terrorists are “frequently middle-class, secularly well educated, but often ‘born-again’ radical Islamists... embrac[ing] apocalyptic visions for humanity’s violent salvation.” (p. 128) Pape’s data analysis consisted of suicide attacks from 1980-2001, however, more suicide attacks were conducted between 2001-2005 than in this period.

**Conclusions:** The author suggests that analyzing the individual terrorists and attempting to develop a profile of the suicide terrorist is inconsequential. The focus should be placed on society’s perception of global jihad and the organizational and group dynamics of the greater terrorist networks but specifically of the cells involved in suicide terrorism.

Hafez, Mohammed M. “Rationality, Culture and Structure in the Making of Suicide Bombers: A Preliminary Theoretical Synthesis and Illustrative Case Study.” *Studies in Conflict & Terrorism* 29, no. 2 (2006): 165-185.

**Terrorist Organization Focus:** Palestinian Suicide Bombers for the case study, however, the author notes several other groups that employ suicide attacks.

**Research Method:** The author employs a case study of Palestinian suicide bombers in order to illustrate the validity of an analytical method that incorporates rationalist, cultural, and structural approaches to explaining suicide terrorism.

**Supporting Arguments:** Organizational leaders on the Palestinian side of the Palestine-Israel conflict have stated their principle reason for employing suicide bombing as its relative effectiveness in comparison to conventional terrorism (p. 173). At the individual level, the author suggests that bombers use a redemptive logic to justify their actions, arguing, “martyrdom operations” are necessary to fulfill one’s commitment to God.” (p. 175) At the societal level, the ethnic conflict between Palestine and Israel combined with a recent (since the 1970s) resurgence of Islamic activism and religion can help to explain the cultural acceptance of suicide tactics.

**Conclusions:** Similarly to the assertions of some of the other researchers included in this work, the author argues that the three levels of motivation: individual, organizational and social, are interrelated to one another (p. 181). Religious interpretation that promotes martyrdom is essential to the individual decision (p. 180). At the organizational level, strategic decisions in relation to asymmetric conflict promote the use of suicide bombers. At the societal level, support of these operations requires three conditions: cultural norms, legitimate authorities condoning the tactics, and feelings of victimization at the community level (p. 181).

Pape, Robert. "Dying to Win: The Strategic Logic of Suicide Terrorism." *The Australian Army Journal* 3, no. 3 (2006): 25-37.

**Terrorist Organization Focus:** Although a large portion of the article addresses al-Qaeda specifically, it also considers other Islamic, Palestinian, and Sri Lankan groups.

**Research Method:** The article uses data from the Chicago Project on Suicide Terrorism. The data used in the Chicago Project are collated from open-source data in Arabic, Hebrew, Tamil, Russian, and English. The author presents some of the findings of this project.

**Supporting Arguments:** "Every suicide campaign since 1980 has been waged by terrorist groups whose principal goal has been to establish self-determination." (p. 28) 301 of 315 attacks since 1980 were part of a larger terrorist campaign designed for political or secular gain (p. 28). Individual suicide terrorists tend to come from countries with foreign (American) combat presence (p. 30).

**Conclusions:** The author suggests a combination of strategic, social, and individual logic supports suicide terrorism as an effective form of terrorism. However, the strategic element unifies the others and ultimately enables the terrorists' agenda. The author suggests that each of the influencing factors in suicide terrorism combine to produce a strategically logical explanation for suicide terrorism. Combination approaches like this incorporate a variety of observations that individual theories may overlook.

Bloom, Mia. "Dying to Kill: Motivations for Suicide Terrorism." in *Root Causes of Suicide Terrorism: The Globalization of Martyrdom* by Ami Pedahzur. (New York, NY: Routledge, 2006).

**Terrorist Organization Focus:** General discussion of groups that use suicide tactics.

**Research Method:** Narrative incorporating previous research conducted by the author and other subject matter experts.

**Supporting Arguments:** The author breaks down the discussion of motivations into two levels: individuals and organizations. At each level the author presents interview excerpts that suggest the basis for using suicide attacks as a tactic. At the individual level, perpetrators have incentives from various aspects of their lives including religious, material, social, and cultural elements (p. 35). At the organizational level, the strategic advantage against a materialistically superior enemy along with the cultural and societal perception and influence are of significance to the organization. The author especially focuses on group competition and outbidding and its impact on the use of suicide attacks as a tactic.

**Conclusions:** The author suggests that a combination of individual-level motivations and organizational motivations contribute to the perpetration of a suicide attack. The author suggests that countering this 'outbidding' can be done as part of counterterrorism policy by employing a concept of 'outbidding the outbidder' or by emphasizing elements of policy that the terrorist group is incapable of delivering (p. 46), although this will be more easily accomplished for nationalistic groups than for religious ones. Financially-targeted counterterrorism efforts may be the key to beginning this outbidding process.

Brym, Robert J. and Bader Araj. "Suicide Bombing as Strategy and Interaction: The Case of the Second Intifada." *Social Forces* 84, no. 4 (2006): 1969–1986.

