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Historical Developments. According to Marco Polo, the Assassins, who belonged to the schismatic sect of Nizārī Ismāʿīlites, would drug themselves into a religious fervor to get a foretaste of eternal bliss before setting out to kill or conquer (*S1*). But no corroborating evidence from Middle Eastern sources exists for such hashish rituals. From the fortress of Masyāf in the An-Nusayrīyah mountains, Rashīd ad-Dīn as-Sinān and his successors, known as *Shaykh al-djebel* (which the Crusaders rendered as “Old Man of the Mountain”), instituted a strategy of political wreckage and intimidation to undermine Sunni dominance in the region. Charismatic leaders ceremoniously passed on the ritual dagger to young men for use in suicide assassination. Victims included caliphs, sultans, emirs, vizirs, qadis (judges), and so on.

There are historical parallels with today’s Islamic radicals in terms of top-down organizational planning and discipline, and a millenarian belief in creation of a just religious society by means of sacrificial violence. Although the Assassins did not refrain from attacking Europeans, coreligionists were their primary victims. The anti-Western tenor of current radical Islamists echoes more the liberation ideology of *juramentado* (Spanish for “having sworn an oath”), which involved suicide attacks by small, diffusely organized groups of Philippine Moslems against colonizing Spaniards and other Christians (16th to 20th centuries) (*S2*).

The first use of terror as a political concept during the French Revolution was primarily the inspiration of lawyers, mid-level civil servants, and other educated professionals. Intellectuals among later-day violent revolutionaries (nihilists, bolsheviks, facists, and ethnic or religious supremacists) have also been the chief proponents of terror to disorient, demoralize, and destroy the enemy. They also occasionally resorted to using suicide attackers when circumstances permitted. Nothing indicates that the attackers themselves were ignorant or impoverished (e.g., Russian anarchist bombers, Japanese *kamikaze*).

Between 1983 and 1999, there were some 50 suicide attacks in Lebanon, about half of which were attributed to the Moslem Shi’ite organizations, Hezbollah and Amal. The other half was the work of secular nationalist parties (Syrian Nationalist Party, Lebanese Communist Party, Lebanese Ba’ath Party), who soon recognized the effectiveness of Hezbollah’s pioneering tactics. After the Israeli Air Force killed Hezbollah secretary general Abas Musavi in February 1992, Hezbollah went “international” a month later with a suicide attack against the Israeli embassy in Buenos Aires (29 killed, 250 wounded). Nevertheless, having obtained its key political objectives in Lebanon, Hezbollah had dramatically lessened its strategic reliance on suicide bombing by 1992, when it decided to participate in parliamentary elections and become a “mainstream” political party. Lebanon’s other martyrdom-sponsoring organizations joined suit.

Hezbollah’s tactics also inspired Valupillai Prabhakaran, the charismatic leader of the Liberation Tigers of Tamil Eelam (LTTE), to form a cadre of suicide bombers (the Black Tigers) who do not “kill themselves” (*thatkolai*) but rather “give themselves” (*thatkodai*) to him and the cause (*S3*). Since 1983, the LTTE has spearheaded the Tamil insurgency against Sri Lanka’s government. The LTTE’s aim is both to eliminate the ruling elite of

Sri Lanka and to terrify the majority Sinhalese population into abandoning the government. Between 1987 and 2000, the Black Tigers carried out 168 attacks in Sri Lanka and India (about half of the world's suicide actions). Its victims include two Sri Lankan Presidents (one killed, one blinded), a Minister of Defense, a Navy Chief, assassinated Indian Prime Minister Rajiv Gandhi, and a host of moderate Tamil leaders.

The LTTE's innovations include frequent use of female bombers and occasionally children (less likely than adult males to be searched), teams of multiple attackers (equipped with cyanide capsules to ensure no surviving sources of information), boat attacks (and a special squad of Sea Tigers), specialized body suits, an explosives research unit (testing for maximum damage at minimal cost and likelihood of detection), and a far-ranging international propaganda and procurement network. As with other successful martyr-sponsoring groups, there are apparently many more applicants than jobs, which allows better selection of candidates for martyrdom. The LTTE has successfully wrested control of Sri Lanka's northern and eastern coastal areas, where it has recently suspended suicide actions and allowed in visitors.

