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Psychology Out of the Laboratory: The Challenge of Violent Extremism

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The Challenge of Violent Extremism

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The idea that people inevitably act in accordance with their self-interest on the basis of a calculation of costs and benefits does not constitute an adequate framework for understanding political acts of violence and self-sacrifice. Recent research suggests that a better understanding is needed of how sacred values and notions of self and group identity lead people to act in terms of principles rather than prospects when the two come into conflict. Perhaps the greatest challenge is to better understand how sacred causes and moral imperatives diffuse through a population and motivate some (usually small) segment of it to commit violent actions. The challenge to psychology is to adopt an interdisciplinary focus drawing on a range of research methods and to become bolder in its choices of study populations if it is to be relevant to real-world problems.

Keywords: suicide terrorism, sacred values, moral virtue, group sacrifice

So, as we set out this year to defeat the divisive forces that would take freedom away, I want to say those fighting words for everyone within the sound of my voice to hear and to heed, and especially for you, Mr. Gore: "From my cold, dead hands."—Charlton Heston

One could argue that it never has been so important as it is now to understand people's willingness to sacrifice for a cause. The events of September 11, 2001 (9/11), were unprecedented and shocking in bringing suicide terrorism to U.S. shores. How could this have happened? Who were these people who attacked the United States and how could they engage in this extreme form of violence? One's first thoughts were inevitably drawn to two possibilities: Either these men were demented psychopathic killers or they had somehow been brainwashed to suppress the human element of action toward others. These immediate reactions have been replaced by a decade of research and a theoretical integration of 9/11 with analyses of other acts of violence. No one doubts that society needs to understand how this could happen to prevent similar occurrences in the future.

A standard assumption of policymakers (Allison & Zelikow, 1999; Gaddis, 1995) and researchers (Herrmann, Tetlock, & Visser, 1999; Pape, 2005) on war and terrorism is that decisions to support or oppose warfare are chiefly made in an instrumentally rational manner, driven by cost–benefit calculations (Ginges, 1997). But war in general and suicide terrorism in particular arouse humans' most noble sentiments and worst fears and rarely, if ever, derive wholly from reason and rational calculation (Ehrenreich, 1997; Keegan, 1994). This challenges the claim that war and terrorism are basically "politics by other means" (von Clausewitz, 1832/2009, p. 23). Social scientist and policymakers alike need to better understand how and when principles are more important than prospects when the two are in conflict.

Words and Concepts

Words carry meaning and perspective, as well as connotations and other forms of judgment. For example, a *terrorist* is despicable, whereas a *freedom fighter* may be a hero. *Suicide* is anomalous and an act of desperation, but *religious martyrdom* is an act of meaning and may be noble. How acts are categorized goes a long way toward determining how they are understood.

Social scientists rarely have the opportunity to coin a new term and leave the baggage of everyday use behind, so it is important for them to explore multiple perspectives as they attempt to understand human behavior. The goal of understanding the suicide terrorism associated with 9/11 places the researcher in the perspective of identifying with the victims, distancing herself or himself from the actors, and perhaps presuming that internal traits of the actors were responsible for their actions (Galinsky, Magee, Inesi, & Gruenfeld, 2006). If, instead, the goal was to understand

the political martyrdom associated with the (symbolic) act of attacking the World Trade Center, one might have a quite different perspective, one that tends to focus more on the conditions that lead to these actions rather than on the internal traits or small group dynamics of the actors.

We do not presume that there is any one correct perspective (Bloom, 2007; Kruglanski & Fishman, 2009; McCauley & Moskalenko, 2011; Merari, 2010; Moghaddam, 2005; Pape & Feldman, 2010). Instead, our argument is that pluralism of perspectives is likely to lead to better insight into human motivation and behavior than any single perspective. We begin our review by placing the events of 9/11 into a broader framework by asking why anyone might be willing to sacrifice his or her life for any reason. With that as background, we turn to research and observations on what we refer to as *sacred values*, which appear to undermine instrumental cost–benefit calculations. Next, we shift to cultural, social, and historical factors that may be linked to political violence and summarize the current state of affairs. Finally, we conclude with some projections about the future and a plea to social scientists to become more involved with issues that are relevant to many lives in society.

The quote from Charlton Heston at the beginning of this article is an example of what one might call *sacred rhetoric*. Heston is proclaiming that the Second Amendment right to bear arms is so important that he would die before letting it be abridged in any way. A common framework for understanding human behavior uses value or utility as currency and assumes that choice is instrumental. In other words, people calculate costs and benefits, and their decisions are based on what maximizes their value or utility. Sometimes the further assumption is made that people assign infinite utility to their own lives. Of course, if this were true, then acts of self-sacrifice are irrational. Nonetheless, people do sometimes give up their lives for a cause, including the cause of other people with whom they identify.

Our review of research on violent extremism is necessarily limited, in part by intrinsic factors but primarily by psychology's overinvestment in laboratory studies with undergraduates and neglect of other populations, field studies, and nonexperimental methodologies. In our review, we rely on historical data, case study interviews, and surveys, bringing in lab studies only with caution and only as converging measures.

Principles of Group Identity and Sacrifice Over Individual Prospects

It was during a series of psychological studies with Muslim fighters on the remote Indonesian Island of Sulawesi about the scope and limits of rational choice that one of us (Scott Atran) had the following experience:

I noticed tears welling up in the eyes of my traveling companion and bodyguard, Fahrin. He had just heard of a young man who had recently been killed in a skirmish with Christian fighters, and the experiment seemed to bring the youth's death even closer to home.

"Farhin," I asked, "did you know the boy?"

"No," he said, "but [that boy] was only in the jihad a few weeks. I've been fighting since Afghanistan [the late 1980s] and I'm still not a martyr."

I tried consoling him: "But you love your wife and children."

"Yes." He nodded sadly. "God has given this, and I must have faith in the way He sets out for me."

"What way, Farhin?"

"The way of the mujahid, the holy warrior." (Atran, 2010b, p. 3)

Farhin is one of the self-styled "Afghan Alumni" who fought the communists in Afghanistan in the 1980s. He was funneled by the future founder of *Jemaah Islamiyah*, Abdullah Sungkar, to the Abu Sayyaf camp near the Khyber Pass to train with other Indonesian volunteers. There he also studied *fiqh al-jihad* (principles of Jihad) with Palestinian scholar Abdullah Azzam, Osama Bin Laden's mentor and originator of the concept of *al-qaeda al-sulbah* (the strong base, or revolutionary Muslim vanguard). Later, Farhin hosted future 9/11 mastermind Khaled Sheikh Mohammed in Jakarta and, in 2000, Farhin helped blow up the Philippines ambassador's residence. Although that operation was something of a dress rehearsal for the October 2002 Bali bombing that killed more than 200 people in the deadliest single terrorist attack that was specifically aimed at Western targets since 9/11, Farhin declined to find suicide bombers for Bali and instead occupied himself running a training camp to battle Christians in Sulawesi.