**Terrorist Organization Focus:** Insurgent and state violence in Israel, the West Bank, and Gaza from Oct 26 2000 to July 12 2005.

**Research Method:** Review and analysis of data collected from "the online database of the International Policy Institute for Counter-Terrorism (ITC) in Herzliya, Israel; the website of Israel's Ministry of Foreign Affairs; the East Coast evening edition of the New York Times; and two authoritative Arabic newspapers – al-Quds, published in Jerusalem, and al-Quds al 'Arabi, published in London." (p. 1974) The collected information was analyzed on 128 variables.

**Supporting Arguments:** The authors were able to confirm their data by comparing Israeli-published reports with Arabic publications. Their model found statistical significance between assassinations and suicide bombings, other intifada-related deaths and suicide bombings, and a reciprocal relationship between suicide bombings and Palestinian prisoners (p. 1983).

**Conclusions:** The authors suggest that the motivations behind suicide bombings are mixed and complex. Organizational strategy is only one element of the motivation behind a suicide attack and often revenge and retaliation are important elements at both an individual level and an organizational level. Specifically they found 5 types of personal motives for the attacks ranging from a desire for personal revenge to a desire to achieve a religious goal. They also found 5 organizational rationales and 5 precipitant elements.

Grimland, Meytal, Alan Apter, and Ad Kerkhof. "The Phenomenon of Suicide Bombing: A Review of Psychological and Non-psychological Factors." *Crisis* 27, no. 3 (2006): 107–118.

**Terrorist Organization Focus:** All

**Research Method:** The authors evaluated research and theories from a variety of contributors to the field and provided evidence that supports the importance of many diverse factors to the cause of suicide terrorism.

**Supporting Arguments:** Common elements throughout the process of becoming a suicide bomber support the theory of a multidimensional approach. The authors saw evidence that cultural, religious, and societal influences, including from the media and other technologies, contributed to the process, as did individual-level factors, the indoctrination period, and organizational and strategic forces.

**Conclusions:** The authors suggest a complex interaction between many contributory forces as the root cause of suicide terrorism. The counterterrorism way ahead is first and foremost through efforts to change the media's glorification of suicide attacks followed closely by similar efforts to de-glorify acts of suicide terror in education and the community. They also highlight the importance of preventing the humiliation, oppression, and abuse of subdivisions of the civilian population.

Isaac, Jeffrey C., Karen Rasler, Eli Berman, David Laitin, Roxanne Euben, Ian Shapiro and Gilles Kepel, "Review Symposium: Understanding Suicide Terror." *Perspectives on Politics* 5, no. 1 (2007). 117-140.

**Terrorist Organization Focus:** All

**Research Method:** A review symposium that reviewed three books: Pape's 2005 *Dying to Win: The Strategic Logic of Suicide Terrorism*, Gambetta's 2005 *Making Sense of Suicide Missions*, and Bloom's 2005 *Dying to Kill: The Allure of Suicide Terror*. Each of the authors presents a unique perspective on the strengths and weaknesses of the books and suggests potential issues or theories that were not addressed in the books under study.

**Supporting Arguments:** Suicide terrorists are not mentally unstable or psychotic but are suggested to be 'altruistic communitarians'. At the tactical level, suicide attacks are useful within asymmetric warfare when conditions in the area are not conducive to conventional insurgency and there is a desire to compel a state to change. Societal constraints including support and organizational constraints such as defection influence the decisions of a terrorist organization. Collective societal humiliation may be an essential contributor to community support (p. 136). Although Islam is not causal to suicide terrorism, the role of religion is undeniable (p. 126) as it presents a potential meaning that can be adopted by attackers and used as a selective interpretive frame for their views (p. 130).

**Conclusions:** Berman and Laitin suggest an ecological theory of rebellion to better examine suicide missions in a more dynamic light than these three books have. Following from this theory, a stronger foundation for policy would be developed. They suggest strengthening local organizations' (other than the terrorist organizations) ability to provide social services and education in competition with those terrorist groups that provide these services now and devoting more resources to eliminating current and future tactics of asymmetric warfare. Rasler argues that the policy recommendations concerning counterterrorism efforts that strive to minimize negative impacts to local populations are essential and policies that distinguish between moderate and radical groups will be the most effective (p. 121). The books under review suggest alternative perspectives to rational choice theories which, in this case, seem incapable of adequately explaining suicide terrorism (Shapiro).

Crenshaw, Martha. "Explaining Suicide Terrorism: A Review Essay." *Security Studies* 16, no. 1 (2007): 133-162.

**Terrorist Organization Focus:** This article compares various elements of 13 different books published on suicide terrorism since 2002 and therefore considers a variety of terrorist organizations.

**Research Method:** Qualitative comparison of 13 different books using three main questions: why sponsoring organizations would see suicide attacks as effective, why a community would support them, and why individuals would engage in suicide missions. The author then compares the various policy recommendations.