Hamas and PIJ initially focused suicide attacks on military installations in the occupied territories but soon shifted to Israel's cities and crowded areas to undermine civilian support for the Israeli government's occupation of Palestinian territories (Hamas and PIJ are publicly ambiguous about whether "Zionist occupation" refers to all of historic Palestine, including Israel itself, or only the West Bank and Gaza) (S4). Although there have been lulls in suicide actions, targeted assassinations of Hamas and PIJ organizers by Israeli intelligence even during lulls stimulated renewed attacks (e.g., after the January 1996 assassination of master bomber Yahya Ayyash). Recently, a radical wing of Fatah, The Palestinian Liberation Movement's dominant secular and nationalist faction, has also sponsored suicide attacks. Unlike Islamic groups, which generally disallow use of women, children, married men, or the elderly, Fatah's Al-Aqsa Martyrs Brigades allow all to become martyrs (*shohada*). As the overwhelming majority of Palestinians express religious beliefs, these rewards also include direct access to paradise.

The Middle East and North Africa are home to several other groups that sponsor suicide terrorism: Egyptian Islamic Jihad (EIJ), Islamic Group of Egypt (Gamaya Islamiya, IG), Armed Islamic Group of Algeria (GIA), and the Marxist-Leninist Kurdistan Worker's Party (PKK). The Islamic groups all have ties to Al-Qaida. The PKK ceased suicide operations in 1999, after its captured leader, Abdullah Ocalan, called for cessation (Turkey subsequently opted not to execute Ocalan). The PKK has not attacked foreign interests, as have the secular groups of Lebanon, Israel-Palestine, and Sri Lanka.

Since 9/11, a number of Islamic groups in Central and Southeast Asia now sponsor or give logistical support to martyr actions. These include Chechen militants (acting mainly against Russian targets), Pakistan's *Harkat Al-Mujahedin* (formerly *Harkat Al-Ansar*), Bangladesh's Moro Islamic Liberation Front (MILF), Singapore's *Jemaah Islamiyah* ("Islamic Community," JI), Malaysia's *Al-Ma'uanah* ("Brotherhood of Inner Power") and *Kumpulan Militan* (KMM), Indonesia's *Laskar Jihad* ("Army of Jihad") and *Majelis Mujahedin* ("Holy Warriors' Council," MMI), and the Philippines' Abu Sayyaf Group. All of these organizations have substantiated ties to Al-Qaida (S5).

Many of the regional groups have long-standing militant credentials. JI, KMM, and MMI trace their origins to *Darul Islam* (“House of Islam”), a revolutionary group that emerged in the 1940s to fight Dutch rule in Indonesia. EIJ, IG, and GIA have roots in pre-existing associations of the “Muslim Brotherhood” (*Al-Ikhwan Al-Muslimun*), a paramilitary religious organization founded in Egypt in 1928 with branches throughout North Africa and the Middle East (S6). Increasingly, Al-Qaida has been able to co-opt militant Islam’s locally deep historical foundations into a global network of fluid but pervasive ties (S7) that support the truly radical goal of supplanting Western dominance with a worldwide Islamic Caliphate.

Through the Taliban, Al-Qaida availed itself of Islamic state terrorism to repress or kill politico-religious nonconformists within its central sphere of influence. As with Iran’s similar, if somewhat less virulent, form of state terrorism, the symbolic focus of repression was on women’s status, where every appearance and activity outside the household must be strictly controlled lest the core bond of Moslem society—the family—come unglued. As have the Algerian GIA and Egyptian EIJ, Al-Qaida’s state terrorism has also ruthlessly sought to extirpate civic (nonreligious and voluntary) influences from the body politic while encouraging other aspects of secular (e.g., scientific and technical) reforms deemed useful for the battles to come. But it is in the offensive against infidels—Christians, Jews and the states that support them, particularly the USA and Israel—that Al-Qaida’s strategy and tactics are revolutionary. Unlike its regional allies, Al-Qaida does not consider its first and primary target to be the less-than-true believers within Islamic countries, but infidels without whose support heresy, blasphemy, apostasy, infidelity, atheism, and political and economic “enslavement” (S8) would presumably not even be conceivable.

