

When Heads Roll: Assessing the Effectiveness of Leadership Decapitation

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Leadership targeting has become a key feature of current counterterrorism policies. Both academics and policy makers have argued that the removal of leaders is an effective strategy in combating terrorism. However, leadership decapitation is not always successful, and existing empirical work is insufficient to account for this variability. As a result, this project answers three primary questions: (1) Under what conditions does leadership decapitation result in the dissolution of a terrorist organization?; (2) Does leadership decapitation increase the likelihood of organizational collapse beyond the baseline rate of collapse for groups over time?; and (3) In cases where decapitation does not result in group collapse, to what extent does it result in organizational degradation and hinder a group's ability to carry about terrorist attacks? I develop a dataset of 298 incidents of leadership targeting from 1945–2004 in order to determine whether and when decapitation is effective. First, I identify the conditions under which decapitation has been successful in bringing about organizational decline. The data show that a group's age, size, and type are critical in identifying when decapitation will cause the cessation of terrorist activity. As

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an organization grows in size and age, it is much more likely to withstand the removal of its leadership. Organizational type is also significant in understanding the susceptibility of an organization to decapitation. Ideological organizations are most likely to experience a cessation of activity following the removal of leader, while religious organizations are highly resistant to leadership decapitation. Second, I determine whether decapitation is an effective counterterrorism strategy that results in organizational collapse. The data show that decapitation does not increase the likelihood of organizational collapse beyond a baseline rate of collapse for groups over time. Organizations that have not had their leaders removed are more likely to fall apart than those that have undergone a loss of leadership. The marginal utility of decapitation is negative for many groups, particularly for larger, older, religious, and separatist organizations. Finally, I look at the extent to which decapitation results in organizational degradation and hinders a group's ability to carry about terrorist attacks. Case studies illustrate whether decapitation has an effect on the operational capacity of an organization by identifying whether the removal of key leaders changes the number and lethality of attacks. If certain organizations are more resilient than others, it is important to know when decapitation should be effective and when it could lead to counterproductive outcomes. Overall, these findings illustrate the need to develop a new model for evaluating the efficacy of leadership decapitation and for developing effective counterterrorism policies.

In the aftermath of 9/11, leadership targeting of terrorist organizations has become a key feature of counterterrorism policies. The 2003 National Strategy for Combating Terrorism (NSCT) claims that leaders are essential to terrorist activity and that their removal is likely to result in organizational collapse.

The terrorist leadership provides the overall direction and strategy that links all these factors and thereby breathes life into a terror campaign. The leadership becomes the catalyst for terrorist action. The loss of leadership can cause many organizations to collapse. Some groups, however, are more resilient and can promote new leadership should the original fall or fail. Still others have adopted a more decentralized organization with largely autonomous cells, making our challenge even greater.¹

¹ See George W. Bush, "National Strategy for Combating Terrorism," (Washington, DC: The White House, February 2003).

While emphasizing the importance of terrorist leaders, the NSCT recognizes that the effectiveness of leadership decapitation is variable and that some organizations are resilient to leadership attacks. Despite insufficient knowledge regarding when the loss of leadership will result in an organization's demise, counterterrorism strategies continue to place a high priority on leadership decapitation. Targeting leaders is listed first in the 2006 NSCT's current priorities of action.² Immediately following the killing of Abu Musab al-Zarqawi, President George W. Bush announced that a "severe blow" had been dealt to al Qaeda. Leadership decapitation is not limited to U.S. counterterrorism efforts. The arrests of the Shining Path's Abimael Guzman³ and the Kurdistan Workers' Party's (PKK) Abdullah Ocalan are commonly cited as examples of successful decapitation. Israel has consistently targeted the leaders of HAMAS. The arrest of Basque Homeland and Freedom's (ETA) leader Francisco Mugica Garmentia was seen as likely to result in ETA's collapse, but authorities determined that the organization was much more complicated than they had assumed.⁴ The recent arrests of two ETA leaders in May and November of 2008 have been characterized by Spanish Prime Minister Jose Luis Rodriguez Zapatero as a "definitive operation in the fight against ETA."⁵