**Supporting Arguments:** Even among these published books there is no consensus about causes of suicide terrorism. However, the research seems to demonstrate a multi-dimensional integration of social, psychological, and political interactions.

**Conclusions:** The author suggests that the interaction between individual, organizational and societal factors results in the use of suicide tactics. She notes that many of the authors included in her review consider individual emotions, religious influences, community support, and organizational strategy among the many elements that eventually lead to the use of suicide tactics. The author noted areas for improvement in research including: comparing suicide and non-suicide attacks by the same group, considering the role of media as an amplifier of global and individual reactions, distinguishing between types of suicide attacks, and distinguishing between the expected outcomes of the attack while refraining from lumping all attacks together simply given the expected death of the perpetrator.

Gill, Paul. "A Multi-Dimensional Approach to Suicide Bombing." *Journal of Conflict and Violence* 1, no. 2 (2007): 142-159.

**Terrorist Organization Focus:** All including some organizations that have not engaged in suicide-terror attacks as comparison groups.

**Research Method:** The author synthesizes empirically-based, one-dimensional research by other authors into a multidimensional concept. He analyzes theories from three different dimensions to build a model that takes into account interconnected influencing factors (individual, organizational, and community dimensions).

**Supporting Arguments:** Various studies have been conducted in order to explain suicide terrorism and multiple theories have been explored including individual-level theories such as pathological disposition to violence and rational choice, and others such as organizational-level theories, for instance, strategic motives and public support, and societal-level theories such as political freedom and poverty (pp. 144-145). Noting the interconnectivity between each of the elements presented by other researchers supports the author's model.

**Conclusions:** The author suggests a complex combination of factors from the individual, organizational, and community levels with emphasis on political and social psychology and group dynamics as the root causes of suicide terror. Further research is needed to refine the model. If confirmed, the theory suggests that a wide variety of policies at the various levels can be employed to counter suicide terrorism.

Gill, Paul. "Suicide Bomber Pathways among Islamic Militants." *Policing* 2, no. 4 (2008): 412-422.

**Terrorist Organization Focus:** Suicide bombers that have acted outside of a conflict area or outside of their own state as well as Palestinian, Tamil, Chechen, and Lebanese suicide bombers.

**Research Method:** The author uses examples of various suicide attacks and the actions of suicide bombers to describe a common progression through the life of a suicide bomber in order to establish the contributions of individual, group, and societal factors to suicide terrorism.

**Supporting Arguments:** In the initial phase, the author describes the importance of community support, media attention, and legitimization of suicide bombings. The second phase, the catalyst, can take many forms and can be religious, political, or personal, from religious radicalization to personal loss. The third phase, pre-existing ties, sets the stage for greater opportunity to join a terrorist organization. The final phase prior to the attack, in-group radicalization, includes solidifying ideologies, declarations of intent, and preparations for the act itself.

**Conclusions:** The author outlines a process or pathway from socialization, to the catalyst, to social bond, to the internalization of relevant group norms that solidifies the path of the suicide bomber. The author highlights that although he outlined one pathway to suicide terrorism, it is important to note that the elements may occur in a different order and that individuals can experience different catalysts, but he argues that each phase is essential to the process.

Kruglanski, Arie W., Xiaoyan Chen and Agnieszka Golec. "Individual Motivations, The Group Process and Organizational Strategies in Suicide Terrorism." *Journal of Policing, Intelligence and Counterterrorism* 1, no. 3 (2008): 70-84.

**Terrorist Organization Focus:** Islamic extremist focus.

**Research Method:** The article is a narrative incorporating the research of several authors into a theory that incorporates individual motivations, group and peer influence, and organizational strategy.

**Supporting Arguments:** The average suicide bomber is male between the ages of 18 and 27 (p. 71). At this age, higher levels of testosterone and greater susceptibility to social influence as well as likelihood to experiment with social roles contribute to individual motivations. At the group level, indoctrination of the individual in their new role as living martyr solidifies their path (p. 75). Solidifying the ideology of the group and the influence of an authority figure is also essential. At the organizational level, strategic considerations and the influence that the group has over the individual work together and lead to the bombing activity.

**Conclusions:** The authors consider the process of becoming a suicide bomber to be a combination of individual motivations, group pressure, and organizational strategy. Given that training of the bombers must take place somewhere, the authors argue that organizational cooperation with a host state is essential. Addressing state sponsorship is a critical element to counterterrorism. The authors also argue that negotiation with terrorists is inevitable and deterrence needs to be incorporated into counterterrorism efforts.

Piazza, James A. "A Supply-Side View of Suicide Terrorism: A Cross-National Study." *The Journal of Politics* 70, no. 1 (2008): 28-39.

**Terrorist Organization Focus:** Various groups involved in suicide and non-suicide terrorism from 1998-2005.

**Research Method:** The author used empirical tests to analyze common theories and correct for perceived selection bias in other studies. Using data from 4660 suicide and non-suicide terrorist attacks from 1998-2005 and a logistical regression, the author tested 4 hypotheses.

