

## Evolutionary Psychology

www.epjournal.net – 2013. 11(4): 791-794

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### Book Review

#### Suicide Bombers: Does an Evolutionary Perspective Make a Difference?

A review and extension of A. Lankford, *The Myth of Martyrdom: What Really Drives Suicide Bombers, Rampage Shooters, and Other Self-Destructive Killers*. Macmillan, New York, 2013, 272 pp., US\$27.00, ISBN#978-0230342132 (hardcover).

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In *The Myth of Martyrdom*, Adam Lankford focuses on the similarities between suicide terrorists and others who commit suicide and murder-suicide. Contrary to popular opinion, he proposes that suicide bombers are psychologically similar to those who take their own lives for other reasons. Theorizing that suicide bombers are not motivated by their willingness to sacrifice themselves for the greater good, he contends the act is the result of mental health issues and individual crises.

Utilizing primary sources (love letters, martyrdom videos, and suicide notes) along with secondary sources (news articles, government sources, and existing data), Lankford identified over 130 suicide bombers who possess risk factors for suicide. His research also examined the similarities and differences between suicide terrorists and workplace, rampage, and school shooters and found evidence of similar motives. Both terrorists and shooters were equally likely to have suffered from issues in their professional and personal life. Lankford also includes testimony from suicide terrorist recruiters and reviews several cases studies, such as that of the Wafa Idris, the first Palestine women to commit a suicide bombing, as well as the 9/11 bombers. Using anecdotal evidence, he compares suicide bombers to those who genuinely sacrifice their lives for the greater good.

Based on the premise that suicide bombers are inherently suicidal, Lankford suggests several possible solutions for predicting and preventing suicide terrorism. Because they are often isolated from their communities, many suicide terrorists use forums and social networking sites to vent their frustrations. By identifying behavioral patterns consistent with these profiles, he feels law enforcement officials could improve online surveillance. Lankford also notes family members and friends have often been more effective at identifying at-risk individuals than law enforcement agents. By educating the

public on how to recognize risk factors for suicidal behavior in general, he believes there would be a corresponding enhancement in our ability to prevent suicide terrorism.

Because Lankford's treatment of suicide lacks an evolutionary perspective, in what follows we use evolutionary theory to expand his discussion of suicide terrorists and strategies for identifying terrorists and preventing suicide bombings. We review work which shows that suicide can be an adaptive strategy that functions to increase inclusive fitness, and we attempt to identify additional risk factors for suicide bombings and derive further insights into the seemingly counterintuitive idea of taking one's own life. We also use an evolutionary perspective to offer some radical solutions to problems posed by suicide bombers.

For people who were taught to think about evolution in terms of "the survival of the fittest," an evolutionary perspective on suicide may seem counter intuitive or even contradictory. However, evolution is not about survival, it is about the perpetuation of genes. Evolution is represented by gradual changes in the composition of a gene pool over time. These changes are a byproduct of reproductive competition to obtain genetic representation in subsequent generations. According to this view, any trait can be analyzed in terms of cost/benefit ratios where the focus is on reproductive costs relative to reproductive benefits. Traits in which the benefits exceed the costs will become more common, those where the costs exceed the benefits will be selected against.

With the advent of kin selection theory there was the realization that one's inclusive fitness (net genetic representation in future generations) is not only a reflection of their reproductive success, but it is also affected by the reproductive success of people they share genes in common with. Those who behave in ways that promote the reproductive success of close relatives (kin selection) will be enhancing their own inclusive fitness. Consistent with this interpretation, there is growing evidence that humans have been programmed by their evolutionary history to promote the reproductive success of their kin as well as their own (Lieberman, Tooby, and Cosmides, 2007).

Just as dying to save a child makes sense from this perspective, dying can be adaptive in other ways. De Catanzaro (1980, 1995) pioneered the idea that under certain circumstances suicide can be adaptive. If an individual's reproductive prospects are low and he or she is not contributing to the welfare of reproductively viable kin, then eliminating their genes from the gene pool through suicide would not remove any genes that have not already been eliminated. Usually there would be pressure operating against suicide. But, this could change if the circumstances reduced the person's fitness, as in the case of illness or old age. If the individual was utilizing resources that could be better used by kin to promote their reproductive best interests, then prolonging that person's existence may diminish rather than enhance their inclusive fitness. In certain contexts, such as opting to conserve one's estate for the reproductive benefit of your children rather than spending huge sums of money to prolong your own life, this could result in selection for self-destructive behavior that culminates in suicide (De Catanzaro, 1995).

The fact that suicide is more common among those who are terminally ill or elderly supports this notion. These people have a low probability of future reproductive success and may be less likely to engage in behavior that would promote their fitness (DeCatanzaro, 1980). Consistent with this prediction, Brown et al. (2009) found a positive

correlation between suicide ideation and perceived burden to kin. This relationship was strengthened for participants with poor health and low interpersonal satisfaction, both of which indicate low fitness. A study by Orden, Lynam, Hollar, and Joiner (2006) reports similar findings and found that perceived burdensomeness predicted suicide attempt status beyond hopelessness and depression, two other well established suicide predictors. Joiner et al. (2007) had people rate suicide notes, and discovered a higher level of burdensomeness in notes left by those using more lethal methods. This remained true even when controlling for variables such as age and gender.

Applying kin selection theory in conjunction with a reproductive cost/benefit analysis to the issue of suicide bombers can be used to derive a number of testable predictions. First, we would predict a disproportionate number of suicide bombers would be single and childless. Second, suicide bombers should be more likely to come from large families; i.e., singletons should be underrepresented among suicide bombers. Third, the propensity to engage in suicide bombing ought to vary in relationship to the likelihood that suicide would confer a residual reproductive advantage to the bomber's family members. Examples would include monetary rewards paid to family members. There are reports that Saddam Hussein used to pay up to \$25,000 to the families of suicide bombers who succeeded in killing Israelis ([http://www.cbsnews.com/2100-202\\_162-505316.html](http://www.cbsnews.com/2100-202_162-505316.html)). In addition, the prospect of elevated status and prestige accorded by the community to the bomber's surviving family members might also enhance their ability to compete for scarce resources and reproductive opportunities. Finally, effective propaganda to recruit suicide terrorists would be expected to include provisions (be they real or imagined) for direct or indirect reproductive benefits (e.g., the promise of going to heaven and being granted exclusive reproductive rights to large numbers of sexually receptive women).

It would follow from kin selection theory that one way to tackle the problem of suicide terrorists would be to eliminate the monetary and social benefits that accrue to the suicide bomber's family members, and also take steps to increase the reproductive costs of committing suicide. In the latter case, one possibility would be to establish well paid, highly trained execution squads who could be dispatched in response to a suicide bombing incident to search out and systematically kill all of the suicide bomber's immediate family members. Once it became common knowledge that engaging in a suicide bombing would be tantamount to taking out a death warrant on your parents and brothers and sisters, the reproductive benefits of suicide bombing would pale in comparison to the reproductive costs, and we would predict that the incidence of suicide bombings would drop precipitously. Other less drastic, but correspondingly less effective options might include forced evacuations, as well as seizures of property and bank accounts from the terrorist's extended family.

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*Suicide bombers*

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