Despite a tremendous amount of optimism toward the success of decapitation, there is very little evidence on whether and when removing leaders will result in organizational collapse. Moreover, there are inconsistencies among current studies of decapitation. A core problem with the current literature and a primary reason for discrepancy over the effectiveness of decapitation is a lack of solid empirical foundations.⁶ In order to develop an empirically grounded assessment of leadership targeting, this study examines variation in the success of leadership decapitation by developing a comprehensive dataset of 298 cases of leadership decapitation from 1945–2004. The overarching goal of this article is to explain whether decapitation is effective and to do this I will answer three questions: Under what conditions does leadership decapitation result in the dissolution of a terrorist organization? Does leadership decapitation increase the likelihood of organizational collapse beyond the baseline rate of collapse for groups over time? Finally, in

² The 2006 document also advocates advancing democracy, cutting off sources of funding, and denying the use of a nation as a base of operations. George W. Bush, "National Strategy for Combating Terrorism," (Washington, DC: The White House, September 2006).

³ "The Shining Path Comes Back," *The Economist*, 17 August 1996.

⁴ William Drozdiak, "Avowed 'Decapitation' of Basque Group in Doubt as Olympics Near," *The Washington Post*, 3 May 1992.

⁵ See Victoria Burnett, "France Arrests Basque Rebel Tied to Killings," *New York Times*, 17 November 2008.

⁶ Audrey Cronin references the lack of empirical research on decapitation. She argues, "Past experience with the decapitation of terrorist groups, however, is not seriously examined for insights into this case." Despite her acknowledgement of the lack of rigorous work on decapitation, she only references cases in which decapitation has contributed to organizational decline. See Audrey Kurth Cronin, "How Al-Qaida Ends: The Decline and Demise of Terrorist Groups," *International Security* 31, no. 1 (Summer 2006): 8.

cases where decapitation does not result in group collapse, to what extent does it result in organizational degradation and hinder a group's ability to carry about terrorist attacks?

Many academics and policy makers have argued in favor of targeting the leaders of terrorist organizations despite the variability of its success rate. Immediately following the killing of Abu Musab al-Zarqawi in June 2006, Eliot Cohen argued that while his death should weaken al Qaeda in Iraq, he acknowledged that it may not have as much difference as many had hoped.⁷ In a study of targeted killings in Israel Stephen David, in spite of concern over potential backlash, argued that decapitation is effective and should be retained.⁸ While many in the State Department have condemned Israel's targeted killings, the NSCT demonstrates the high priority placed upon removing the leadership of terrorist organizations. While there are laws against assassination, the Executive Order banning assassination does not apply to the command and control centers of terrorist organizations. Irrespective of questions regarding the legality of leadership targeting and its ability to destroy an organization, the conventional wisdom is that removing key leaders can greatly weaken a terrorist organization, and leadership targeting continues to be heralded as an effective strategy.

Optimism toward the success of decapitation is based primarily on theories of charismatic leadership. The concept of charisma has been pivotal in developing decapitation as a dominant counterterrorism strategy. Organizations headed by charismatic leaders, whose skills are viewed as essential to the operational success of the group, are seen as more volatile than other types of organizations. Social network analysis, which is rooted in sociological studies of organizational dynamics, would predict more variability in the success of decapitation. According to social network analysis, social ties between actors are the primary means by which to understand the functioning of an organization. Actors with the most social ties are crucial to organizational planning, and their removal can weaken an organization. If organizations have networks that are susceptible to the removal of central actors, decapitation should be effective. These two theoretical perspectives have both been used to bolster claims regarding the effectiveness of decapitation.

This article explores the effectiveness of decapitation as a counterterrorism policy. First, I identified the conditions under which decapitation results in organizational decline. A group's age, size, and type are all important predictors of when decapitation is likely to be effective. The data indicate that as an organization becomes larger and older, decapitation is less likely to result in organizational collapse. Furthermore, religious groups are highly

⁷ Eliot A. Cohen, *The Wall Street Journal*, 11 June 2006.