**Supporting Arguments:** The study found that terrorists who are nationals of non-democratic states are more likely to engage in suicide attacks (p. 28). The authors tested strategic theories and democracy theories of suicide terrorism but found no empirical evidence to support them. They did, however, find statistical correlation between suicide terrorism and foreign occupation, religious diversity, and group typology.

**Conclusions:** "Suicide terrorism is a product of political and organizational features of the terrorists themselves." (p. 28) There was no evidence of correlation between suicide terrorism and occupation by regime type. Democracies were determined to be less likely to produce suicide terrorists. Groups with universal or abstract political goals were more likely than groups with domestic political goals to engage in suicide terrorism.

Post, Jerrold M., Farhana Ali, Schuyler Henderson, Steven Shanfield, Jeff Victoroff and Steven Weine. "The Psychology of Suicide Terrorism." *Psychiatry* 72, no. 1 (2009): 13-31.

**Terrorist Organization Focus:** Terrorism is discussed broadly but the main emphasis is on militant Islam.

**Research Method:** Review of current literature on the psychology of suicide terrorism with the intention of informing mental health professionals to help improve understanding of the phenomenon of suicide terror.

**Supporting Arguments:** Social and cultural elements of the life course shape the collective identity. Socialization begins long before entering into a terrorist group, for instance, the authors provide an example of pro-suicide terrorism propaganda in a kindergarten class in Gaza City (p. 19). Adolescent psychology can be used to help explain the predominance of adolescent males as the core group of suicide terrorists (p. 20) focusing on the stage of experimentation, identity, and group influence. The authors explain the social process model, moral disengagement, intergroup relations theory, leader-follower relationships, and 'deindividuation' to describe group influence in the suicide terrorism process.

**Conclusions:** Collective identity and normality form a psychological perspective, although economics, history, politics, and anthropology contribute as well. The authors argue that "suicide terrorism is the result of a complex psychological pathway," (p. 27) and in order to limit suicide terrorists and prevent future attacks, policies should address the issue in a way that does not allow individuals to enter onto this path in the first place. They also suggest that dissension within the group, facilitated exit from the group, and delegitimizing the leaders will help to reduce suicide terrorism.

Pedahzur, Ami. "Toward an Analytical Model of Suicide Terrorism – A Comment." *Terrorism and Political Violence* 16, no. 4 (2010): 841–844.

**Terrorist Organization Focus:** The author's focus is on societies and communities that suffered from repression and were involved in a long-lasting struggle (which excludes some of Al-Qaeda's suicide terrorists).

**Research Method:** This article is a comment on a previous article. The author proposes an alternative model to the argument of the previous article as a result of prior research and knowledge on the subject. The author states that the amount of time allowed for a response did not afford the ability to describe in great detail or present the arguments with sufficient supporting facts.

**Supporting Arguments:** The author noticed trends in the suicide bombing process that support this three-stage model. The first stage includes a strategic decision by the organization and requires a permissible social environment. The second stage includes recruitment based on a personal experience or loyalty to the group and once again requires a social environment where suicide terrorism is permissible. The final stage is at the organizational level and includes training and confirmation of the bomber's commitment.

**Conclusions:** The author presents a three-stage model for explaining suicide terrorism: Stage 1) Organizational leadership decision-making; Stage 2) Individual motivations; Stage 3) Organizational recruitment, socialization and employment process (where stages 1 and 2 will likely co-occur). The author suggests continuing research along the lines of the proposed three-stage model. Although a more defined model than many others, it follows the same multidimensional approach of other researchers.

Karademir, Kutluer. "Suicide Terrorism as a Multidimensional Process: A Complex Relational Approach." *International Journal of Security and Terrorism* 4, no. 2 (2013).

**Terrorist Organization Focus:** 17 different organizations that were active from 1981 to 2006 and are included in Gambetta and Tzvetkova's (2006) dataset (listed by group on p. 28) (as cited in Karademir, 2013).

**Research Method:** Using a database compiled by Gambetta and Tzvetkova in 2006 (as cited in Karademir, 2013), the author applies a theoretical framework of analysis devised by Stacey (2001) to examine the interactive elements of suicide terrorism and show that these complex relationships between factors are the root causes of suicide terrorism.

**Supporting Arguments:** The author's focus is to present Stacey's (2001) theoretical framework as a potentially useful tool for future research, and to demonstrate the applicability of the framework, he provides examples of its application. He highlights arguments of cultural humiliation and betrayal and their influence on suicide terrorism and describes the procedure of becoming a suicide terrorist in the context of captured Al Qaeda militants from the 2003 suicide mission in Istanbul.

**Conclusions:** The author suggests a complex relationship between individual, social, and organizational factors. Policy responses need to incorporate and address interactions among people, groups, and society as a whole, taking into account the individual, social, and organizational factors that contribute to the phenomenon. The author suggests that future research should apply this framework in order to gain the greatest understanding of the phenomenon and find the most applicable policy responses.