"Is a person a better and more deserving martyr if he kills one rather than ten of the enemy or ten rather than a hundred?" I asked.

"If his intention is pure, God must love him, numbers don't matter, even if he kills no one but himself."

"What if a rich relative were to give a lot of money to the cause in return for you canceling or just postponing a martyrdom action?"

"Is that a joke? I would throw the money in his face."

"Why?"

"Because only in fighting and dying for a cause is there nobility in life." (Atran, 2010b, p. 4)

A modern, Western, urban, economically comfortable, and academically educated audience might well consider this sort of sentiment and behavior wildly atypical. But let us look at some other examples of fighting to die for a cause. Even today, these stories in literature and film reveal strong cultural values with universal resonance.

Samson

In what may be history's first and most famous suicide–martyrdom action,

Samson said, Let me die with the Philistines. And he bowed himself with all his might; and the house fell upon the lords, and upon all the people that were therein. So the dead which he slew

at his death were more than they which he slew in his life. (Judges 16:30, King James Version)

Leonidas and the 300 Spartans

In 480 BC, King Leonidas and his 300 Spartan warriors knowingly volunteered to fight to the death an overwhelming force of Persians at Thermopylae to gain time for other Greeks to unite and assemble forces to preserve their freedom (including their freedom to fight one another; Herodotus, trans. 1996). Spartans were the Greeks' most effective fighters, governed by the maxim "Return with your shield or on it" and bound by a code of honor that forbade abandoning a fallen comrade on the battlefield, even if that put additional lives at great risk.

The Jewish Zealots

In 66 AD, the first Jewish revolt against Roman occupation began with youths throwing stones and Roman commanders telling their soldiers to sheathe their swords and defend themselves with wooden staves. The Jewish zealots and Sicarii (daggers) upped the ante, much as Hamas would do later against Israelis and Iraqi and Afghan insurgents would do against America's coalition. They attacked Roman soldiers and their Greek underlings in self-sacrificial acts during public ceremonies, cranking up the wheels of revenge and retribution. The Sicarii and zealots, who claimed to be freedom fighters but whom the Romans deemed terrorists (*lestes*;Josephus, ca. 66–73 AD/1985), modeled their mission on Samson's example. The Jewish revolt ended with mass suicide of perhaps hundreds of Sicarii warriors and their families at the desert fortress of Masada in 73 AD. But that was hardly the end of the story. This "heroic" death inspired two subsequent revolts, ending with Rome expelling Jews from Judea, a group that included many Christians who still considered themselves Jews. Judea became Palaestina, renamed for the Philistines. The Jewish Diaspora spread a universalizing faith to the far corners of the world, eventually bringing Roman emperor Constantine and the Arab tribesman Mohammed to monotheism.

Defenders of the Alamo

There is perhaps no greater symbol today of sacrifice for comrade and cause in American lore than the Alamo (Altsheler, 1913/1993). The Alamo's defenders in 1836 voluntarily chose death over surrender to overwhelming Mexican forces to give supporters of Texas independence more time to assemble in their fight for freedom (including the freedom to hold slaves).

The Anarchists

Beginning in the 1870s, a loosely connected worldwide terrorist movement arose, egalitarian in principle and dedicated to the elimination of the power of the state and international capital. By 1901, anarchist assassins (who used suicide bombings and other means) had killed the Russian czar, president of France, empress of Austria, king of Italy, and president of the United States. The political (and to some extent social and economic) consequences

were similar in many respects to those of the 9/11 attacks. State reaction to anarchism played a formative role in creating national police and intelligence (e.g., FBI, Scotland Yard, Russian Okhrana; Rapoport, 2002).

The Kamikaze

In 1944, Japanese fighter pilots were asked by Admiral Takijiro Onishi to volunteer for a mission "transcending life and death." Volunteers became kamikaze (divine wind), who died while crashing fully fueled fighter planes into American ships. The apotheosis of this tactic occurred during the Battle of Okinawa, where some 2,000 kamikaze rammed more than 300 ships. In perhaps the most ruinous naval battle in U.S. history, 5,000 Americans died.

Hezbollah

The first major contemporary suicide terrorist attack in the Middle East was the December 1981 destruction of the Iraqi embassy in Beirut (27 dead, over 100 wounded). Its precise authors are still unknown, although it is likely that Ayatollah Khomeini approved its use by parties sponsored by Iranian intelligence. With the assassination of pro-Israeli Lebanese President Bashir Gemayel in September 1982, suicide bombing became a strategic political weapon. Under the pro-Iranian Lebanese Party of God (Hezbollah), a Shi'ite group, this strategy soon achieved geopolitical effect with the October 1983 truck-bomb killing of nearly 300 American and French servicemen, leading to the abandonment of the multinational force policing Lebanon. By 1985, these attacks arguably led Israel to cede most of the gains made during its 1982 invasion of Lebanon. Sri Lanka's nominally Hindu Tamil Tigers, as well as a number of avowedly secular Middle Eastern groups, such as the Kurdish PKK and Lebanese Ba'athists, also adopted suicide bombing techniques along Hezbollah and Palestinian models.

Explaining Suicide/Martyrdom as a Political Act: For Cause and Comrades

These examples of fighting to die for a cause, when thought of in terms of individual outcomes, are difficult to comprehend. Not only is participation in such acts of violence costly and risky to the individual, collective success leads to indiscriminate collective benefits. From the perspective of individual-level instrumental rationality, the most effective strategy is to take a free ride on the actions of others (Olson, 1965). One answer to this problem has been to argue that participation can only make sense if participants are offered selective incentives (e.g., Lichbach, 1994; Lupia & Sin, 2003; Popkin, 1979), where contributors to collective actions accrue selective private benefits in addition to the public benefits of a successful rebellion. This approach does not ignore the importance of ideology (Lichbach, 1994) but characterizes a high level of commitment to ideology as a willingness to delay selective incentives to the future when victory is obtained (Weinstein, 2005). The existence of suicide terrorism poses a significant challenge to this interpretation, requiring speculation about religious

rewards or perhaps sacrifice for a community of real and imagined family.