⁸ Stephen R. David, "Fatal Choices: Israel's Policy of Targeted Killing," *Mideast Security and Policy Studies* 51 (September 2002).

resistant to attacks on their leadership, while ideological organizations are much easier to destabilize through decapitation.

Second, the data also show that decapitation is not an effective counterterrorism strategy. Decapitation does not increase the likelihood of organizational collapse beyond to a baseline rate of collapse for groups over time. The marginal utility for decapitation is actually negative. Groups that have not had their leaders targeted have a higher rate of decline than groups whose leaders have been removed. Decapitation is actually counterproductive, particularly for larger, older, religious, or separatist organizations.

Finally, in order to determine whether decapitation hindered the ability of an organization to carry out terrorist attacks, I looked at three cases in which decapitation did not result in a group's collapse. The results were mixed over the extent to which decapitation has resulted in organizational degradation. While in some cases decapitation resulted in fewer attacks, in others the attacks became more lethal in the years immediately following incidents of decapitation. I argue that these results are largely driven by a group's size and age.

Ultimately, these findings indicate that our current counterterrorism strategies need rethinking. The data show that independent of other measures, going after the leaders of older, larger, and religious groups is not only ineffective, it is counterproductive. Moreover, the decentralized nature of many current terrorist organizations has proven to be highly resistant to decapitation and to other counterterrorism measures. The remainder of this article will proceed in five parts. First, I will look at existing explanations for leadership decapitation, focusing on theories of charismatic leadership and social network analysis. Second, I will outline the data and methodology used in this study. Third, I will identify the conditions under which decapitation is likely to result in organizational collapse. Fourth, I will evaluate the effectiveness of decapitation. Fifth, I will look at three cases to explore the extent to which decapitation can weaken an organization. I will conclude with a discussion of policy implications.

EXISTING EXPLANATIONS

Studies of Decapitation

The belief that decapitation is effective is based upon the notion that leadership is essential to the functioning of an organization. Kent Layne Oots argues that leadership is essential to the formation of terrorist organizations.⁹ "The formation of a terrorist organization, like the formation of any other

⁹ While Oots claims that leadership is important, he argues that little is known about the leadership of terrorist organizations. As a result, he does not take a stance on the success of leadership decapitation. Kent Layne Oots, "Bargaining with Terrorists: Organizational Considerations," *Terrorism* 13, no. 2 (March/April 1990).

political organization depends on the leadership's ability to recruit and retain a committed membership."¹⁰ If individuals do not have sufficient incentives to act on behalf of a terrorist organization, there will be a strong tendency to free ride. Mancur Olsen presents the concept of selective incentives as a solution to this free-rider problem.¹¹ The leader is responsible for ensuring that the group is able to provide selective incentives sufficient to maintain and attract members and to induce them to commit acts of violence.¹² It is the leader's job to provide incentives that are lower than the cost of membership in order to generate a surplus that can be used to lead the organization and supply goods to its members. While leadership is crucial to the provision of selective incentives, the removal of key leaders does not always result in organizational disintegration.¹³ According to Oots, while a group without political leadership can lose the political focus necessary to direct its behavior toward specific goals, it can still carry out terrorist activity even if it is no longer operates as a unified political movement. Furthermore, decapitation can cause the factionalization of an organization into smaller groups causing an increase in political violence as "smaller groups each become active and develop their own demands."¹⁴ While Oots recognizes the importance of leadership in the provision of selective incentives, he remains ambivalent regarding the ability of decapitation to result in organizational collapse.

Robert Pape and Stephen Hosmer have studied the effects of decapitation against state leaders. Pape responds to Colonel John Warden III who argues that capturing or killing a state leader is frequently a decisive strategy.¹⁵ Warden claims "leadership decapitation is the most critical element in determining a nation's will to fight."¹⁶ In contrast, Pape finds that leadership targeting is not likely to result in successful coercion for three reasons:¹⁷ it is hard to find individuals and kill them,¹⁸ the death of a leader during war often brings less policy change than is expected, and in most states succession is unpredictable. Furthermore, while decapitation can temporarily disrupt

¹⁰ Kent Layne Oots, "Organizational Perspectives on the Formation and Disintegration of Terrorist Groups," *Terrorism* 12, no. 3 (1989): 143.