Al Qaida’s declared aim in this offensive is to use spectacular, seemingly indiscriminate, displays of violent self-sacrifice to demoralize the enemy’s noncombatant population so as to sap popular support for the enemy’s will to resist the agenda of the organization sponsoring the attack. This agenda includes immediate evacuation of Western interests from countries with large Moslem populations and acceptance of an Islamic Caliphate over all Moslems (including in countries with Moslem minorities) (S9): “The Caliphate is the only and best solution to the predicaments and problems from which Muslims suffer today.... It will remedy economic underdevelopment which was bequeathed upon us as a political independence on an atheist East and infidel West.” (S10). Al-Qaida’s brand of suicide mass terrorism is a fairly novel form of psychological warfare, using its opponents’ strengths to its own advantage. An attack operates on the assumption that the more efficient and global the media, the more powerful and widespread its effects.

Radical Islamic Fundamentalism—An Oxymoron. Unlike people in Western Christian societies, Arabic, Ottoman, and Persian Moslem communities never entertained notions of a church different or separate from state or nation until Kemal Ataturk established the Republic of Turkey in 1923. Christians early on accepted a separation of church and state as a matter of cultural survival (“Render therefore unto Caesar the things which are Caesar’s; and unto God the things that are God’s.” *Matthew 22:21*). Once Christianity became the religion of empires and kingdoms, relations between church and state were

often conflicting and intermittently blurred. Nevertheless, these two distinct bodies of powers and functions endured through all of Western Christendom. Beginning with the Peace of Westphalia at the end of Europe's religious Thirty Years War, spurred along by the nonreligious American Revolution and the antireligious French Revolution, and culminating with the advent of the European Union after World War II, Western Europe and some former colonies finally opted for a full constitutional divorce between church and state (albeit with some apparent backsliding now occurring in the United States). This would hopefully forestall the hitherto relentless bloodshed among competing religious communities and allow for a constitutionally sanctioned degree of political and religious pluralism needed to sustain economic productivity, social peace, and individual welfare.

In contrast, the very idea of conflict or struggle between religious ministrations, on the one hand, and political, economic, and social administration, on the other hand, was wholly alien to Moslem civilization ever since Mohammed successfully fused all these functions in the Nation of Islam. Like Judaism, but unlike Christianity, war-making powers have been scripturally invested with leaders of the religious community since ancient times (*S11*). Unlike Christianity before modern times, Islam tolerated other religions in its midst, particularly Christianity and Judaism, even allowing their adherents to reach the highest political offices under ultimate (sometimes merely titular) Moslem suzerainty. Only with the collapse of post-colonial Moslem regimes that were caricatures of Western secular ideologies (national militarism, communism, socialism, or constitutional monarchy), has the idea and policy emerged of religious believers seizing control of the state apparatus by repressing or annihilating nonconformists from within and blocking entry or killing infidels from without.

Contrary Academic Explanations. Scholarly explanations of the genesis of suicide terrorism have tended toward rather simplistic reductions to some essential cause or factor. Some of these elements have been more important than others, depending on time and place. All are also characteristic of phenomena other than suicide terrorism. None alone are sufficient to explain its genesis. Given the fact that its spread across minds and populations now depends critically on global media, calling for often immediate reactions, the phenomenon of suicide terrorism is almost guaranteed to “mutate” in structure, capability, and operation at a spiraling rate that may be approaching that of a biological or ideational retrovirus, such as AIDS or computer worms. Consider the following:

At first, when Hezbollah's connections to Iran were obvious, analysts sought to explain the genesis of suicide terrorism as a “state-sponsored” activity. Daniel Pipes, Director of the Middle East Forum and an advisor to the U.S. Departments of State and Defense, concluded that: “Governments, not individuals willing to die, make this a potent force. Without state support, suicide acts would be infrequent and ineffectual.” (*S12*). Individuals who participate in suicide attacks might themselves be victims of “blackmail” and “unwilling suicide.” Adequate defense would thus be straightforward: make unbearable the costs to states that sponsor terror.