Anthropologist Roy Rappaport (1999) has argued that group-level moral obligations, such as religious beliefs and prescriptions, reinforce cooperative norms by conferring on them sacredness. Sacredness assumptions are ineffable in the sense that, unlike secular social contracts, they cannot be fully expressed and analyzed because they include a logic of moral appropriateness that is—at least in part—immune to instrumental calculations. In what is arguably the first comparative study of history, Ibn Khaldûn (1318/1958) claimed that enduring dynastic power stems from moral commitment and group feeling, with its ability to unite desires, inspire hearts, and support mutual cooperation (Atran & Henrich, 2010). Recent studies in cognitive and social psychology suggest that such group attachments can even blind committed members to the availability of an exit strategy (Van Vugt & Hart, 2004) and help to explain why individuals would sacrifice their own self-interest to participate in violent collective actions.

Although these ideas suggest some reasons why people might engage in self-sacrifice, there is very little supportive evidence drawn from relevant populations. Our research team has attempted to address this issue by using a variety of methods, primarily drawing on field research.

Evidence From Field Research

Research carried out by our team in the last few years highlights some of the complexities and nuances that undermine single-factor explanations, such as all-consuming religious devotion. For example, in one of the world's best-selling works, *The God Delusion*, biologist and social critic Richard Dawkins (2006) echoed a popular misconception about the slavish gullibility of jihadis:

Suicide bombers do what they do because they really believe what they were taught in their religious schools; that duty to God exceeds all other priorities, and that martyrdom in his service will be rewarded in the gardens of Paradise. (p. 308; cf. Harris, 2004)

In fact, terrorist groups rarely draw from madrassas because most madrassas cater to poorer elements of society who lack the needed social, linguistic, and technical skills to successfully carry out operations in hostile territory (Graff & Winthrop, 2010). Very few suicide bombers ever attended a madrassa, apart from the poor rural madrassas of the Taliban and a few associated with Indonesia's Jemaah Islamiyah (mostly 3 elite madrassas, but also occasionally involving alumni from up to 50 madrassas out of some 30,000 in the country, which is far less than 1%; see International Crisis Group, 2009; Magouirk & Atran, 2008). Indeed, none of the 9/11 pilot bombers or Madrid train bombers (Bergen & Pandey, 2005) and just one of the London Underground bombers (only briefly before the operation) spent time in these religious schools. The 2009 Christmas Day airline underwear bomber, a secularly educated university student, did attend a radical madrassa in Yemen for a few weeks, but such isolated examples hardly indicate a trend.

Examination of available cases of Muslim suicide bombers and other jihadis shows that few ever had a traditional religious education. Indeed, independent studies indicate that a majority of al-Qaeda members and associates went to college, that the college education was mostly secular and science oriented, and that engineer and medical doctor are the professions most represented in al-Qaeda (Bergen & Lind, 2007; Gambetta & Hertog, 2007; Sageman, 2004). Much the same has been true for Hezbollah and Hamas (Berrebi, 2007; Krueger, 2007). Case studies of major terrorist incidents indicate that most of those involved, including suicide bombers, came to radical Islam in their late teens and early twenties, with little knowledge of the *hadith* and Qur'an (Atran, 2010b; Bloom, 2007; Sageman, 2004, 2008). Moreover, religious motivation is not a highly significant predictor of who becomes a terrorist. Other factors, including friendship and family networks (Sageman, 2004, 2008), perceived foreign meddling and occupation (Pape, 2005; Pape & Feldman, 2010), and a sense of national humiliation (Merari, 2010), appear far more significant. For example, there is no correlation between measures of religious devotion and support for suicide attacks among Palestinians (Ginges, Hansen, & Norenzayan, 2009).

This observation does not mean that the behavior of Muslim jihadists has nothing to do with their religious beliefs. In our own interviews and experiments with militants, we have found overwhelming support for the idea that suicide bombing is an "individual obligation" (*fard al-ayn*) for any Muslim when the society around them fails to fight off the perceived onslaught of infidels (this notion of jihad against infidels as the "sixth pillar of Islam"—on par with the five traditional pillars of belief in God, prayer, alms for the poor, fasting at Ramadan, and pilgrimage to Mecca—is considered heretical by most religious Muslims). But such radical religious commitment arguably has less to do with traditional and institutionalized forms of religious learning and teaching than with the sacralization of political aspirations (cf. Krueger, 2007; Tessler & Robbins, 2007) into new, nontraditional forms of group identity and commitment.

Similarly, economic factors such as poverty are not strongly predictive of who becomes a terrorist (Atran, 2010b; Krueger, 2007; Pape, 2005; Sagemen, 2004); however, hardship under occupation (Pape & Feldman, 2010), social marginalization (Sageman, 2008), frustrated expectations (Gambetta & Hertog, 2007), loss of significance (Kruglanski, Crenshaw, Post, & Victoroff, 2008), and national humiliation (Merari, Diamant, Bibi, Broshi, & Zakin, 2009) frequently are reliable factors that usually have (different) economic components. Our own research into the impact of economic factors, as well as material factors more generally, has focused on how people reason about the use of economic incentives. On this issue, results of our experiments carried out with representative samples of people living in conflict zones generally support the information we have gained from interviews that we have carried out with militants, as illustrated by the responses of Farhin discussed at the beginning of this article. Namely,

ordinary Palestinians, like Farhin, believed that the idea of monetarily rewarding a family in exchange for the violent sacrifice of a family member is morally inappropriate (Ginges & Atran, 2009b).

To give one concrete illustration, in 2005, we surveyed a representative sample of Palestinians living in the West Bank and Gaza, asking them whether they thought it would be acceptable for a martyr's family to be financially compensated for their loss. Using a hypothetical scenario and a between-subjects design, we randomly varied the amount of money a family was requesting in compensation (10,000, 100,000, or 1,000,000 Jordanian dinars; approximately $14,000, $140,000, and $1,400,000, respectively). In general, participants felt that compensation was unacceptable, and the more compensation, the more unacceptable it was seen to be (Ginges & Atran, 2009b). As Figure 1 shows, the same pattern was found for participants who believed that suicide attacks were acceptable or unacceptable.