# Notes

- 1 Merriam-Webster, "Fireship," 2014, <http://www.merriam-webster.com/dictionary/fireship> (accessed May 19, 2018).
- 2 Scott Atran, "Genesis of Suicide Terrorism," *Science* 299 (2003): 1534-1435.
- 3 Ibid.
- 4 Ibid.
- 5 Robert A. Pape, "The Strategic Logic of Suicide Terrorism," *American Political Science Review* 97, no. 3 (2003): 343-361; James A. Piazza, "A Supply-Side View of Suicide Terrorism: A Cross-National Study," *The Journal of Politics* 70, no. 1 (2008): 28-39.
- 6 Jerrold M. Post, *The Mind of the Terrorist: The Psychology of Terrorism from the IRA to al-Qaeda* (New York, NY: Palgrave MacMillan, 2007).
- 7 Scott Atran, "The Moral Logic and Growth of Suicide Terrorism," *The Washington Quarterly* 29, no. 2 (2006): 127-147.
- 8 The Chicago Project does not distinguish between suicide terrorist attacks and other forms of suicide attack.
- 9 The University of Chicago, "Chicago Project on Security and Terrorism: Suicide Attack Database," 2014. [http://cpostdata.uchicago.edu/search\\_new.php](http://cpostdata.uchicago.edu/search_new.php) (accessed April 18, 2014).
- 10 Ibid.
- 11 Ibid.
- 12 Ibid.
- 13 Ibid.
- 14 Miranda Sissons and Abdulrazzaq Al-Saiedi, "A Bitter Legacy: Lessons of De-Baathification in Iraq," 2013, <http://www.ictj.org/sites/default/files/ICTJ-Report-Iraq-De-Baathification-2013-ENG.pdf> (accessed May 20, 2018); James P. Pfiffner, "US Blunders in Iraq: De-Baathification and Disbanding the Army," *Intelligence and National Security* 25, no. 1 (2010): 80.
- 15 The University of Chicago (2014).
- 16 Pfiffner, "US Blunders in Iraq: De-Baathification and Disbanding the Army," (2010).
- 17 NATO Public Diplomacy Division, "NATO Briefing: Countering Terrorism," 2011, [http://www.nato.int/nato\\_static\\_fl2014/assets/pdf/pdf\\_2011\\_09/20110905\\_NATO\\_Briefing\\_Countering\\_Terrorism\\_EN.pdf](http://www.nato.int/nato_static_fl2014/assets/pdf/pdf_2011_09/20110905_NATO_Briefing_Countering_Terrorism_EN.pdf) (accessed May 20, 2018).
- 18 Assaf Moghadam, "Suicide Terrorism, Occupation and the Globalization of Martyrdom: A Critique of Dying to Win," *Studies in Conflict and Terrorism* 29, no. 8 (2006): 707-729.
- 19 Anne Speckhard and Khapta Ahkmedova, "The Making of a Martyr: Chechen Suicide Terrorism," *Studies in Conflict and Terrorism* 29, no. 5 (2006): 429-492.
- 20 The University of Chicago (2014).
- 21 Ibid.
- 22 Scott Atran, "Mishandling Suicide Terrorism," *The Washington Quarterly* 27, no. 4 (2004): 67-90; Sara Wade Jackson and Dan Reiter, "Does Democracy Matter?: Regime Type and Suicide Terrorism," *The Journal of Conflict Resolution* 51, no. 2 (2007): 329-348; Ami Pedahzur, "Toward an Analytical Model of Suicide Terrorism – A

Comment," *Terrorism and Political Violence* 16, no. 4 (2010): 841-844; Pape, "The Strategic Logic of Suicide Terrorism," (2003).

**23** Paul Gill, "A Multi-Dimensional Approach to Suicide Bombing," *International Journal of Conflict and Violence* 1, no. 2 (2007): 142-159.

**24** Martha Crenshaw, "Explaining Suicide Terrorism: A Review Essay," *Security Studies* 16, no. 1 (2007): 133-162.

**25** Meytal Grimland, Alan Apter and Ad Kerkhof, "The Phenomenon of Suicide Bombing: A Review of Psychological and Nonpsychological Factors," *Crisis* 27, no. 3 (2006): 107-118.

**26** Alan B. Krueger and Jitka Maleckova, "Education, Poverty and Terrorism: Is There a Causal Connection?" *Journal of Economic Perspectives* 17, no. 4 (2003): 119-144; Jeff Victoroff, "The Mind of the Terrorist: A Review and Critique of Psychological Approaches," *Journal of Conflict Resolution* 49, no. 1 (2005): 3-42; David Lester, Bijou Yang and Mark Lindsay, "Suicide Bombers: Are Psychological Profiles Possible?" *Studies in Conflict & Terrorism* 27, no. 4 (2004): 283-295; Scott Ashworth, Joshua D. Clinton, Adam Meirowitz and Kristopher W. Ramsey, "Design, Inference, and the Strategic Logic of Suicide Terrorism," *American Political Science Review* 102, no. 2 (2008): 269-273; Gill, "A Multi-Dimensional Approach to Suicide Bombing," (2007); Pedahzur, "Toward an Analytical Model of Suicide Terrorism – A Comment," (2010).