According to the Federation of American Scientists, however, even Hezbollah “may have conducted operations that were not approved by Iran.” (*S13*). Although other

terrorist organizations have entered into relationships with governments, there is no evidence that such relationships were ever proprietary or exclusive; they have often been changing and volatile (e.g., relations of Lebanese and Palestinian groups with Syria, Iran, and Iraq). Moreover, all polls of populations supporting suicide attacks, and nearly all interrogations of captured suicide operatives, indicate that those who choose martyrdom do so as willing volunteers.

Many of the arguments used to demonstrate state sponsorship of suicide terrorism have since proved specious: the organization's shadowy nature (hence, a front for something more substantial), the careful planning involved (requiring sophisticated state-level intelligence services), the innovative use of personnel, explosives, and other weapons (requiring state-level financing and logistics), and so forth. Many of these same arguments are now used to demonstrate the contrary, namely, that shadowy, mobile, flexible, innovative organizations could not possibly be sponsored by top-heavy state bureaucracies. Some analysts even surmise that suicide terrorism thrives only in anarchy. For example, Shibley Telhami, Professor of Government at the University of Maryland and a Brookings Institute Fellow, states: "The absence of effective government is their primary source of power. They are antigovernment." (S14). Support for this view comes from the recent rise of a stateless, multinational Al-Qaida, concurrent with the disintegration of the Palestinian Authority and its ability to control new waves of suicide bombings. Nevertheless, governments have sponsored, aided, and abetted suicide terrorism in the past and will likely do so in the future.

Other scenarios locate the essence of suicide terrorism in the individual's irrational pathology or reasonable coping mechanisms. Much of the early research on terrorism, especially in the psychological literature, instructed that the causes of terrorism "must be sought in the psychopathology of the assassin." (S15). Popular media images of crazed, lone gunmen blowing their brains out after a killing spree encouraged public support for this approach. According to Israeli psychologist Ariel Merari: (S16) "Culture in general, and religion in particular, seem to be relatively unimportant in the phenomenon of terrorist suicide. Terrorist suicide, like any other suicide, is basically an individual rather than a group phenomenon: it is done by people who wish to die for personal reasons." (S17). For Rafi Israeli, a Professor at the Hebrew University's Truman Institute for Peace, suicide bombers are low-esteem sufferers who have emerged from broken families (S18).

Psychologist Andrew Silke, however, notes that it is rare to find hard evidence of a terrorist who suffers from personality disorders or who could be classified as mentally ill or psychologically deviant. Silke argues that becoming a terrorist is primarily a product of individual socialization. Socially disaffected persons become terrorists when they encounter a precipitating event, such as "extreme physical violence committed by the police or security forces or other rival group against the individual, friends or simply anyone they can identify with." (S19). In a similar vein, Palestinian psychiatrist Eyad Sarraj, Director of the Gaza Community Mental Health Program, holds that suicide terrorism stems from despair and trauma at being constantly humiliated and subject to violence (both by Israel and the Palestinian authority): "Do you know what it means for a child to see his father spat at and beaten before his eyes?" (S20)