Figure 1

Percentages of Participants Who Reported That Payments to Families of Martyrs Were Acceptable as a Function of the Amount of Money Paid and a Belief That Islam Supported Suicide Attacks (A) or Opposed Suicide Attacks (B)
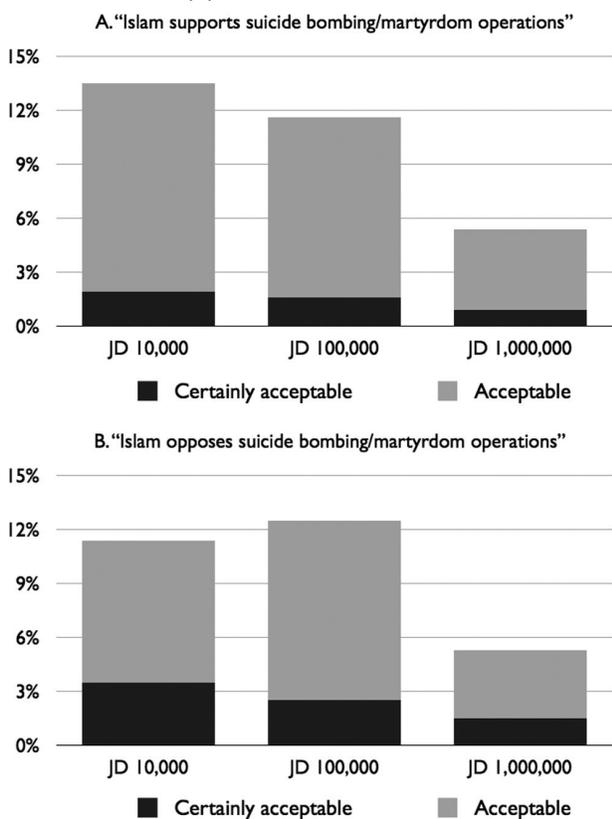
Note. JD = Jordanian dinars.

Beyond Instrumentalism: War as a Moral Imperative

To explain why people are willing to kill and be killed, we need to address the broad assumption, held by most scholars and policymakers, that decisions about violence are consequentialist in nature, that, for example, the decision to go to religious war is simply a calculated attempt to realize political aspirations or achieve economic gains by other means. According to such assumptions, people make choices about the use of violence in much the same way that they make any other types of choices (Kissinger, 1995; Moskos, 1975; Smith, 1983). That is, that people make choices between the use of violent or nonviolent responses, as in the decision to go to war and to continue fighting, by making an assessment of the relative consequences of alternate options and choosing the one that best matches their preferences. Our research suggests that this is not always the case: People often appear to make decisions about war and diplomacy in a different manner, and decisions to take part in (or support) political violence seem to be driven by moral reasoning (Atran, 2003; Ginges, 1997; Ginges & Atran 2009b, 2011; cf. Kühne, 2006; McPherson, 1997). This approach, which parallels theories that focus on the social and relational aspects of morality (Haidt, 2007; Rai & Fiske, 2011), suggests that to understand political violence, more needs to be known about the way moral commitment to the ingroup and values closely associated with group identity can trump individual-level motivations.

Consider the founding of the United States. Without calculating the probability of success, a few poorly equipped rebels knowingly took on the mightiest empire in the world. The Declaration of Independence (1776) concluded with the words, "And for the support of this Declaration, with a firm reliance on the protection of Divine Providence, we mutually pledge to each other our Lives, our Fortunes and our sacred Honor." As Osama Hamdan, the ranking Hamas politburo member for external affairs, put it to one of us in Damascus, "George Washington was fighting the strongest military in the world, beyond all reason. That's what we're doing. Exactly" (Atran, 2010b, p. 347).

Evidence From Field Research

This historical analysis is supplemented by our empirical research into the importance of collective commitment in predicting both individual participation in political violence and support for suicide attacks (Ginges & Atran, 2011; Ginges et al., 2009). First, field studies carried out in the West Bank show that commitment to the ingroup and its values is a strong indicator of willingness to take part in political violence. In one study, we investigated the relationship between value priorities of Israeli settlers (Jewish Israelis living in the West Bank) and willingness to participate in acts of political violence. We found no relationship between the extent to which people prioritized self-enhancement, such as achieving social status and prestige, and willingness to participate in violence. In contrast, we uncovered large positive relationships between prioritiza-

tion of collective commitment values, such as conforming to social norms and tradition, and willingness to take part in political violence. This finding was replicated in a study of Palestinians carried out by Nichole Argo, who intriguingly found that the strength of the correlation grew—negatively for self-enhancement and positively for communal orientations—as anticipated sacrifice increased (Argo, 2009).

Second, a series of experiments has demonstrated that while people are sensitive to the consequences when deciding whether to support diplomacy, they tend to be remarkably insensitive to the material outcomes of political violence (Ginges & Atran, 2011). In one set of studies, participants—including samples of college students in the United States and a convenience sample of Nigerians in Lagos—were told about a hypothetical scenario in which 100 innocent compatriots were being held by Country X. Participants were informed that Country X planned to torture and kill the hostages and were asked to approve or disapprove of a response option that would succeed in rescuing all of the hostages. We randomly assigned participants to either a military condition (in which the option was described as armed attack) or a diplomatic condition (in which the option was described as negotiation). When participants were told that their option would be completely successful (in releasing the hostages), military and diplomatic interventions were equally supported. To measure sensitivity to consequences, participants were then asked to indicate how many hostages (from 1 to 100) they required to be rescued to continue to support their option over other (unnamed) options. In the diplomatic condition, support was contingent on outcomes; in all experiments, participants required an average of >80 hostages rescued to ensure their continued support for diplomacy. In contrast, participants in the military condition required an average of only one hostage to be saved to ensure their continued support. This finding was replicated in similar experiments carried out with Palestinian supporters of Hamas.

In another experiment, opposition to, as well as support for, deadly intergroup violence was insensitive to typical instrumental preferences for risk. Participants responded to a hypothetical scenario modeled on Tversky and Kahneman's (1981) Asian disease problem that demonstrates risk aversion under gains but risk-seeking choices under losses. In our scenario, Country X had captured and was holding 600 compatriots as hostages and participants were asked to choose between two response options of equal expected utility. One option was a gamble (e.g., "1/3 probability that 600 hostages would be saved and a 2/3 probability that none will be saved") and one was a sure thing (e.g., "200 hostages will be saved"). Instead of using mundane labels for options (e.g., Option A), we labeled one option *Military Option* and one *Diplomatic Option*, meaning that in addition to choices being based on risk preferences, they were also based on preferences for political or violent responses.