¹¹ Mancur Olson, *The Logic of Collective Action: Public Goods and the Theory of Groups* (Cambridge: Harvard University Press, 1965), 51.

¹² Oots, "Organizational Perspectives on the Formation and Disintegration of Terrorist Groups," 141.

¹³ See Martha Crenshaw, "How Terrorism Declines," *Terrorism and Political Violence* 3, no. 1 (Spring 1991).

¹⁴ Oots, "Organizational Perspectives," 142.

¹⁵ John A. Warden, "Employing Air Power in the Twenty-First Century," in *The Future of Air Power in the Aftermath of the Gulf War*, ed. Richard H. Shultz Jr. and Robert L. Pfaltzgraff Jr. (Maxwell Air Force Base, AL: Air University Press, 1992), 65.

¹⁶ Robert A. Pape, *Bombing to Win* (Ithaca: Cornell University Press, 1996), 79.

¹⁷ Ibid.

¹⁸ Pape also makes this claim in his op-ed piece. See Robert A. Pape, "Wars Can't Be Won Only from Above," *New York Times*, 21 March 2003.

terrorist operations, it rarely leads to long-term gains.¹⁹ Hosmer looks at whether targeting state leaders has an effect upon the ability of the United States to “shape the policy and behavior of enemy states and other hostile actors.”²⁰ He argues that leadership attacks are rarely successful and finds that “an examination of past cases shows that direct attacks on leaders rarely produce wanted policy changes, often fail to deter unwanted enemy behavior, sometimes produce harmful unintended consequences, [and] frequently fail to kill the leader.”²¹ Like Pape, Hosmer focuses on operations against state leaders, yet he draws parallels between states and terrorist organizations. He argues that the arrests of Abimael Guzman, leader of Shining Path, and Abdullah Ocalan of the PKK may have weakened the organizations but did not result in their collapse.

There have also been studies on the effectiveness of decapitation against terrorist groups specifically. Stephen David focuses on the Israeli case and finds that while targeted killings have been successful, there are still reasons to believe that it could be a counterproductive policy.²² Daniel Byman argues that while decapitation has been effective in reducing the lethality of Hamas’ attacks, the number of attacks has increased overall.²³ Audrey Kurth Cronin identifies several cases in which decapitation has been successful, yet she acknowledges that serious research is still needed on the topic.²⁴ Overall, these authors find that decapitation has had variable success in reducing the severity and the number of terrorist attacks. Langdon et al. develop a more comprehensive empirical account of leadership decapitation and examine whether an organization disbands, divides, or radicalizes.²⁵ They find that a majority of organizations were unchanged by leadership decapitation and that none of the groups radicalized after the removal of their leaders. Internal disputes prior to leadership crises make groups more likely to splinter after decapitation. Contrary to conventional wisdom, they claim that hierarchically structured organizations are better suited to deal with leadership setbacks. Finally, they find that religious organizations have rarely disbanded because they provide a strong source of group cohesion, and groups that rely heavily

¹⁹ Robert A. Pape, “The Strategic Logic of Suicide Bombing,” *American Political Science Review* 97, no. 3 (August 2003): 356.

²⁰ Stephen T. Hosmer, *Operations Against Enemy Leaders* (Santa Monica: RAND, 2001), 1.

²¹ *Ibid.*, 19.

²² David, “Fatal Choices: Israel’s Policy of Targeted Killing.”

²³ Byman claims that this reduction in the lethality of attacks could be attributed to other counterterrorism policies. See Daniel Byman, “Do Targeted Killings Work?” *Foreign Affairs* 85, no. 2 (2006).

²⁴ See Cronin, “How Al-Qaida Ends.” Cronin cites the following cases as successful instances of decapitation: Direct Action, People’s Liberation Army, Manuel Rodriguez Patriotic Front, Covenant, the Sword and the Arm of the Law, the PKK, RIRA, and Aum Shinrikyo. While I agree with a majority of her cases, my dataset classifies Manuel Rodriguez Patriotic Front and the PKK as failures. I will discuss this further in my methodology.