The Role of Religion. For Merari, (S21) who has reversed his earlier position and now holds that suicide terrorism can only be properly fathomed at the organizational and not individual level, (S22) religion is only one of a number of possible organizational mechanisms for establishing a contract binding the individual to his group commitment. The example of nonreligious suicide bombers in Lebanon and Sri Lanka would seem to drive home the point. Nevertheless, it is possible to consider ostensibly nonreligious commitments to transhistorical ethno-nationalist agendas, personality cults, and axiomatic Marxist-Leninist principles as examples of (quasi-) religious belief defined as follows: (i) (materially) costly, and (ii) sincere (emotionally hard-to-fake) commitment to (iii) a preposterously counterfactual world (of supernatural or transcendent causes that are impossible to verify or falsify by logical or empirical means) (S23). The greater the material sacrifice (e.g., killing of self or a loved one) to an apparently absurd truth (instant violent death becoming an eternally pleasurable life in paradise, surviving one's death by making it a living part of ineluctable historical or national consciousness), the more one is able to convince oneself, and thus others, of the selfless truth of one's cause.

Because the worth of this commitment to a factually preposterous world cannot be empirically or logically validated, it is validated only through emotional communion with fellow believers in public ceremonies. This ceremonial communion always involves the affective coordination of body states among members of the congregation (through song, chant, incantation, dance, sway, marching, etc.). Even the Taliban and Al-Qaida promote ritual use of a cappella chants. Ritual communion often includes typical primate gestures of submission and trust (kneeling, bowing, prostrating, baring throat and chest, etc.) as well as courtship (routinized, formulaic patterning of ritual) and bonding (cooing, hugging, kissing, etc.) (S23).

In the case of Al Qaida and the Taliban, early religious indoctrination appears to be significant for proactive martyrdom. Prolonged humiliation and precipitating events are not evident factors. “*Jihad*” was often the first word children learn to spell in Taliban religious schools (*madrasa*). Taught as “God’s path to paradise,” the idea matures if need be into war unto death, as in the following Harakat (Pakistani-based Al-Qaida ally) Oath to Jihad (*bayt al-ridwan*): “I, Amir Maawia Siddiqi, son of Abdul Rahman Siddiqi, state in the presence of God that I will slaughter infidels my entire life.” (S10). Palestinian suicide terrorists become “living martyrs” the moment they reaffirm the *bayt al-ridwan* in video testaments of their willingness to die so long as enemies live (S24).

Such sentiments are characteristic of apparently arational, emotionally driven commitments, including heartfelt romantic love and uncontrollable vengeance (S25). They may have emerged under natural selection’s influence, to override rational calculations based on seemingly impossible or very long odds of achieving individual goals, such as lasting security (S26). Although these sentiments seem to lack rationality in the short term (i.e., in the rational-choice sense of maximizing known or anticipated utility), they may be eminently rational as evolutionary strategies that refine the reward mechanism for pursuing individual self-interest by enhancing long-term benefits for members of a population *on average*. Provided that actual instances of self-sacrifice are relatively rare, yet frequent enough to convince people of their sincerity and efficacy, they may benefit many or most individuals in a population much of the time.

In the case of religiously inspired suicide terrorism, however, these sentiments are manipulated by organizational leaders, recruiters, and trainers to the advantage of the institution (particularly institutional elites), not the individual. In much the same way, the pornography, fast food, or soft drink industries manipulate evolved proclivities for naturally scarce commodities like sexual mates, fatty foods, and sugar to ends that reduce personal fitness but benefit the manipulating institution. In the present case, such manipulation is an extreme form of a common practice, in which society's ruling management demands readiness-to-die from its own members—and occasional execution of this demand—as a demonstration of faith in society. In times of crisis, every society routinely calls upon some of its own people to forfeit their own particular bodies for the general good of the body-politic. Still, these more common calls to sacrifice usually allow a glimmer of hope for survival. The psychological distance between willing acceptance of certain loss of life and possible escape—however unlikely—is the ultimate measure of devotion that religions typically uphold as ideal (S27).

In sum, both psychosocial (small cells organized under charismatic leadership) and socio-ecological (unattached males in supportive religious and peer groups) factors shape the causal network of interconnected representations, emotions, and behaviors that are broadly characteristic of contemporary suicide bombing. Individual psychopathology, lack of education, and poverty as such seem not to be significant determining factors, whereas religious and political context may be decisive. Institutionalized creation of intimate social cells of willing believers works to canalize ideas (as might a school) and emotions (as might a church) into proximate causes of actions that lead to attack forms of martyrdom. One's performance in the network of religious and cultural behaviors often has a complex causal determination that involves any number of variously interrelated personal and social selection factors (S28). These pertain to the internal environment of individual ideas and emotions, as well as to external conditions of social and physical context.