Using a between-subjects design, we varied three aspects of the scenario and the choice set. First, we manipulated whether the military option or the diplomatic option was the gamble. Second, we manipulated whether the choice was framed under losses ("hostages will die") or gains ("hostages will be saved"). Third, we manipulated the scenario itself by either including or not including a description of Country X carrying out vivid moral violations (e.g., torturing hostages) in the past. Pretests showed that the vivid moral violation created a moral preference for the military response over the diplomatic one but that the absence of the vivid moral violation led to moral preferences for the diplomatic option.

Our results showed that instrumental preferences for risk taking (being risk averse under gains and risk seeking under losses) were reversed when moral preferences clashed with risk preferences. For example, in the vivid violation condition (which created a moral preference or mandate for the military option), most participants chose the military gamble over the diplomatic sure thing under gains, whereas they chose the military sure thing over the diplomatic gamble under losses. In the no-vivid-violation condition (where there was a moral preference against violence), participants preferred the diplomatic gamble over the military sure thing under gains and the diplomatic sure thing over the military gamble under losses. Our results showed that support and opposition to military violence are insensitive to risk.

Strikingly, results from experiments involving hypothetical scenarios were replicated in surveys of actual and intended participation in political violence among Israeli settlers. In a large-scale anonymous survey of settlers, we measured past participation in political violence, future intentions to participate in violence, beliefs regarding the efficacy of violence, as well as beliefs that violence was a righteous response. In this study, variance in the perceived effectiveness of violence was unrelated to variance in either past participation in political violence or future intentions to participate in violence against Palestinians (Ginges & Atran, 2011).

This research may have significant implications for understanding the trajectory of violent intergroup conflicts. For example, because support for diplomacy is more sensitive than support for violence to consequences, it follows that support for diplomacy will also be more sensitive to fluctuating fortunes. Proponents of violent resolutions to intergroup conflict, as compared with proponents of diplomatic solutions, may find it easier to mobilize consistent popular support. A related implication is that proponents of nonviolent alternatives are unlikely to mobilize popular support by questioning the efficacy of violence. Instead, a more productive method may be to challenge the very notion that violence is morally mandated.

Sacred Values

As we have been suggesting, in dealing with conflict, two broadly different approaches to modeling the values that drive decisions and choice of behavior have emerged: a consequentialist approach based on instrumental or material values (von Neumann & Morgenstern, 1944) versus a deontological approach based on moral or sacred values (Weber, 1958). The consequentialist approach has its origin in the writings of David Hume (1758/1955) and John Stuart

Mill (1871) and suggests that all decisions are ultimately based on the expected outcomes of one's actions. Modern adherents have adopted utility theory as a normative framework (Buchanan & Tullock, 1962). The deontic approach to sacred values also has a long history, originally articulated by Immanuel Kant (1785/2005) and developed by Emile Durkheim (1912/1955) and Max Weber.

The deontic approach suggests that sacred values represent moral imperatives that circumscribe certain actions independently of expected outcomes and that people act in accordance with them because they are the right or noble thing to do, as in fundamental matters of religion (Rappaport, 1999). Matters of principle or sacred honor are enforced to a degree far out of proportion to any individual or immediate material payoff when they are seen as defining "who we are." Revenge, "even if it kills me," between whole communities that mobilize to redress insult or shame to a single member goes far beyond individual tit for tat (Axelrod & Hamilton, 1981) and may become the most important duty in life. Such behavior may well define and defend what it means to be, say, a Southern gentleman (Cohen & Nisbett, 1996), a Solomon Islander (Havemeyer, 1929), or an Arab tribesman (Atran, 1985; Peters, 1967). To be sure, sincere displays of willingness to avenge at all costs can have the long-term payoff of thwarting aggressive actions by stronger but less committed foes (see also Frank, 1988). Likewise, a willingness to sacrifice for buddies can help create greater esprit de corps that may lead to a more formidable fighting force. But these acts far exceed the effort required for any short-term payoff and offer no immediate guarantee for long-term success.

Despite some authors' serious misgivings about the explanatory adequacy of theories of rational choice and utility in everyday life (Nisbett & Ross, 1980), economics (Kahneman, 2003), and politics (Schelling, 1993), much more attention has focused on instrumental decision making than on morally motivated decision making. However, recent work in social and cognitive psychology suggests that sacred values may be critically involved in important decisions in life (Baron & Spranca, 1997; Tetlock, 2000, 2003), as well as in sustaining seemingly intractable cultural and political conflicts (Atran, Axelrod, & Davis, 2007; Dehghani et al., 2009, 2010); Ginges, Hansen, & Norenzayan, 2007; Sachdeva & Medin, 2009). This research indicates that sacred values are intimately bound up with sentiments of personal and collective identity (Dehghani et al., 2009), may have privileged links to emotions (Ginges & Atran, 2008, 2009a, 2009b), show insensitivity to quantity and calculations of loss versus gain (Ritov & Baron, 1999; Tanner & Medin, 2004), and resist material trade-offs. A psychological implication is that holders of sacred values are strongly averse to using traditional utility-based models to reason about these values. Specifically, although a secular value can easily be substituted with another value, trade-offs involving sacred values result in strong negative emotions and moral outrage.

Sacred values may have their basis in religion, but such transcendent core secular values as a belief in the importance of individual morality, fairness, reciprocity,

and collective identity ("justice for my people") can also be sacred values. Decisions based on sacred values, such as whether to become a priest or a suicide bomber, often seem to follow a rule-bound logic of moral appropriateness and absolutist thinking (Berns et al., in press), which, at least in a proximate sense, defies the cost–benefit calculations and means–end logic of realpolitik and the marketplace (Atran, 2010b; Hoffman & McCormick, 2004).

From an instrumental perspective, sacred values are an anomaly, a form of irrationality that only gets in the way of bringing about the best states of affairs. But instrumental approaches are not immune from criticism. Rational choice involves selecting and ordering the apparent best means for achieving goals, goals that are often in the future. But rational analysis is only as good as people are at anticipating future states of affairs and their valuation of them. A growing body of research suggests that people's ability and willingness to perform effective cost–benefit analyses of probabilities and outcomes is limited (Bennis, Medin, & Bartels, 2010). In other words, there is no necessary strong link between achieving satisfactory outcomes and basing decisions on calculations of anticipated instrumental outcome. Indeed, other modes of decision making, such as relying on the advice of an expert or even following moral rules, may be at least as effective. For example, Pape (2005) suggested that decisions based on moral principles, summed within and between populations, may well fit an instrumental frame.

