

Are Suicide Bombers Suicidal?

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Recent work by Ariel Merari argues that, while certain contextual factors increase the probability of suicide attacks, they do not explain why particular individuals become suicide bombers. Merari seeks to demonstrate that suicide bombers are motivated by an unusually high prevalence of depression and suicidal tendencies. This article questions the representativeness of Merari's sample. It raises the possibility that interviewer and contextual effects contaminated his findings. Finally, it presents evidence that challenges Merari's conclusions. This evidence is drawn from interviews with immediate family members and close friends of a 25 percent random sample of Palestinian suicide bombers who conducted attacks between 2000 and 2005. Based on their analysis, the authors question the value of a psychological approach to the study of suicide bombers and assert the importance of focusing on the political and social roots of the phenomenon.

The Difficulty of Imputing Motives

Since the 1980s, researchers have argued that a wide range of factors motivate suicide bombers. These factors include religious fanaticism, the desire to liberate occupied territory, the craving for revenge against occupiers, inter-group competition aimed at attracting recruits and supporters, desperation originating in material deprivation, and irrational urges grounded in psychopathology.¹ The large body of research literature devoted to suicide bombers has helped to deepen the understanding of how these factors operate, singly and in combination. It has broadened the evidentiary basis for the present analysts' generalizations. Nonetheless, the ability to resolve many of the debates in the field, especially those concerning the relative causal weight of different variables in different contexts, continues to be hampered by methodological problems that are sometimes acknowledged but rarely overcome.

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Foremost among these issues is over-reliance on anecdotal evidence, objective indicators, and small and/or unrepresentative samples. For example, researchers often base their claims about the motivations of suicide bombers exclusively on scraps of biographical evidence pasted together from newspaper reports and other published sources, and statistics measuring the frequency and lethality of suicide attacks, economic conditions, and other indicators of the context within which suicide bombers operate. Analysts will of course always find it daunting to impute motives to social actors insofar as they lack direct access to the cognitive and limbic processes occurring in actors' minds. However, the distance between the inner life of the suicide bomber and the kind of anecdotal and objective evidence that analysts often use to infer motives is so vast that one may sensibly wonder just how much the evidence reveals.

For this reason, the results of research recently published by Ariel Merari and colleagues are of more than passing interest.² Merari is the *doyen* of suicide bombing researchers. His work stretches back to the 1980s, and his recent book, *Driven to Death*, was twelve years in the making. His knowledge of the literature is encyclopedic. However, it is less his authority than his interpretation of his unique data set that demands attention.

Merari acknowledges that, "in the absence of evidence to the contrary, the conclusion that suicide bombers are just ordinary, normal people seems tentatively reasonable." However, he emphasizes that no one has ever reported relevant evidence based on interviews with, and the administration of psychological tests on, suicide bombers.³ Merari, a psychologist, does. He and his colleagues interviewed a convenience sample of 15 failed Palestinian suicide bombers—and, for comparative purposes, 12 Palestinian insurgents who engaged in non-suicide attacks and 14 Palestinian organizers of suicide attacks. His findings led him to conclude that conventional wisdom about the psychological ordinariness of suicide bombers is dubious.

Merari's argument is neither monocausal nor exclusively psychological. He acknowledges that a host of social and political factors influence the propensity of individuals to engage in suicide attacks. These factors include perceived political threats to the existence of national and other groups, strong public support for suicide bombing, endorsement of political martyrdom by authoritative cultural (particularly religious) figures, recruitment of bombers through preexisting social networks, and the efforts of militant organizations to plan attacks, provide the necessary materiel, and train and dispatch bombers. His review of the literature regarding these factors is balanced and useful but adds only incrementally to the body of knowledge. What is most innovative about Merari's work stems from his observation that, while each of the factors just listed increases the rate of suicide bombing in particular populations, they do not, separately or together, explain why particular *individuals* become suicide bombers. Providing such an explanation is precisely the task that Merari sets himself.

In particular, Merari finds that the suicide bombers in his sample were more likely than others were to display depressive and suicidal symptoms. "Marked clinical signs" of depression were evident in 53 percent of the failed suicide bombers, compared to 21 percent of the organizers and 8 percent of the insurgents who engaged in non-suicide attacks. Fully 40 percent of the suicide bombers, compared to none in the other two groups, displayed suicidal tendencies apart from their political/religious desire for martyrdom.⁴

This article raises questions about Merari's methods and findings. First, it finds problems with the selection of Merari's sample and the reliability of inferences he draws from it. Second, it raises the possibility that interviewer and contextual effects contaminated Merari's findings. Third, it presents new evidence challenging Merari's conclusions.