²⁵ See Lisa Langdon, Alexander J. Sarapu, and Matthew Wells, “Targeting the Leadership of Terrorist and Insurgent Movements: Historical Lessons for Contemporary Policy Makers,” *Journal of Public and International Affairs* 15 (Spring 2004).

on a single leader's teachings are likely to withstand a crisis in leadership. There are limitations to this study. The data look at only thirty-five cases of leadership cases against nineteen small organizations with only one leader. Moreover, their study was not limited to terrorist organizations, and thus it is difficult to apply these findings to a study on terrorism.

I argue that disagreement and uncertainty regarding the effectiveness of decapitation is due in part to the weakness of empirical evidence. Existing work tends to be anecdotal, is based on studies of assassination of state leaders, or focuses on single cases. These studies are based primarily upon a small sample, do not look at statistical patterns, and overlook differences between different types of organizations. However, optimism toward decapitation continues to dominate current counterterrorism policies. In order to understand the prominence of leadership targeting, the remainder of this section will look at theories of charismatic leadership and social network analysis. While theories on charisma provide the basis for much of the optimism regarding the susceptibility of an organization to decapitation, social network analysis allows for more divergent findings regarding its efficacy.

Charismatic Leadership

The concept of charisma is often used to explain why decapitation should result in the collapse of terrorist organizations. This theory lies at the basis of the CIA's justification of "lethal covert operations" to remove Osama bin Laden and his high command."²⁶ Prominent instances of decapitation, including the PKK, Aum Shinrikyo, and Shining Path, have involved the removal of charismatic leaders. These leaders were seen as crucial to the continued success of the organization. Weber defines charisma as a "quality of an individual personality by virtue of which he is set apart from ordinary men and treated as endowed with supernatural, superhuman or at least specifically exceptional powers or qualities."²⁷ Leadership is maintained on the basis of these qualities. The leader provides the basis for a group's strength and cohesion through agenda setting and maintaining successful recruitment policies. A charismatic claim to authority breaks down if the leader's "mission is not recognized by those to whom he feels he has been sent."²⁸ The legitimacy of a leader's authority is a product of recognition and "springs from faithful devotion."²⁹ Charismatic authority is by its nature unstable and contingent

²⁶ Rupert Cornwell, "Campaign against Terror: A Justifiable Tool in the War against Terrorism," *The Independent*, 6 November 2002.

²⁷ Max Weber, *The Theory of Economic and Social Organization* (New York: Free Press, 1964), 358.

²⁸ Max Weber, *From Max Weber: Essays in Sociology*, trans. H. H. Gerth and C. Wright Mills (New York: Oxford University Press, 1946), 246.

²⁹ *Ibid.*, 249.

upon recognition as a “leader,”³⁰ and organizations with a charismatic leader tend to be more volatile and unstable than other types of organizations.³¹

Theoretically, charisma does not hold up as an explanation for when decapitation is likely to result in organizational disintegration.³² Weber refers to “the institutionalization of charisma” in order to explain whether the transfer of authority affects the survival of an organization that has experienced the death of its charismatic leader.³³ He claims that like bureaucratic authority, charismatic authority can become routinized. He wrote, “Perhaps it is even more important that when the organization of authority becomes permanent, the staff supporting the charismatic ruler becomes routinized.”³⁴ However, if charisma can be transferred, the removal of a leader would not necessarily result in the collapse of an organization. Michael Freeman argues that the collective action problems faced by revolutionary organizations can be overcome by charisma.³⁵ They find that while organizations with charismatic leaders tend to be more susceptible to leadership attacks, over time charismatic leadership can become more institutionalized and more resilient to leadership attacks. Organizations in which the leader provides both key operational and inspirational roles are most likely to fall apart after decapitation.