Evidence From Field Research

We studied sacred values by surveying nearly 5,000 Palestinians and Israelis between 2004 and 2009, questioning citizens from across the political spectrum including refugees, supporters of Hamas, Israeli settlers, and national leaders from the major Israeli and Palestinian political factions. We asked them to react to hypothetical but realistic compromises in which their side would be required to give away something it valued in return for lasting peace.

In our first series of studies (Ginges, Atran, Medin, & Shikaki, 2007), we used a between-subjects experimental design in which we randomly chose participants to respond to one of three hypothetical peace deals involving a difficult trade-off. Each set of trade-offs included an original offer we pretested as likely to be rejected (taboo), the same trade-off with an added material incentive (taboo+), and the original trade-off with an added symbolic concession (symbolic). See Table 1 for sample scenarios. (A separate test showed that the symbolic concession held no material value for participants.)

We separately assessed whether the values in question were sacred to the participants by asking if they would consider compromising the value in exchange for some great material benefit to their people. Many respondents insisted that the values involved were sacred to them. For example, nearly half of the Israeli settlers surveyed said they would not consider trading any land in the West Bank—territory they believe was granted them by God—in exchange for peace. More than half of the Palestinians considered full sovereignty over Jerusalem in the same

Table 1

Sample Scenarios of Proposed Israeli and Palestinian Trade-Offs for Peace

Sample	Deal type		
	Taboo deal	Taboo+ deal	Symbolic deal
Israeli settlers	Israel would recognize the historic and legitimate right of Palestinian refugees to return.	The people of Israel would be able to live in peace and prosperity, free of the threat of war or terrorism.	Palestinians would recognize the historic and legitimate right of the Jewish people to Eretz Israel.
Palestinian refugees	Palestinians would recognize the historic and legitimate right of the Jewish people to Israel.	The Palestinian people would be able to live in peace and prosperity, free of the threat of Israeli violence and aggression.	Israel would recognize the historic legitimacy of the right of return.
Palestinian students	Palestinians would recognize the sacred and historic right of the Jewish people to Israel.	Israel will pay Palestine one billion U.S. dollars a year for ten years.	Israel would recognize the historic legitimate right of the Palestinians to their own state and would apologize for all the wrongs done to the Palestinian people.

light, and more than four fifths felt that the right of return was a sacred value, too.

Strikingly, we found that the offer of instrumental incentives to compromise a sacred value backfired. Among both Palestinians and Israeli settlers, the greater the material incentive offered, the greater the disgust registered. For example, in one scenario, Israeli settlers were offered a deal to give up the West Bank to Palestinians in return for peace and for an American subsidy to Israel of $1 billion a year for 100 years. For those who had chosen to live in the occupied territories for reasons of economy or quality of life, that is, those for whom the land was not a sacred value, the offer led to increased willingness to accept land for peace, a decrease in disgust and anger at the deal, and a corresponding reduction in willingness to use violence to oppose it. But for settlers who believe the occupied territories were God's ancient trust to them, expressions of anger and disgust and willingness to use violence rose markedly when material incentives were introduced.

Our results imply that using the standard approaches of businesslike negotiations in such seemingly intractable conflicts may only backfire, with material offers and sweeteners interpreted as morally taboo and insulting (on par with accepting money to sell your child or sell out your country). The backfire effect of offering material incentives to encourage compromise over sacred values has been replicated in studies carried out with Indonesian madrassa students (Ginges & Atran, 2009a), in India for Muslims over Kashmir and for Hindus over the Babri Mosque (Sachdeva & Medin, 2009), and among Iranians who hold the Iranian nuclear energy program to be a sacred value (Dehghani et al., 2009). If suicide bombers and other terrorists are motivated to a significant extent by commitment to sacred values, then standard approaches to violence reduc-

tion such as economic incentives (or disincentives), physical punishment, or preaching the virtues of moderation are also likely to fail, unless they are pegged to appeals that speak to at least some core aspects of their hopes and commitment.

Alternatives to Instrumental Approaches

Fortunately, our work also suggests another, more optimistic course. Absolutists who violently rejected profane offers of money or peace for sacred land were much more inclined to accept deals that involved their enemies making the symbolic but difficult gesture of conceding respect for the other side's sacred values. For example, Palestinian hardliners were more willing to consider recognizing the right of Israel to exist if the Israelis apologized for suffering caused to Palestinian civilians in the 1948 war (which Palestinians call *Naqba*, the Catastrophe). This increase in flexibility in the face of the other side's symbolic gestures appears to be mediated by a reduced feeling of humiliation on the part of those being asked to compromise (Ginges & Atran, 2008), a result that seems to confirm the tie between sacred values and collective sense of honor (cf. Cohen & Nisbett, 1996; Stern, 2004).

These survey results were mirrored by our discussions with political leaders from both sides (Atran et al., 2007). Elliot Abrams, senior member of the National Security Council staff responsible for Middle East affairs during George W. Bush's presidency, responded to our White House briefing on these results this way:

Seems right. On the settlers [being removed from Gaza, Israeli Prime Minister Ariel] Sharon realized too late that he shouldn't have berated them about wasting Israel's money and endangering soldier's lives. Sharon told Atran that he realized only afterward

that he should have made a symbolic concession and called them Zionist heroes making yet another sacrifice. (Atran, 2010b, p. 378)

Here, the settlers' enemy was their own government. Observations such as these suggest that progress on sacred values might open up negotiations on material issues rather than the reverse.

Of course, in the Middle East, there are leaders on both sides who currently refuse any notion of compromise, and there may be some posturing on willingness to compromise. Nonetheless, although words—of an apology, recognition, or respect—are not enough on their own, they are the beginning; they are the things that just might make the other side willing to listen and calm the heat in their anger. Words have the extreme power to change emotions. They can express the abstract and the factual, but they can also change and inspire. And the science says they are a good way to start cutting the knot (Atran & Ginges, 2009).

Although research on sacred values and other noninstrumental orientations has been quite limited, one can identify contexts where sensitivity to sacred values could or should have been applied to policy. One obvious issue is that although people recognize their own side's sacred values, they often ignore or downplay the importance of the other side's values (Atran & Axelrod, 2008). Afghan hill societies have withstood centuries of would-be conquests by keeping order through sanctified customs in the absence of central authority. When seemingly intractable conflicts arise, rival parties convene councils, or *jirgas,* of elders and third parties to seek solutions through consensus. In Afghanistan and the frontier regions of Pakistan, Pashtun tribesmen will defend to the death the ancient code of honor known as *pashtunwali*, which requires protecting valued guests at the risk of one's own life (Atran, 2009, 2010a).