In 2006, the present authors drew a 25 percent random sample of suicide bombers ($N = 42$) from a database of collective violence events that occurred in Israel, the West Bank, and Gaza between 2000 and 2005.⁵ The database contained information on the residence of each suicide bomber, so it was possible to track down each one's immediate family members and close friends. With a trained and closely supervised female assistant, this article's second author conducted 33 sets of in-depth, semi-structured interviews of the selected bombers' immediate family members and close friends in the West Bank. On average, the interviews were about 90 minutes in duration. Another trained and closely supervised female assistant conducted nine sets of such interviews in Gaza. (It was necessary to use female assistants because in many cases it would have been considered indecent for female respondents to be alone with a male interviewer.) All interviews were conducted in Arabic. Not one family member or close friend who was contacted refused to be interviewed.⁶ This primary data source was supplemented by relevant documentary material, including newspaper accounts, party statements, letters written by the bombers, their wills, and their martyrdom videos. Based mainly on the interviews, it was possible to construct profiles of the bombers' social conditions and states of mind in the year leading up to their attacks. Some of this evidence is presented below.⁷

In brief, this article reaches the conclusion that Merari's claim about the association between depression and suicidality, on the one hand, and propensity to commit suicide attacks, on the other, rests on a weak foundation. The present authors acknowledge validity problems with their data, but feel justified in concluding that conventional wisdom about the ordinariness of Palestinian suicide bombers seems to fit the facts better than Merari's revisionism does.

Sampling Issues

As noted, Merari bases his argument on interviews with 15 individuals whom he defines as failed Palestinian suicide bombers. However, whether all the respondents are actually suicide bombers is open to question. Six of them were captured because they chose not to activate their explosive device. Five others said they did not trigger their bomb because it was not within reach. Only four said they tried to activate their device but failed to detonate it.⁸ Whether the nine respondents who said they wanted to detonate their bombs really intended to do so, cannot be known; claiming device failure or inability to reach the device may be an excuse for hesitation, at least in some cases.

Even if one accepts that all 15 of Merari's respondents were suicide bombers, it is unclear that they are representative of completed Palestinian suicide bombers. Merari shows that several sample characteristics, including age, employment status, marital status, and religiosity are similar to known population characteristics.⁹ However, it is an elementary principle of sampling theory that similarity of sample and known population characteristics is no guarantee of sample representativeness because sample and population characteristics may differ in unknown yet theoretically relevant ways. That is why the present researchers draw random samples—randomization ensures that each unit has an equal chance (or at least a known probability greater than zero) of being selected, so all characteristics of the random sample, known and unknown, are likely to mirror the characteristics of the population.

Even if one treats Merari's sample as representative, its small size ought to warn one against drawing conclusions of any sort. For example, Merari finds that one of four respondents who tried to activate their explosive device displayed suicidal tendencies in interviews, compared to five of eleven respondents who did not try to activate their explosive

device.¹⁰ He presents this difference as meaningful but it is not. Assuming a random sample, these findings are, respectively, 25 percent (with a margin of error of ± 21.6 percent) and 45.5 percent (with a margin of error of ± 15.0 percent; present authors' calculations).¹¹ Because the margins of error overlap, the appropriate conclusion is that there is no statistically significant difference between the two categories of respondents in terms of their likelihood of displaying suicidal tendencies. (Incidentally, if the margins of error did not overlap and the differences *were* statistically significant, the findings would run counter to Merari's argument that suicide bombers tend to be suicidal. That is because respondents who did *not* try to activate their devices would have displayed a higher prevalence of suicidal tendencies than did respondents who tried to activate them).

"Data" is not the plural of "anecdote." Because of the sampling problems just noted, Merari's observations are properly viewed as a series of anecdotes drawn from a convenience sample that may or may not be similar to the population of interest and from which it is extremely hazardous to draw inferences.