- References and Notes**
- S1. B. Lewis, *The Assassins* (Basic, New York, 2002).
- S2. K. Andriolo, *Am. Anthropol.* **104**, 736 (2002).
- S3. A. Waldman, *New York Times*, 14 January 2003, p. A1. “Black Tigers underwent intense physical and psychological training and reportedly a last dinner with Mr. Prabhakaran.”
- S4. Israeli intelligence initially supported the expansion of militant Islamic groups, including the Muslim Brotherhood, to counter Arafat’s Fatah and the PLO. These groups became pillars of Hamas and PIJ. As the “brothers” (*ikhwan*) explained to this author in the 1970s and 1980s, only persons whose parents were born in Israel-Palestine could remain after the Zionist entity was destroyed. All others would leave, by force if necessary. Those remaining would be incorporated into a version of the traditional *millet* system, wherein tolerated non-Moslem religious communities (*dhimmi*), such as Christians and Jews, would be granted inferior social and political status in exchange for being allowed to live among Moslems.
- S5. “White Paper—The Jemaah Islamiyah Arrests,” Singapore Ministry of Home Affairs (Singapore Ministry of Home Affairs, Singapore, 9 January 2003); available at www2.mha.gov.sg.
- S6. The Brotherhood arose in response to the Ottoman Caliphate’s collapse. It consisted of nationwide cells that might ultimately be brought together into an army to expel foreign influence from Egypt and eventually the whole Moslem world. During the First Arab-Israeli War (1948–1949), Egyptian authorities disbanded the Brotherhood, sent thousands of members to detention camps, and probably murdered its founder, Hassan Al-Banna. It was dissolved again in 1954 after a failed attempt to assassinate Egyptian leader Gamal Nasser. It has persisted as an association of militant, clandestine groups that reject Western values and seek to live by the Quran’s original precepts. The Brotherhood has claimed responsibility for political violence in Egypt, Syria, Jordan, Palestine and Sudan. After disavowing violence in the 1980s, it was permitted to operate openly in Egypt. A wave of religiously inspired assassinations of foreign tourists compelled the government to move against the group in the mid and late 1990s.
- S7. On the day (27 December 2002) of a suicide attack on a West Bank Jewish Seminary (jointly claimed by Hamas and PIJ) and the suicide bombing of government headquarters in Chechnya, French authorities broke up a four-man cell (plotting to destroy the Russian embassy) with direct links to Chechen militants, GIA and Al-Qaida. Possibly spurred by strengthened contacts with Al-Qaida, Hezbollah leader Sheikh Hassan Nasrallah has recently urged Palestinian allies, PIJ and Hamas, “to take suicide bombings worldwide.” P. Martin, *Washington Times*, 4 December 2002.
- S8. Slavery—an institution sanctioned in Moslem Holy Law, or *Sharī’a*—was finally outlawed by Saudia Arabia and Yemen in 1962. *De facto* slavery, especially at the household level, is still not uncommon. Traditionally, Moslems had a right to enslave infidels. They also had a lawful duty to provide adequate nourishment and lodging for slaves and to treat them humanely, unlike the case with the much harsher forms of European and American slavery. *De facto* (economic, social, political) “enslavement” to infidel (e.g., American) and atheist (e.g., Russian) interests is the ultimate humiliation of an Islamic Nation that for centuries appeared to successfully carry out Allah’s program to conquer the world through the joint force of ideas and arms.