After 9/11, Taliban leader Mullah Omar assembled a council of clerics to judge his claim that Bin Laden was the country's guest and could not be surrendered. The clerics countered that because a guest should not cause his host problems, Bin Laden should leave (Barfield, 2003). But instead of keeping pressure on the Taliban to resolve the issue in ways they could live with, the United States ridiculed their deliberation and bombed them into a closer alliance with al-Qaeda. Pakistani Pashtuns then offered to help out their Afghan brethren as a matter of honor, despite the fact that few of the notoriously unruly frontier tribes were initially sympathetic to the Afghan Taliban program of homogenizing tribal custom and politics under one rule, much less to al-Qaeda's global ambitions (Atran, 2009).

Field interviews suggest that a key factor helping the Taliban is the moral outrage of the Pashtun tribes against those who deny them autonomy, including a right to bear arms to defend *pashtunwali,* their tribal code. Its sacred tenets include protecting women's purity (*namus*), the right to personal revenge (*badal*), and the sanctity of the guest (*melmastia*) and sanctuary (*nanawateh;* Atran, 2010a).

Implications of work on sacred values for policy, including counterterrorism, may be novel and significant.

For instance, according to the Quadrennial Defense Review Report, the chief aim of counterterrorism efforts is to "minimize [U.S.] costs in terms of lives and treasure, while imposing unsustainable costs on its adversaries" (U.S. Department of Defense, 2006, p. 18). To a significant degree, however, terrorists may not respond to utilitarian cost–benefit analysis. Rather than minimizing the appeal and effect of radical ideology and action by raising their costs in lives, each death may inspire many more young people to join the cause. We speculate that the lesson for understanding violent extremism, at least in the long run, is that the most important measure may be to provide alternative hopes and heroes that speak to people's—especially young people's—yearning for moral significance rather than focusing exclusively on carrots and sticks. Indeed, a utilitarian policy may actually play into the hands of terrorists, who turn it around to show that the NATO allies try to reduce people to material individuals with criminal psyches rather than moral social beings.

Future Directions

Discounting the Future

It is common, if not universal, within a rational analysis to discount the future. A dollar today is worth more than a dollar a year from now, because that dollar is capital that could be invested to produce more than a dollar a year from now; furthermore, inflation might reduce the buying power of that dollar, one might not be around to enjoy the dollar, or circumstances might intervene such that the dollar is not forthcoming. Although a body of literature suggests that for instrumental goods, people discount the future in inappropriate and irrational ways (Lowenstein, Read, & Baumeister, 2003), the conclusion from a rational perspective is that people should discount the future, but they should do so in a consistent and coherent way. The further down the line a goal is, the less its real value is here and now and the less committed a person is to implement the means to realize it.

Noninstrumentally rational decisions about sacred values may show little or no discounting and, arguably, could represent reverse discounting; that is, material gains (or losses) in the present may be irrelevant compared with temporally distant effects of maintaining sacred values. In many cases, sacred values are concerned with sustaining tradition for posterity. In other cases, the future takes on a transcendent value, the dream of what ought to be rather than what is, as in the fight for liberty or justice.

Improving and Refining Predictions

We need to improve our understanding about the way sacred values play out in conflicts that are often violent. Although sacred values typically appear to be processed deontologically (Berns et al., in press) and lead to noninstrumentally rational choices, sometimes claims to sacred values may be posturing. In India, Sonya Sachdeva has examined Muslim–Hindu conflicts over the status of the territory of Kashmir as well as the conflict over a sacred site in Ayodha, which, up until 1992, was the site of the Babri Mosque. In 1992, hundreds of Hindu extremists

razed the mosque to the ground, claiming that it was illegitimately built on the sacred grounds of Lord Ram's birthplace.

In both conflicts, the sacred and secular do not mix, although an interesting asymmetry emerges in the role that sacred values play for Hindu and Muslim participants in the two cases. In the conflict over Kashmir, the issue appears to be more symbolically charged for Muslims than for Hindus. Overall, Hindus and Muslims disapprove of any material compromise over Kashmir (taboo trade-off: "Instead of the current two to one split of Kashmir, it would be evenly divided between Pakistan and India") and readily envisage rioting over the issue. Nevertheless, Muslims who regard the Kashmir issue in terms of scared values are even more resistant to any compromise (compared with those without sacred values), whereas Hindus who regard the Kashmir issue in terms of sacred values are actually more open to compromise. In the Ayodha conflict, however, the opposite pattern appears: Hindus with sacred values become more resistant to solutions, whereas Muslims become more willing to accept them. Understanding and predicting when claims to sacred values are posturing and when they are not represents a significant theoretical and practical challenge.[1]

Intergroup Dynamics

More needs to be known about how values become sacred and how they may lose their sacredness. One intriguing possibility concerns the role of intergroup dynamics. Sacred values are intimately tied to social identity and thus may be thought of as culturally and historically produced models of one's "position in a set of social relations along with the actions that are proper (legitimate) given such a position" (Drury & Reicher, 2000, p. 581). Following this perspective, values may change in their sacredness as relevant social relations also change.

Atran and Axelrod (2008) argued,

Sacred values provide the moral frame that delimits which agreements are possible. For the most part, members of a moral community—be it a family, ethnic group, religious congregation, or nation—implicitly share their community's sacred values. Thus, there is usually no need to refer to these values or even to be conscious of them when pursuing trade-offs or negotiations within a community. Sacred values usually become highly relevant and salient only when challenged, much as food takes on overwhelming value in people's lives only when it is denied. Direct threats to a community's sacred values are most apparent when different moral communities come into conflict. (pp. 234–235)

For example, increasingly burdensome taxation on the American colonies by the British Crown was interpreted by some colonists as a moral violation of the political right to taxation only with representation. This was one factor that spurred colonists to push for independence. Ultimately, the British Parliament decided to rescind the onerous taxes but allow a token tax simply to assert the Crown's right to rule the colonies. But what would have been viewed by the colonists only a few years before as a sincere effort by the British to respect colonists' political right to taxation only with representation was now viewed as a pernicious attempt to violate the colonists' natural right, "endowed by their Creator" (The Declaration of Independence, 1776, para. 2), to complete self-determination. The moral value of a political right had become absolute and no compromise would be therefore possible.