**27** Mark Ware and Michael Mabe, *The STM Report: An Overview of Scientific and Scholarly Journal Publishing*, Overview, The Hague: International Association of Scientific, Technical and Medical Publishers, 2015, <http://digitalcommons.unl.edu/cgi/viewcontent.cgi?article=1008&context=scholcom> (accessed December 17, 2018).

**28** Angela Boland, Gemma Cherry and Rumona Dickson, *Doing a Systematic Review: A Student's Guide* (London: SAGE Publications Limited, 2013).

**29** Arlene G. Fink, *Conducting Research Literature Reviews: From the Internet to Paper* (Thousand Oaks, CA: Sage Publications, 2005).

**30** José Luis R. Martin, Victor Pérez, Montse Sacristán and Enric Álvarez, "Is Grey Literature Essential for a Better Control of Publication Bias in Psychiatry?: An Example From Three Meta-analyses of Schizophrenia," *European Psychiatry* 20, no. 8 (2005): 550-553; Laura McAuley, Ba Pham, Peter Tugwell and David Moher, "Does the Inclusion of Grey Literature Influence Estimates of Intervention Effectiveness Reported in Meta-Analyses?" *The Lancet* 356, no. 9237 (2000): 1228-1231; Annette Boaz, Deborah Ashby and Ken Young, *Systematic Reviews: What Have They Got to Offer? Evidence-based Policy and Practice*, (2002) <https://www.kcl.ac.uk/sspp/departments/politiceconomy/research/cep/pubs/papers/assets/wp2.pdf> (accessed December 17, 2018).

**31** Piazza, "A Supply-Side View of Suicide Terrorism: A Cross-National Study," (2008).

**32** Mark Ensalaco, *Middle Eastern Terrorism* (Philadelphia, PA: University of Pennsylvania Press, 2008).

**33** Robert Pape, "Dying to Win: The Strategic Logic of Suicide Terrorism," *The Australian Army Journal* 3, no. 3 (2006): 25-37; Pape, "The Strategic Logic of Suicide Terrorism," (2003).

**34** Atran, "Mishandling Suicide Terrorism," (2004).

**35** Atran, "The Moral Logic and Growth of Suicide Terrorism," (2006).

**36** Jackson and Reiter, "Does Democracy Matter?: Regime Type and Suicide Terrorism," (2007); Piazza, "A Supply-Side View of Suicide Terrorism: A Cross-National Study," (2008).

**37** Piazza, "A Supply-Side View of Suicide Terrorism: A Cross-National Study," (2008).

**38** Rohan Gunaratna, "The Post-Madrid Face of Al Qaeda," *The Washington Quarterly* 27, no. 3 (2004): 91-100; Hilal Khashan, "Collective Palestinian Frustrations and Suicide Bombings," *Third World Quarterly* 24, no. 6 (2003): 1049-1067; Crenshaw, "Explaining Suicide Terrorism: A Review Essay," (2007).

**39** Jerrold M. Post, Farhana Ali, Schuyler W. Henderson, Steven Shanfield, Jeff Victoroff and Stevan Weine, "The Psychology of Suicide Terrorism," *Psychiatry* 72, no. 1 (2009): 13-31.