Diagnostic Issues

Merari and his colleagues tested their assessments of respondents for inter-coder reliability. They also had a senior clinical specialist who was ignorant of the respondents' group memberships code all interview and test materials independently. Merari claims that these procedures prevented idiosyncratic interpretations of the data and enabled the achievement of an acceptable level of what some researchers call "objectivity," which in practice means intersubjective consensus by members of a research community.¹²

Of course, any intersubjective consensus may be invalid. In psychology and psychiatry, the likelihood of misdiagnosis increases if assessments are based on clinical observation rather than organic pathology. Misdiagnosis is especially likely when the immediate social context of the study and the relationship between interviewers and respondents' bias responses in ways consonant with the expectations, backgrounds, and interests of the researchers.¹³ Arguably, Merari's study suffers from just this problem.

Five potential sources of bias are evident. First, the interviewers may have sought out signs of depression, leading to overdiagnosis. Overdiagnosis of depression is an increasingly common problem in psychology and psychiatry,¹⁴ and as Merari notes, the view that depression and suicidality lead to suicide bombing in certain contexts has been a pet theory of his for more than 20 years, well before he had any evidence to support the hypothesis.¹⁵ A possible inclination to overdiagnose depression is suggested by Merari's report on research conducted by his student, Nasra Hassan. She interviewed family members of 34 Palestinian suicide bombers who conducted their attacks before the Second Intifada, almost the entire population of suicide bombers during that period. Although "no single personality type emerged" from her analysis, and 42.9 percent of the bombers were "leaders" and "sociable extroverts," Merari illustrates the personalities of the suicide bombers by offering extended biographical sketches of three of them—each one a depressive personality type.¹⁶

A second potential source of bias resides in the fact that the respondents were political prisoners serving life sentences in Israeli jails. That circumstance may have led them to exhibit a higher rate of depression and suicidality than one would find outside the prison system. Such tendencies are certainly evident among political prisoners in other contexts.¹⁷ Said differently, some, many or all of the cases of depression and suicidality that Merari and his colleagues observed may have been due, in whole or in part, to serving life sentences in Israeli prisons, not to depressive and suicidal dispositions predating imprisonment.

Third, it may be relevant that at least six and perhaps more of Merari's fifteen respondents failed to complete their suicide mission because they lacked the resolve to do so. Some depressive and suicidal tendencies may have resulted not from a preexisting condition so much as the respondents' failure to execute their plan, thereby disappointing their organizational sponsor, the Palestinian public, and themselves, resulting in a depressed state.

Fourth, the interviews and tests were conducted by authority figures who respondents likely viewed as part of the coercive apparatus of an Israeli penal institution. This situation may have led prisoners to respond less than candidly. The present authors find evidence of lack of candor in one of the tests Merari and his associates conducted. The interviewers administered an adapted version of the California Psychological Inventory (CPI), which consists of hundreds of true-false questions, responses to which presumably reveal respondents' personality traits. However, Merari wisely refrained from analyzing the results because 36 percent of the respondents completed less than half the questionnaire or gave answers indicating extreme inconsistency or strong efforts to please the interviewers. Yet, despite this clear signal of the difficulty of interpreting the responses of the failed suicide bombers, Merari proceeded to base his findings on Rorschach and Thematic Apperception Tests. In such projective tests, respondents are asked to respond to ambiguous external stimuli such as inkblots. Presumably, their responses reveal emotions and internal conflicts that are otherwise inaccessible to the observer. While some analysts have recently sought to increase the reliability and validity of such projective tests, many researchers continue to regard them as relatively unreliable and invalid instruments that were never intended to be used for formal diagnosis.¹⁸ Most clinical psychologists would not be inclined to base diagnostic decisions on projective tests alone, particularly when results of psychometric testing such as the CPI have been discarded due to invalid results.¹⁹ It is unclear why Merari did not assess depression using the standard psychiatric protocol of the *Diagnostic and Statistical Manual of Mental Disorders* (DSM-IV-TR).²⁰

Fifth, at least some of the interviewers were affiliated with the Israeli defense establishment, suggesting that they might have had an unconscious political interest in coming up with findings that depoliticize and delegitimize the Palestinian national movement, notably the observation that 40 percent of Palestinian suicide bombers were motivated by a psychopathological urge.

These arguments are not accusations. However, they suggest possible problems that are certainly worth raising. Like-minded authorities with an interest in particular research results testing subjects in a coercive institution using questionable projective techniques may produce invalid findings, even setting aside the fact that their sample is small and possibly unrepresentative.