This view suggests that moral values become truly sacred and absolute when people become aware that their values are opposed and threatened by an adversarial group. But another possibility is that values become absolute and transcendent when people become aware that others in their own group regard them in that way.

Social Networks

Thus far, our research indicates that buying into a cause that glorifies self-sacrificing violence for the greater good may be a general aspect of violent extremism. The cause itself, along with sincere belief in it, may be a necessary condition. Nevertheless, it is by no means usually sufficient. Many millions of people express sympathy with al-Qaeda or other forms of violent political expression that support terrorism, but relatively few willingly use violence. From a 2001–2007 survey of 35 predominantly Muslim nations (with 50,000 interviews randomly chosen to represent about 90% of the Muslim world), a Gallup study projected that 7% of the world's 1.3 billion Muslims thought that the 9/11 attacks were "completely justified." If one includes Muslims who considered the attacks "largely justified," their ranks almost double. Adding those who deemed the attacks "somewhat justified" boosts the number to 37%, which implies hundreds of millions of Muslims. (Polls also imply that 20% of the American public has a "great deal" of prejudice against Muslims, two thirds has "some prejudice" against them, and 6% of Americans think that attacks in which civilians may be victims are "completely justified"; Esposito & Mogahed, 2008).

Of these many millions who express support for violence against the outgroup, however, only thousands are willing to actually commit violence. This also appears to be the case in the European Union, where fewer than 3,000 suspects have been imprisoned for jihadi activities out of a Muslim population of perhaps 20 million. In the United States, fewer than 500 suspects have been arrested for having anything remotely to do with al-Qaeda ideology or support for terrorism after 9/11, with fewer than 100 cases being considered serious out of an immigrant Muslim population of more than 2 million.

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[1] The Ayodhya issue is tinged with some additional emotional content for Hindus, which makes it more arousing for them than for the Muslim participants. Muslim participants often pointed to the legality of the issue, stating plainly that the mosque used to exist on the site and now that it no longer does, justice has to be served. However, Hindu participants most often referred to the religious epic *Ramayana* in their responses, in which Ayodhya is named as the birthplace of Lord Ram. Additionally, over the past decade or so, a major point of Hindu pilgrimage in Ayodhya has been the warehouse on the outskirts of town that houses all of the materials that will eventually be used in the construction of the proposed Ram temple.

For Americans fed a constant diet of individualism, the group is not where one generally looks for explanation. But a body of research tends to support the finding that participation with friends, family, and fellow travelers in action-oriented activities, such as soccer or paintball, or even active participation in an online chat room is a good predictor of which radicals will actually branch into violence (Atran 2010b; Sageman, 2008; cf. Kenney, 2008; Whyte, 1993). Recently, Gardner and Steinberg (2005) found that adolescents and young adults between the ages of 13 and 23 years were more inclined than adults to take risks under peer influence of three or more friends. One study, dubbed the chicken experiment, used a driving-simulation game to see which age groups take more risks in deciding whether to run a yellow light. Results showed that "although the sample as a whole took more risks and made more risky decisions in groups than when alone, this effect was more pronounced during middle and late adolescence than during adulthood" (Gardner & Steinberg, 2005, p. 632). Indeed, most crimes by teens and young adults are perpetrated in packs. Sociologist Randall Collins (2008) found that gang members and people involved in rioting tend to commit acts of violence against individuals or other targets in groups of four or more.

Other research indicates that if group cohesion is based on how much the members like the group and get along with its members, then the members are less likely to speak up against the group norms and the group is more likely to make poor decisions (Klein & Goethals, 2002). This may be because like-minded individuals in a group are more concerned with their social relations than their tasks; they are less prone to cause conflict within a group so they may maintain congeniality. When this is coupled with the reality bias wherein individual group members believe others in the group to be more extreme (Prentice & Miller, 2002), then the whole group tends to shift to a more extreme position as people bend over backward to accommodate what each believes is the other's more radical position. Social psychologists refer to this particular group dynamic as *extremity shift* or *outbidding*, which is responsible for a bandwagon effect (McCauley, 1972), whether in the rush to support a patriotic war or the cause of martyrdom (cf. Zimbardo, 2008).

But there is more to group dynamics than just the weight and mass of people, their behavior, and their ideas: There are also the structural relationships between group members that make the group more than the sum of its individual members. The networking among members distributes thoughts and tasks that no one part may completely control or even understand. Numerous case studies show that people usually go on to extreme violence in small, action-oriented groups of friends and family, in which the extent of ideological commitment to a cause may vary greatly among individual members of the group (Atran, 2010b; Sageman, 2008; cf. Moghaddam, 2005).

In sum, a key difference between terrorists and most other people in the world may lie not so much in individual pathologies, personality, education, income, or any other demographic factor but in small-group dynamics where the relevant trait just happens to be jihad (for dissenting views, see Kruglanski et al., 2008; Merari et al., 2009). If so, it is not likely that terrorist attacks can be prevented by trying to profile terrorists: They are not different enough from everyone else in the population to make them remarkable. Insights into homegrown jihadi attacks will have to come from understanding group dynamics, not individual psychology. Small-group dynamics can trump individual personality to produce horrific behavior in ordinary people, not only in terrorists but also in those who fight them (Haritos-Fatouros, 1988; Zimbardo, 2008).

Psychology Outside the Lab

Perhaps the greatest theoretical challenge is to better understand how sacred causes and moral imperatives diffuse through a population and motivate some (usually small) segment of it to commit actions. But such understanding will require recognition that lab studies are one very modest tool in what needs to be a large toolbox and that undergraduates may qualify as falling into a relevant age range but otherwise are far from the study population of greatest value (Atran & Axelrod, 2010; cf. Atran & Medin, 2008). One reason psychology so far has not clearly demonstrated its obvious relevance to understanding violent extremism is its relative unwillingness to venture off campus. Our ending quotation from Sheik Muhammad Hussain Fadlallah, spiritual leader of Lebanese Hezbollah (as quoted in Abu-Rabi, 1996) is a sobering commentary on the field:

The problem with the discipline of psychology is that it attempts to study the phenomenon of martyrdom from the perspective of pragmatic vocabulary and laboratory results. They refuse to admit that certain things can be understood only through labor and pain. You can never be capable of appreciating freedom if you do not come to grips with enslavement. You can appreciate the cries of the starved when you come to grips with the pangs of starvation. (p. 242)

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