**40** Post, *The Mind of the Terrorist: The Psychology of Terrorism from the IRA to al-Qaeda*, (2007).

- 41 Ellen Townsend, "Suicide Terrorists: Are they Suicidal?" *Suicide and Life Threatening Behavior* 37, no. 1 (2007): 35-49.
- 42 Ami Pedahzur, Arie Perliger and Leonard Weinberg, "Altruism and Fatalism: The Characteristics of Palestinian Suicide Terrorists," *Deviant Behavior* 24, no. 4 (2003): 405-423.
- 43 Shaul Kimhi and Shemuel Even, "Who are the Palestinian Suicide Bombers?" *Terrorism and Political Violence* 16, no. 4 (2004): 815-840.
- 44 Israel Orbach, "Terror Suicide: How is it Possible?" *Archives of Suicide Research* 8, no. 1 (2004): 115-130.
- 45 Jean-Paul Azam, "Suicide Bombing as Inter-generational Investment," *Public Choice* 122, no. 1/2 (2005): 177-198; Eli Berman and David D. Laitin, "Religion, Terrorism, and Public Goods: Testing the Club Model," *Journal of Public Economics* 92 (2008): 1942-1967; Speckhard and Ahkmedova, "The Making of a Martyr: Chechen Suicide Terrorism," (2006).
- 46 Karen Jacques and Paul J. Taylor, "Male and Female Suicide Bombers: Different Sexes, Different Reasons?" *Studies in Conflict & Terrorism* 31, no. 4 (2008): 304-326.
- 47 Nick Ayers, "Ghost Martyrs in Iraq: An Assessment of the Applicability of Rationalist Models to Explain Suicide Attacks in Iraq," *Studies in Conflict and Terrorism* 31, no. 9 (2008): 856-882.
- 48 Martha Crenshaw, "Theories of Terrorism: Instrumental and Organizational Approaches," *The Journal of Strategic Studies* 10, no. 4 (1987): 13-31.
- 49 Pape, "The Strategic Logic of Suicide Terrorism," (2003).
- 50 Doğu Ergil, "Suicide Terrorism in Turkey," *Civil Wars* 3, no. 1 (2000): 37-54.
- 51 Daphne Burdman, "Education, Indoctrination and Incitement: Palestinian Children on Their Way to Martyrdom," *Terrorism and Political Violence* 15, no. 1 (2003): 96-123.
- 52 Ibid.
- 53 Post, *The Mind of the Terrorist: The Psychology of Terrorism from the IRA to al-Qaeda* (2007).
- 54 R. Ramasubramanian, "Suicide Terrorism in Sri Lanka," (Institute of Peace and Conflict Studies, New Delhi, India, 2004).
- 55 Ibid.
- 56 Khashan, "Collective Palestinian Frustrations and Suicide Bombings," (2003).
- 57 Efraim Benmelech, Claud Berrebi and Esteban F. Klor, "Economic Conditions and the Quality of Suicide Terrorism," *The Journal of Politics* 74, no. 1 (2012): 113-128.
- 58 Ibid.
- 59 Jackson and Reiter, "Does Democracy Matter?: Regime Type and Suicide Terrorism," (2007).
- 60 Ariel Merari, "The Readiness to Kill and Die: Suicidal Terrorism in the Middle East," in *Origins of Terrorism: Psychologies, Ideologies, Theologies, States of Mind*, by Walter Reich and Walter Laqueur, (Washington D.C.: The Woodrow Wilson Center Press, 1990), 196.
- 61 Pedahzur, Perliger and Weinberg, "Altruism and Fatalism: The Characteristics of Palestinian Suicide Terrorists," (2003).
- 62 Atran, "Genesis of Suicide Terrorism," (2003); Atran, "Mishandling Suicide Terrorism," (2004).
- 63 Atran, "The Moral Logic and Growth of Suicide Terrorism," (2006).
- 64 Pape, "Dying to Win: The Strategic Logic of Suicide Terrorism," (2006).

**65** Eli Berman and David D. Laitin, "Review Symposium: Understanding Suicide Terror," *Perspective on Politics* 5, no. 1 (2007): 122-129.

**66** Assaf Moghadam, "Palestinian Suicide Terrorism in the Second Intifada: Motivations and Organizational Aspects," *Studies in Conflict and Terrorism* 26, no. 2 (2003): 65-92.

**67** Robert J. Brym and Bader Araj, "Suicide Bombing as Strategy and Interaction: The Case of the Second Intifada," *Social Forces* 84, no. 4 (2006): 1969-1986.

**68** Gill, "A Multi-Dimensional Approach to Suicide Bombing," (2007).

**69** Post et al., "The Psychology of Suicide Terrorism," (2009).

**70** Pedahzur, "Toward an Analytical Model of Suicide Terrorism – A Comment," (2010).

**71** Mia Bloom, "Dying to Kill: Motivations for Suicide Terrorism," In *Root Causes of Suicide Terrorism: The Globalization of Martyrdom*, by Ami Pedahzur, (New York, NY: Routledge, 2006); Atran, "Genesis of Suicide Terrorism," (2003); Ayers, "Ghost Martyrs in Iraq: An Assessment of the Applicability of Rationalist Models to Explain Suicide Attacks in Iraq," (2008); Berman and Laitin, "Review Symposium: Understanding Suicide Terror," (2007); Crenshaw, "Explaining Suicide Terrorism: A Review Essay," (2007); Gill, "A Multi-Dimensional Approach to Suicide Bombing," (2007); Grimland, Apter and Kerkhof, "The Phenomenon of Suicide Bombing: A Review of Psychological and Nonpsychological Factors," (2006); Post et al., "The Psychology of Suicide Terrorism," (2009); Pedahzur, "Toward an Analytical Model of Suicide Terrorism – A Comment," (2010); Ramasubramanian, "Suicide Terrorism in Sri Lanka" (2004).

**72** Eli Berman and David D. Laitin, "Hard Targets: Theory and Evidence on Suicide Attacks," November 2005, <http://www.nber.org/papers/w11740.pdf> (accessed May 19, 2018); Eli Berman and David D. Laitin, "Rational Martyrs vs. Hard Targets: Evidence on the Tactical Use of Suicide Attacks," In *Suicide Bombing from an Interdisciplinary Perspective*, by Eva Meyersson Milgrom, (Princeton: Princeton University Press, 2004), 1-38; Berman and Laitin, "Review Symposium: Understanding Suicide Terror," (2007); Berman and Laitin, "Religion, Terrorism, and Public Goods: Testing the Club Model," (2008); Pape, "Dying to Win: The Strategic Logic of Suicide Terrorism," (2006); Bloom, "Dying to Kill: Motivations for Suicide Terrorism," (2006).