Findings from Immediate Family Members and Close Friends of a Representative Sample of Palestinian Suicide Bombers

The present authors conducted a survey of immediate family members and close friends of Palestinian suicide bombers. It included a battery of questions relevant to the motivations of the bombers. Specifically, to analyze the degree to which psychological stressors affected each bomber's state of mind in the year preceding his or her attack, each respondent was asked a series of questions about the suicide bomber's personality, whether s/he suffered any social, emotional or financial crisis, and so on. Respondents were also asked to support their answers by quoting or paraphrasing the bombers.²¹ Separate interviews were conducted

with at least two immediate family members or close friends of each suicide bomber. This procedure allowed answers to be compared for consistency. No inconsistencies were found between interviews regarding any particular suicide bomber. External sources, including published accounts and unpublished materials left by the bombers, were occasionally examined to check the validity of responses.

For each case, the bombers were independently coded as having manifested, in the year before their attack, (1) outward signs of depression (including chronic feelings of sadness, repeated tearfulness, and diminished pleasure in normal activities) or personal crisis that could have led to depression (including a deep-seated desire for revenge, inability to achieve highly valued goals, and wrenching goal conflict); or (2) no outward sign of depression or personal crisis that could have led to depression. There were no differences of opinion between the two authors as to whether any case fell into category 1 or 2.²²

The interviews revealed that in the year preceding their suicide attacks, nine bombers (21 percent of the total, ± 6.3 percent) expressed the desire for martyrdom. None of the others gave any indication to their immediate family members or close friends that they wanted to end their lives for any other reason.

Thirty-two bombers (76 percent of the total, ± 6.6 percent) did not manifest any sign of depression or personal crisis that could have led to depression that was apparent to any immediate family or close friend. In many cases, the bombers' became more contemplative and religious in the weeks before their suicide attack. However, their immediate family members and close friends typically characterized more than three-quarters of the bombers as energetic, sociable, happy, athletic, studious, and so on, in the year preceding their attack.

The remaining 10 bombers (24 percent of the total, ± 6.6 percent) manifested outward signs of depression or experienced personal crises that could have led to depression. However, as their stories demonstrate, the psychological stressors they experienced most often derived from the immediate social and political context in which they found themselves, not from some underlying, chronic pathology (see the Appendix for details).

The best estimate for the prevalence of depression in the Palestinian–Israeli population at large is 24.9 percent.²³ However, this figure is based on a sample of Palestinian Israelis, not Palestinians residing in the West Bank and Gaza. Given living conditions in the occupied territories, one would expect a higher prevalence of depression there. It is striking, therefore, that the apparent prevalence of depression among the suicide bombers in the sample was just 24 percent. This finding suggests that the prevalence of depression among Palestinian suicide bombers is not unusually high. Indeed, some observers might consider a 24 percent prevalence rate surprisingly low given the difficult circumstances—illustrated by the cases summarized in the Appendix—in which Palestinians residing in the West Bank and Gaza often find themselves embroiled because of the conflict with Israel.

Research on a large, representative sample of Palestinian families in the West Bank and Gaza ($n = 7,000$) during the First Intifada (1987–93) suggests one possible explanation for the apparently relatively low rate of depression among the suicide bombers in the sample.²⁴ The study shows that radical political engagement had no effect on depression for young Palestinian men. Overall, they were psychologically resilient. Insofar as they defined their political engagement as an important part of a national struggle, and because family and community tended to offer them strong support, political engagement acted as a prophylactic against depression. This finding suggests the hypothesis that politically engaged Palestinians—perhaps even suicide bombers—are no more likely to be depressed and suicidal than other Palestinians are.

“Objective” and “Subjective” Evidence

Because students of suicide bombers cannot interview the people who chiefly interest them, they have relied mainly on artifacts (newspaper reports, organizational documents, martyrdom tapes, and the like) for evidence to support their generalizations. Some analysts have interviewed convenience samples of people who were acquainted with suicide bombers or applied ethnographic techniques to develop a deep understanding of the *milieux* in which suicide bombers originate. Merari's data (derived mainly from interviews with a small convenience sample of failed and imprisoned Palestinian suicide bombers) are unique; the present authors' (derived mainly from interviews with family members and close friends of a 25 percent random sample of Palestinians who engaged in suicide attacks during the Second Intifada) are rare. Both research groups assert the superiority of the type of evidence they adduce. Both dispute the validity and reliability of the type of evidence presented by the other.

Merari asserts greater veracity based on the view that his analysis is “objective” and “scientific” while “families’ evaluations,” such as the present authors’, “are subjective by nature.”²⁵ The authors have already presented their case for questioning the objectivity and scientificity of Merari's assertion that suicide bombers tend to be prone to depression and suicide before they embark on a plan to blow themselves up. It remains to say something about the reliability and validity of the present authors' “subjective” data.