- S9. U.S. Department of Justice, *Al Qaeda Training Manual*, online release 7 December 2001; ; available at www.usdoj.gov/ag/trainingmanual.htm.
- S10. D Rhode, A. Chivers, *New York Times*, 17 March 2002, p. A1.
- S11. Papal authorities frequently used indirect scriptural support to co-opt such powers, whereas Judaism's minority status for the last two millennia precluded its rabbinical authorities (with marginal exceptions) from attempting to implement offensive war on Biblical terms.
- S12. D. Pipes, *Natl Interest* (No. 4), 95 (1986).
- S13. "Hizballah," Federation of American Scientists (FAS) Intelligence Resource Program Rep. (21 May 2002); available at www.fas.org/irp/world/para/hizballah.htm.
- S14. S. Telhami, *New York Times* (4 April 2002), p. A23.
- S15. A. Kaplan, in Y. Alexander, J. Gleason, *Behavioral and Quantitative Perspectives on Terrorism* (Pergamon, New York, 1981), p. 36.
- S16. A. Merari, in W. Reich, *Origins of Terrorism* (Cambridge Univ. Press, New York, 1990), p. 206.
- S17. Interpretation bias in terms of exclusively personal factors, or "fundamental attribution error," seems especially prevalent in "individualistic" cultures (e.g., USA, Western Europe). In contrast, cultures (in Africa and Asia) in which a "collectivist" ethic appears more prevalent show less susceptibility to such judgments. Thus, experiments compared how Americans and Chinese interpreted murders, as when a recently fired postal worker stormed a post office killing several people inside then himself. As predicted, Americans (university students and journalists) attributed the murders more to personality factors ("bad temper," "psychologically disturbed"), whereas the Chinese (students and reporters) attributed more to situational factors ("victim of policy," "isolation from the community"). M. Morris, R. Nisbett, K. Ping, in *Causal Cognition*, D. Sperber, D. Premack, A. Premack, Eds. (Oxford Univ. Press, Oxford, 1995), pp. 577-612.
- S18. R. Israeli, *Terrorism Polit. Violence* **9**, 96 (1997).
- S19. A. Silke, *Psychologist* **14**, 580 (2001).
- S20. E. Sarraj, *Mid-East Realities Newsl.* (February 2002); available at www.middleeast.org/archives/newslet1.htm.
- S21. A. Merari, *Harvard Int. Rev.* **23** (2002); available at www.hir.harvard.edu/back/article.php3?art_id=merari2234.
- S22. E. Sprinzak, *Foreign Pol.* (September/October), 66 (2000); available at www.foreignpolicy.com/issue_SeptOct_2001/sprinzak.html.
- S23. S. Atran, *In Gods We Trust: The Evolutionary Landscape of Religion* (Oxford Univ. Press, New York, 2002).
- S24. The *bayt al-ridwan* refers to the garden in paradise where the Prophet and martyrs reside. Reaffirmation of this Jihad oath emphasizes the free and joyful path of sacrifice, along which green birds will carry the martyr against a purple sky to the loving care of 72 young virgins. N. Hassan, *New Yorker* (19 November 2001); available at www.newyorker.com/fact/content/?011119fa_FACT1.
- S25. R. Frank, *Passions Within Reason* (Norton, New York, 1988).
- S26. R. Nesse, *Science Spirit* **10**, 32 (1999).
- S27. Unlike people willing to blow themselves up, for frontline soldiers in an apparently hopeless battle there usually remains hope for survival. G. Allport, J. Gillespie, J. Young, *J. Psychol.* **25**, 3 (1948). The distance between no hope and some

(however small) is infinite. While commitment to die for nonkin cannot be rendered within standard theories of Expected Utility, there are moves theorists attempt, such as invoking “infinite utility.” Using “infinite utility” to patch theories of rationality creates holes elsewhere in the system. Thus, expected utilities are usually weighted averages, which has scant sense when one term is infinite. The deeper point is that notions of maximization of anticipated benefits cannot account for such behaviors, and ad hoc moves to maintain rationality utility at all costs results in a concept of rationality or utility doing little explanatory work. In sum, reliance on rational-choice theories may not be the best way to understand and try to stop suicide terrorism.

S28. S. Atran, *Hum. Nat.* **12**, 351 (2001).