**73** Speckhard and Akhmedova, "The Making of a Martyr: Chechen Suicide Terrorism," (2006).

**74** David Lester, Bijou Yang and Mark Lindsay, "Suicide Bombers: Are Psychological Profiles Possible?" *Studies in Conflict & Terrorism* 27, no. 4 (2004): 283-295; Ergil, "Suicide Terrorism in Turkey," (2000); Kimhi and Even, "Who are the Palestinian Suicide Bombers?" (2004); Orbach, "Terror Suicide: How is it Possible?" (2004).

**75** Kutluer Karademir, "Suicide Terrorism as a Multidimensional Process: A Complex Relational Approach," *International Journal of Security and Terrorism* 4, no. 2 (2013): 15-30; Benmelech, Berrebi and Klor, "Economic Conditions and the Quality of Suicide Terrorism," (2012); Brym and Araj, "Suicide Bombing as Strategy and Interaction: The Case of the Second Intifada," (2006); Jackson and Reiter, "Does Democracy Matter?: Regime Type and Suicide Terrorism," (2007); Jacques and Taylor, "Male and Female Suicide Bombers: Different Sexes, Different Reasons?" (2008); Merari, "The Readiness to Kill and Die: Suicidal Terrorism in the Middle East," (1990); Pape, "The Strategic Logic of Suicide Terrorism," (2003); Pedahzur, Perliger and Weinberg, "Altruism and Fatalism: The Characteristics of Palestinian Suicide Terrorists," (2003).

**76** Azam, "Suicide Bombing as Inter-generational Investment," (2005).

**77** Moghadam, "Palestinian Suicide Terrorism in the Second Intifada: Motivations and Organizational Aspects," (2003).

**78** Paul Gill, "Suicide Bomber Pathways among Islamic Militants," *Policing* 2, no. 4 (2008): 412-422.

**79** Burdman, "Education, Indoctrination and Incitement: Palestinian Children on Their Way to Martyrdom," (2003).

**80** The University of Chicago, "Chicago Project on Security and Terrorism: Suicide Attack Database," (2014); Kimhi and Even, "Who are the Palestinian Suicide Bombers?" (2004); Pedahzur, Perliger and Weinberg, "Altruism and Fatalism: The Characteristics of Palestinian Suicide Terrorists," (2003); Ramasubramanian, "Suicide Terrorism in Sri Lanka," (2004); Speckhard and Akhmedova, "The Making of a Martyr: Chechen

Suicide Terrorism," (2006); Ayres, "Ghost Martyrs in Iraq: An Assessment of the Applicability of Rationalist Models to Explain Suicide Attacks in Iraq," (2008).

**81** Berman and Laitin, "Hard Targets: Theory and Evidence on Suicide Attacks," (2008); Jacques and Taylor, "Male and Female Suicide Bombers: Different Sexes, Different Reasons?" (2008).

**82** Michael C. Horowitz, "Nonstate Actors and the Diffusion of Innovations: The Case of Suicide Terrorism," *International Organization* 64 (2010): 33-64; Assaf Moghadam, "Motives for Martyrdom: Al-Qaida, Salafi Jihad, and the Spread of Suicide Attacks," *International Security* 33, no. 3 (2008): 46-78.

**83** Crenshaw, "Explaining Suicide Terrorism: A Review Essay," (2007).

**84** Ibid.

**85** Karademir, "Suicide Terrorism as a Multidimensional Process: A Complex Relational Approach," (2013).

**86** Crenshaw, "Explaining Suicide Terrorism: A Review Essay," (2007).

**87** Azam, "Suicide Bombing as Inter-generational Investment," (2005).

**88** Berman and Laitin, "Review Symposium: Understanding Suicide Terror," (2007).

**89** Berman and Laitin, "Religion, Terrorism, and Public Goods: Testing the Club Model," (2008).

**90** Ergil, "Suicide Terrorism in Turkey," (2000).

**91** Benmelech, Berrebi and Klor, "Economic Conditions and the Quality of Suicide Terrorism," (2012); Bloom, "Dying to Kill: Motivations for Suicide Terrorism," (2006).

**92** Moghadam, "Palestinian Suicide Terrorism in the Second Intifada: Motivations and Organizational Aspects," (2003).

**93** Post et al., "The Psychology of Suicide Terrorism," (2009).

**94** Karademir, "Suicide Terrorism as a Multidimensional Process: A Complex Relational Approach," (2013).

Copyright © 2018 by the author(s). Homeland Security Affairs is an academic journal available free of charge to individuals and institutions. Because the purpose of this publication is the widest possible dissemination of knowledge, copies of this journal and the articles contained herein may be printed or downloaded and redistributed for personal, research or educational purposes free of charge and without permission. Any commercial use of Homeland Security Affairs or the articles published herein is expressly prohibited without the written consent of the copyright holder. The copyright of all articles published in Homeland Security Affairs rests with the author(s) of the article. Homeland Security Affairs is the online journal of the Naval Postgraduate School Center for Homeland Defense and Security (CHDS).