The possibility certainly exists that an approach such as the present authors' underestimates the prevalence of depression and suicidality among suicide bombers insofar as (1) families' and close friends' descriptions may be “skewed by the wish to present them in a positive light”²⁶ and (2) loved ones can be oblivious to the internal turmoil of the sufferer. That is why the authors adopted an approach similar to that of the DSM-IV-TR, the standard tool for diagnosing depression; they asked respondents mainly about *outward* signs of depression, thus minimizing the chance that responses would significantly distort the underlying reality.²⁷ The present authors also sought corroborating or falsifying evidence from other respondents, separately interviewed. The limitations of the approach are acknowledged, but given the impossibility of interviewing suicide bombers themselves, it may be the best researchers can do.

Ordinary People After All

The suicide bombers in the study conducted by the present authors differed from the Palestinian population in terms of their gender, age structure, and marital and employment status. Most significantly, only two bombers (5 percent of the total) were women and the average age of the bombers was just 22. Consequently, 88 percent were unmarried and 40 percent were students. Only 5 percent were unemployed, compared to a Palestinian unemployment rate of 29 percent in the period 2000–05.²⁸ For other sociodemographic variables, such as economic status, occupational distribution (for non-students), and geographical distribution, the bombers were not much different from the Palestinian population. With the exception of the variables just noted, they were quite ordinary. The only other study similar to the present authors' reaches similar conclusions. Nasra Hassan's interviews with family members of nearly all Palestinian suicide bombers before the Second Intifada discovered that “the portrait of the suicide bomber . . . may not be all that exceptional in the context of Palestinian society at the time,” “all suicides came from typical Palestinian families,” and “no single personality type emerged” from her analysis.²⁹

Ever since Philip Zimbardo and Stanley Milgram conducted their now-classic experiments in the 1970s, scholars have known that ordinary people can do extraordinary things in certain social circumstances.³⁰ Under the right conditions, they may even discard deeply held norms of decency and civility, and behave in ways that most people would consider cruel and immoral. This insight into human nature (or, more accurately, into the absence of a fixed human nature) has greatly enriched social science and history. Some scholars still engage in moral essentialism and psychological reductionism. However, the consensus in history and the social sciences lies in a more nuanced and contextual appreciation of the sources of human action.³¹

Researchers have made much progress in the study of suicide bombers over the past decade,³² but in the present authors' judgment Merari and his colleagues have not advanced the field by seeking to revive a psychopathological approach to understanding motives that most scholars have rejected.³³ Their renewed assertion that a deep urge for self-immolation drives many if not most suicide bombers has already fuelled extravagant claims³⁴ that, one hopes, will at most only temporarily and partially obscure the largely political and social roots of suicide bombing.

Notes

1. See, respectively, Assaf Moghadam, *The Globalization of Martyrdom* (Baltimore: Johns Hopkins University Press, 2008); Robert A. Pape, *Dying to Win: The Strategic Logic of Suicide Terrorism* (New York: Random House, 2005); Robert J. Brym and Bader Araj, "Suicide Bombing as Strategy and Interaction: The Case of the Second *Intifada*," *Social Forces* 84 (2006), pp. 1969–1986; Maya Bloom, "Palestinian Suicide Bombing: Public Support, Market Share, and Outbidding," *Political Science Quarterly* 119 (2004), pp. 61–88; James A. Piazza, "A Supply-Side View of Suicide Terrorism: A Cross-National Study," *The Journal of Politics* 70 (2008), pp. 28–39; and Bruce Bongar, Lisa M. Brown, Larry E. Beutler, James N. Breckenridge, and Philip G. Zimbardo, eds., *Psychology of Terrorism* (Oxford: Oxford University Press, 2006).

2. Ariel Merari, Ilan Diamant, Arie Bibi, Yoav Broshi, and Gora Zakin, "Personality Characteristics of 'Self Martyrs'/'Suicide Bombers' and Organizers of Suicide Attacks," *Terrorism and Political Violence* 22 (2010), pp. 87–101; Ariel Merari, Jonathan Fiugel, Boaz Ganor, Ephraim Lavie, Yohanan Tzoreff, and Arie Livne, "Making Palestinian 'Martyrdom Operations'/'Suicide Attacks': Interviews with Would-Be Perpetrators and Organizers," *Terrorism and Political Violence* 22 (2010), pp. 102–119; Ariel Merari, *Driven to Death* (Oxford: Oxford University Press, 2010).