Religious organizations are seen as more likely to have charismatic leaders who are essential to setting and maintaining organizational goals. Thus according to theories of charismatic leadership these groups should be weakened by decapitation. Given increases in the amount of religiously driven terrorism, this view continues to hold a prominent place within the literature on terrorism.³⁶ However, there are a number of problems with this view. First, theories of charismatic leadership overpredict the success of decapitation. The effect of decapitation is highly variable, and religious organizations tend to be most resistant to leadership decapitation.³⁷ Second, many studies

³⁰ Geoffrey K. Nelson, *Cults, New Religions and Religious Creativity* (London: Routledge and Kegan Paul, 1987), 117.

³¹ See Lorne Dawson, “Crises in Charismatic Legitimacy and Violent Behavior in New Religious Movements,” in *Cults, Religion, and Violence*, eds., David G. Bromley and J. Gordon Melton (Cambridge: Cambridge University Press, 2002).

³² Due to the difficulties in identifying whether a leader is in fact charismatic, this study does not determine whether the removed leader possessed charismatic qualities. Instead, I test the strength of the charisma claim, by evaluating leadership decapitation in general.

³³ Nelson, *Cults, New Religions and Religious Creativity*, 120.

³⁴ Weber, *From Max Weber: Essays in Sociology*, 297.

³⁵ See Michael Freeman “The Headless Horseman: A Theoretical and Strategic Assessment of Leadership Targeting,” unpublished manuscript, Naval Postgraduate School (2009). Freeman argues that the likelihood of success can be determined by looking at the interaction of operational and inspirational leadership.

³⁶ Jean-Francoise Mayer, “Cults, Violence, and Religious Terrorism: An International Perspective,” *Studies in Conflict and Terrorism* 24 (September 2001).

³⁷ The data in this study proves this point. See also Langdon, Sarapu, and Wells, “Targeting the Leadership of Terrorist and Insurgent Movements: Historical Lessons for Contemporary Policy Makers.”

on the fragility of charismatic leadership have focused primarily on cults and religious groups.³⁸ While some terrorist groups can also be classified as cults, charisma should be more directly applicable to cults and millenarian groups than to religious terrorist organizations more generally. It seems plausible that terrorist organizations, which are also classified as cults, would be more susceptible to collapse than others. Third, terrorist organizations have adapted in order to diminish their susceptibility to leadership attacks. In a hierarchical organization, the leader is more directly responsible for planning and recruitment. As a result, hierarchical organizations are more easily weakened, and organizations have become increasingly decentralized in response.³⁹ Moreover, as the institutional school of organizational theory suggests, organizations tend to develop “a life of their own, irrespective of the desires of those in control.”⁴⁰ Organizations can pursue their goals without an operational or spiritual leader, thus highlighting the need to reformulate both the charismatic model and its predictions.

Social Network Analysis

Social network analysis has become a leading method of understanding the vulnerability of terrorist organizations. Social network analysis explores relationships among social entities, and the structure of a group or a larger social system is determined by patterns of relationships among the actors.⁴¹ Thus identifying organizational structure is essential in understanding the ability to weaken an organization. While there are a number of different structural configurations, a majority of the literature on terrorism identifies organizations as either hierarchical or decentralized. The most common form of the hierarchical organization is the “long-linked, vertically integrated organization.”⁴² There is a general consensus in social network analysis that hierarchically structured organizations are more susceptible to leadership targeting, while the literature is divided over the ability to weaken decentralized organizations or local networks.⁴³ Decentralized organizations can take several shapes: chain networks where “the members are linked in a row and

³⁸ See Nelson, *Cults, New Religions and Religious Creativity*; Steven L. Carlton-Ford, *Cults and Non Conventional Religious Groups: The Effects of Ritual and Charisma* (New York: Garland Publishing, 1993); and Marc Galanter, *Cults: Faith, Healing, and Coercion* (New York: Oxford University Press, 1999).

³⁹ See John Arquilla and David Ronfeldt, *Networks and Netwars: The Future of Terror, Crime, and Militancy* (Santa Monica: RAND, 2001); Michele Zanini, “Middle Eastern Terrorism and Netwar,” *Studies in Conflict and Terrorism* 22 (July/September 1999); and Ami Pedahzur and Arie Perlinger, “The Changing Nature of Suicide Attacks: A Social Network Perspective,” *Social Forces* 84, no. 4 (June 2006).

⁴⁰ Charles Perrow, *Complex Organizations: A Critical Essay* (New York: McGraw Hill, 1986), 167.

⁴¹ Stanley Wasserman and Katherine Faust, *Social Network Analysis: Methods and Applications* (Cambridge: Cambridge University Press, 1994).

⁴² James D. Thompson, *Organizations in Action: Social Sciences Bases of Administrative Theory* (New Brunswick: Transaction Publishers, 2007), 75.

⁴³ See Byman, “Do Targeted Killings Work?”

communications must flow through an adjacent actor before getting to the next,” star networks “where members are tied to a central node and must go through it to communicate with each other,” and all-channel networks “where everyone is connected and can communicate directly with everyone else.”⁴⁴ According to Thompson decentralized organizations have components that are reciprocally interdependent and that are segmented and arranged into self-sufficient clusters.⁴⁵ Ami Pedahzur characterizes nonhierarchical organizations as having horizontal ties, which can operate independently or within a group.⁴⁶

Placement of the leader and key actors within a terrorist organization is essential to understanding its susceptibility to decapitation. According to Wasserman and Faust, actors with a high degree of prominence are involved extensively in relationships with other actors, making them more visible.⁴⁷ In a hierarchical organization, leaders can be clearly identified and are more visible. They have more social ties with other actors in the organizations and are more directly responsible for scheduling and planning organizational activities. In decentralized organizations, key actors are referred to as “hubs,” individuals within a network with the most social ties.⁴⁸ They are the critical communicative elements of a network and are responsible for ensuring the distribution of information and logistical support. While leaders may or may not be the actors with the most social ties, the notion that hubs are critical to the operational success of an organization provides a theoretical basis for optimism toward decapitation.⁴⁹ Most of the communication within and between social networks goes through the hubs, and their removal should make the organization more vulnerable. Pedahzur argues that hubs are “the glue that binds all of its components: logistics, intelligence, recruitment and dispatching.”⁵⁰ As a result, “damage to one of the hubs will indeed lead to the speedy disintegration of the network so that the more hubs there are,

⁴⁴ There are other forms, but these are the most common. See Arquilla and Ronfeldt, *Networks and Netwars*.

⁴⁵ Thompson, *Organizations in Action*, 76.

⁴⁶ See Pedahzur and Perlinger, “The Changing Nature of Suicide Attacks: A Social Network Perspective.” Pedahzur references the work of Arquilla and Ronenfelt who show that horizontal networks can take on many different structures. See Arquilla and Ronfeldt, *Networks and Netwars: The Future of Terror, Crime, and Militancy*.

⁴⁷ There are two measures of prominence: centrality and prestige. See Wasserman and Faust, *Social Network Analysis: Methods and Applications*.

⁴⁸ Pedahzur argues that horizontal networks can operate within or independently of a group. While focusing on decentralized organizations, he is specifically concerned with local networks that operate under the framework of a larger movement. See Pedahzur and Perlinger, “The Changing Nature of Suicide Attacks: A Social Network Perspective.”

⁴⁹ Arquilla et al. argue that location or degree of an actor’s centrality is essential to understanding the structure and function of a network. Arquilla and Ronfeldt, *Networks and Netwars: The Future of Terror, Crime, and Militancy*.

⁵⁰ Pedahzur and Perlinger, “The Changing Nature of Suicide Attacks: A Social Network Perspective.”

the greater the resilience of the network against direct attacks.”⁵¹ Similarly Marc Sageman writes “if enough hubs are destroyed, the network breaks down into isolated, non-communicating islands of nodes.”⁵² In an analysis of al Qaeda, Deibert and Stein argue that destroying the center and removing the leader will weaken the organization.⁵³ While identifying and removing key hubs should be an effective means by which to weaken a terrorist organization, hubs do not always occupy positions of central leadership. For example local Palestinian networks do not have leaders and the organization’s central leadership has limited control over local cells.⁵⁴ If there were a clear separation between hubs and leaders, then leadership targeting would be ineffective in weakening an organization. However, in cases where there is overlap between the leader and the hub, decapitation should weaken a decentralized organization.