3. Merari, *Driven to Death*, p. 5.

4. Merari et al., "Personality Characteristics," pp. 95–96.

5. The sampling frame was compiled from the online database of the International Policy Institute for Counter-Terrorism (ICT) in Herzliya, Israel; the website of Israel's Ministry of Foreign Affairs; the East Coast evening edition of the *New York Times*; and two Arabic newspapers—*al-Quds*, published in Jerusalem, and *al-Quds al-'Arabi*, published in London. The authors selected the sample using the random number generator in SPSS. For additional information on the database, see Brym and Araj, "Suicide Bombing."

6. Arabic and English versions of the questionnaire are available from the authors on request.

7. For details on the survey methodology, see Bader Araj, *Suicide Bombing and Harsh State Repression: The Second Intifada, 2000–05* (Ph.D. dissertation, Department of Sociology, University of Toronto, 2011), pp. 14–17 and 95–97.

8. Merari, *Driven to Death*, p. 142.

9. *Ibid.*, pp. 108–120.

10. *Ibid.*, p. 143.

11. The authors used the formula for the standard error of a proportion in a simple random sample, $s.e = \sqrt{p(1-p)/n}$, where p is the proportion and n is the number of cases.

12. Steven Shapin, *Never Pure: Historical Studies of Science as if It Was Produced by People with Bodies, Situated in Time, Space, Culture, and Society, and Struggling for Credibility and Authority* (Baltimore: Johns Hopkins University Press, 2010).

13. Richard B. Felson, "Mass Media Effects on Violent Behavior," *Annual Review of Sociology* 22 (1996), pp. 103–128.

14. Edward Shorter, *A History of Psychiatry: From the Era of the Asylum to the Age of Prozac* (New York: Wiley, 1997), p. 290; Gordon Parker, "Is Depression Overdiagnosed?" *BMJ* 335 (18 August 2007), p. 328.

15. Merari, *Driven to Death*, p. 251.

16. The quotations are at Merari, *Driven to Death*, p. 95; the biographical sketches are at pp. 97–101.

17. Gregor Weißflog, Maya Böhm, Grit Klinitzke, and Elmar Brähler, "Erhöhte Ängstlichkeit und Depressivität als Spätfolgen bei Menschen nach politischer Inhaftierung in der DDR" ["Increased Anxiety and Depression as Long-term Consequences of Political Imprisonment in the GDR"]. *Psychiatrische Praxis* 37(6) (2010), pp. 297–299.

18. Consider Merari's interpretation of one respondents' reaction to card 3BM of the Thematic Apperception Test (Merari, *Driven to Death*, p. 113). The card shows the figure of a person huddled against a couch with his/her head bowed on his/her right arm and a revolver lying beside him/her. Merari reports that one of his respondents said the card illustrates a depressed woman who is considering ending her life but is trying to find a solution to her problems. Merari infers that "feelings of loneliness, distress, helplessness, and sadness" dominate the respondent. Yet a standard diagnostic handbook suggests that the respondent's interpretation is typical; most people describe the figure in card 3BM as being in a depressed state. Moreover, the authors of the diagnostic handbook note that when the respondent mentions possible solutions to the figure's problems, it suggests some adaptive ability to recover from depression—an interpretation that Merari ignores. See Irving B. Weiner and Roger L. Greene, *Handbook of Personality Assessment* (Hoboken NJ: Wiley, 2008), pp. 441–442.

19. Merari et al., "Personality Characteristics," p. 92; Scott O. Lilienfeld, James M. Wood, and Howard N. Garb, "The Scientific Status of Projective Techniques," *Psychological Science in the Public Interest* 1(2) (2000), pp. 27–66. The authors are grateful to Dr. Gregory Hamovitch, a practicing clinical psychologist in Toronto and former president of the Ontario Psychological Association, for this last point.

20. American Psychiatric Association, *Diagnostic and Statistical Manual of Mental Disorders, Fourth Edition, Text Revision (DSM-IV-TR)* (Arlington, VA: 2000), p. 345 ff.

21. Relevant questions include the following:

V32. Please describe the martyr and his/her personality (what kind of person was s/he—his/her main characteristics, relations with others, social skills)?

V33. Did you notice any significant changes in his/her behaviour, mood, or habits in the last period of his life? (1 = Yes, 2 = No, 3 = Other [please specify], 99 = Don't know)

V34. If the answer to V33 is 1, please explain such changes. When and why did they appear?

V35. Was the martyr physically and mentally healthy? (1 = Yes, 2 = No, 3 = Other [please specify], 99 = Don't know)

V36. If the answer to V35 is 2, please provide details.

V37. Did s/he suffer any social, emotional or financial crisis in the last year of his/her life that might have affected his/her decision, in one way or another, to participate in a martyrdom operation? (1 = Yes, 2 = No, 3 = Other [please specify], 99 = Don't know)

V38. If the answer to V37 is 1, please explain that crisis and how it affected him/her.

22. The authors sought to distinguish cases of likely "major" and "minor" depression, and disagreed over the classification of two cases. However, the distinction is not relevant here because for present purposes all cases of likely depression have been aggregated.

23. Giora Kaplan, Saralee Glasser, Havi Murad, Ahmed Atamna, Gershon Alpert, Uri Goldbourt, and Ofra Kalter-Leibovici, "Depression among Arabs and Jews in Israel: A Population-Based Study," *Social Psychiatry and Psychiatric Epidemiology* 45 (2010), p. 931.
24. Brian K. Barber, "Political Violence, Family Relations, and Palestinian Youth Functioning," *Journal of Adolescent Research* 14(2) (1999), pp. 206–230.
25. Merari, *Driven to Death*, pp. 84, 89.
26. *Ibid.*, p. 95.
27. See note 23. DSM-IV-TR criteria for depression include "appears tearful . . . most of the day, nearly every day," "markedly diminished interest or pleasure in all, or almost all, activities most of the day, nearly every day," "psychomotor agitation or retardation nearly every day (observable by others. . .)," and so on. See American Psychiatric Association, *Diagnostic*, p. 345 ff.
28. *The Palestinian Strategic Report 2005* (Beirut: Al-Zaytouna Centre for Studies and Consultations). Available at http://www.alzaytouna.net/english/books/PSR05/STR2005_Eng_ch7.pdf (accessed 2 July 2011), p. 213.
29. Merari, *Driven to Death*, pp. 90–91, 95.
30. Philip G. Zimbardo, "Pathology of Imprisonment," *Society* 9(6) (1972), pp. 4–8; Stanley Milgram, *Obedience to Authority: An Experimental View* (New York: Harper & Row, 1974).
31. See especially the debate among historians that greeted the publication of Christopher R. Browning, *Ordinary Men: Reserve Police Battalion 101 and the Final Solution in Poland* (New York: Harper, 1992) and Daniel Jonah Goldhagen, *Hitler's Willing Executioners: Ordinary Germans and the Holocaust* (New York: Knopf, 1996).
32. See especially Mohammed M. Hafez, *Manufacturing Human Bombs: The Making of Palestinian Suicide Bombers* (Washington, DC: United States Institute of Peace, 2006); Moghadam, *The Globalization*; Pape, *Dying to Win*; Ami Pedahzur, *Suicide Terrorism* (Cambridge UK: Polity, 2005); and Scott Atran, *Talking to the Enemy: Faith, Brotherhood, and the (Un)Making of Terrorists* (New York: HarperCollins, 2010). For a recent theoretical reflection on the literature, see Robert J. Brym and Cynthia Hamlin, "Suicide Bombers: Beyond Cultural Dopes and Rational Fools," in Mohammed Cherkaooui and Peter Hamilton, eds., *Raymond Boudon: A Life in Sociology*, 4 vols. (Oxford: Bardwell Press, 2009), vol. 2, pp. 83–96.
33. Merari, *Driven to Death*, pp. 251–252.
34. Paul Kix, "The Truth about Suicide Bombers," *Boston Globe*, 5 December 2010. Available at http://www.boston.com/bostonglobe/ideas/articles/2010/12/05/the_truth_about_suicide_bombers/ (accessed 2 July 2011); Adam Lankford, "Do Suicide Terrorists Exhibit Clinically Suicidal Risk Factors? A Review of Initial Evidence and Call for Future Research," *Aggression and Violent Behavior* 15 (2010), pp. 334–340.

Appendix

Following are brief sketches of the ten people in the sample who manifested outward signs of depression or experienced personal crises that could have led to depression. These vignettes are offered to illustrate the authors' coding decisions.

1. A man's brother gave information to the Israelis that enabled them to assassinate his cousin, a Hamas leader. The man (whose name is withheld at the request of his parents) underwent considerable psychological turmoil until he decided to clear his family's name and avenge the assassination of his cousin by means of a suicide attack.
2. Following the assassination of two close friends and the arrest of others by the Israelis, Ibrahim Naji fell into a depressed state according to his parents. Eventually, he blew himself up to avenge the killing of his friends and in reaction to the humiliation of his father during an Israeli incursion into the refugee camp in which they resided.

3. Abdalfatah Rashid was a police officer. He accidentally killed a Palestinian prisoner during an interrogation regarding a car theft. Rashid was jailed but then escaped. Now wanted by the Palestinian Authority and fearful that the family of his victim might pursue him, it was relatively easy for a militant from Palestinian Islamic Jihad whom he had met in prison to convince him to carry out a suicide attack.
4. Reem Riashee was Hamas's first female suicide bomber and the first Palestinian mother to blow herself up. Her bombing may have been due to pressure from her husband, a Hamas supporter who, according to media reports, forced his wife to conduct the attack as atonement for adultery—but who dismissed such reports when he was interviewed in Gaza with the statement that “Reem died and her secret [motivation] died with her.” Despite the ambiguity, this case was classified as one of personal crisis leading to depression.
5. Iyad al-Musri was surrounded by death and injury because of the Palestinian–Israeli conflict. He lost his 14-year-old brother, a 15-year-old cousin, an uncle, four close friends, and five neighbors. The interviewer's field notes remark that “the smell of death is everywhere on their street.” Al-Musri himself was injured several times. He developed a strong sense that his days were numbered. When a neighborhood woman professed her love for him, and his father urged him to marry her, he rejected her overtures and told his father, “We think about two different things.” He blew himself up nine days after his brother and cousin were killed.
6. The Israeli internal security service recruited a man (name withheld at the request of the family) who, according to his brother and one of his close friends, was chronically “mentally disturbed.” His task was to collect information on a local Palestinian Islamic Jihad leader. The leader discovered the mole and then gave him the opportunity to redeem himself by becoming a suicide bomber or face the consequences. He suffered tremendous stress when his ties to the Israeli intelligence service were discovered. When he blew himself up, several Israeli intelligence officers and soldiers were seriously injured.
7. Abdalbasit Awdeh was the perpetrator of the second *intifada*'s deadliest suicide bombing in Netanya in March 2002. His brother emphasized that a secondary motivation for Awdeh's attack was that he suffered because Israeli military regulations prevented him from marrying the woman he loved. She lived in Iraq. He was not permitted to visit her and she was denied the right to move to the West Bank. Although Awdeh's brother regarded the resulting frustration as only a secondary motivation for his suicide attack, this case was classified as a personal crisis possibly leading to depression.
8. Sa'er Huninee felt deeply neglected by his father, who remarried and subsequently seemed to focus his attention mainly on his new family. Huninee then witnessed an Israeli soldier driving a jeep back and forth over the legs of Huninee's acquaintance, who was of course seriously injured. Huninee's mother and sister said that he used to have nightmares because of the incident, calling out the name of the injured man in his sleep and vowing that he would save him. Huninee was also traumatized when of two of his close comrades from the Popular Front for the Liberation of Palestine were assassinated by Israeli forces. He visited the place of their assassination a month before he blew himself up.
9. One suicide bomber (name withheld at the request of the family) would periodically break down in tears because his family was so poor they lacked hot running water and he had to wear clothes donated by other families. After watching a

documentary about the 1982 Sabra and Shatila massacre in Lebanon, he often voiced the desire to kill Israeli Prime Minister Ariel Sharon. His rage was reinforced in 2002, when 1,000 Israeli soldiers razed part of the Jenin refugee camp, killing 52 Palestinians, 22 of them civilians (23 Israeli soldiers were also killed in the incursion). He became a suicide bomber shortly thereafter.

10. Rami Ganim was a sociable man known for his good sense of humor. He was active in the Popular Front for the Liberation of Palestine. However, about a year before he became a suicide bomber, the Israelis arrested him. They put tremendous pressure on him to become a collaborator, going so far as to break his hand and his nose, and arrest his father. When Ganim nonetheless refused, Israeli intelligence tried to ruin his reputation by giving the impression that he had become a collaborator. These events caused Ganim to experience considerable psychological distress and, eventually, to use a suicide belt he procured from Palestinian Islamic Jihad.