Through agent-based modeling Carley et al. examine variation in the ability to destabilize different types of organizations. Destabilization occurs when the rate of information flow has been reduced, when a decision-making body can no longer reach consensus, and when the ability of the organization to carry out tasks and interpret information has been impaired.⁵⁵ They find that while leadership removal can be effective, decentralized organizations are much harder to weaken than hierarchical organizations. While leaders with the highest cognitive loads can be targeted in order to destabilize the network,⁵⁶ it is difficult to identify the hub whose removal would destabilize the network.⁵⁷ Furthermore, the removal of a leader or hub could also result in organizational adaptation, resulting in a new emergent leader. The authors support the claim that it is easier to weaken a hierarchical organization, while new leaders are more likely to emerge in decentralized groups.⁵⁸

⁵¹ Ibid.

⁵² He claims that the arrests of key hubs have been successful in breaking up smaller networks, and if key hubs within the global Salafi jihad networks were removed, they would be unable to carry out large-scale attacks. Marc Sageman, *Understanding Terror Networks* (Philadelphia: University of Pennsylvania Press, 2004), 140. Sageman defines a small-world network as having dense interconnectivity. He juxtaposes this structure to a hierarchically structured organization. Further Sageman finds that while hierarchical networks can be eliminated through leadership decapitation, small-world networks require the elimination of hubs.

⁵³ Ronald J. Deibert and Janice Gross Stein, “Hacking Networks of Terror,” *Dialog-IO* (Spring 2002): 7.

⁵⁴ Pedahzur and Perlinger, “The Changing Nature of Suicide Attacks: A Social Network Perspective.”

⁵⁵ Kathleen Carley, Ju-Sung Lee, and David Krackhardt, “Destabilizing Networks,” *Connections* 24, no. 3 (2002).

⁵⁶ An actor with the highest cognitive load has “the most people to talk to, the most information to process, the most tasks to do, the hardest tasks to do, the most people to negotiate with to get the job done, etc.” See .ibid.

⁵⁷ Ibid., 86.

⁵⁸ Focusing on the Israeli case, Daniel Byman also argues that targeted killings are less effective against decentralized organizations. See Byman, “Do Targeted Killings Work?” Thompson argues that

While social network analysis provides support for the claim that there is variation in the success of decapitation, there are limitations to its use. First, these studies are static and do not allow for the possibility that the susceptibility of organizations to leadership attacks can change over time. Second, the major problem facing studies of social network analysis is a lack of empirical grounding. These studies focus on single cases, making it difficult to generalize across cases. This lack of comparative analysis is problematic when formulating counterterrorism policy. Despite these limitations, the concept of organizational structure is essential in determining whether decapitation is an effective counterterrorism strategy. In this study, I treat age, size, and type as proxies for different aspects of a group's structure. This provides a way to identify whether certain organizations are more or less susceptible to leadership targeting.⁵⁹

METHODOLOGY

Dependent Variable

In order to understand whether and when decapitation is an effective counterterrorism strategy, this project develops the following three standards of assessment for decapitation. First, I identify the conditions under which decapitation results in organizational collapse. Second, I determine the effectiveness of decapitation as a counterterrorism strategy by comparing the lifespan of groups that have and have not undergone decapitation. Finally, I look at whether decapitation weakened the group and affected its ability to carry out attacks. The datasets developed for this study determine whether a group's susceptibility to decapitation is correlated with an organization's age, size, type, who was targeted, and whether the leader was arrested or killed. I use quantitative analysis to determine whether decapitation is effective and case studies to assess the extent to which leadership targeting resulted in organizational degradation for specific organizations.

The dependent variable is coded according to two different measures of effectiveness: decisiveness and organizational degradation. First, the dependent variable is coded according to whether the organization remained active or collapsed after decapitation; this is a measure of decisiveness. If an organization was inactive for two years following the incident of decapitation, the case was coded as a success. Alternatively if activity declined but resumed

decentralization dilutes the power structure of an organization by creating more power positions and by limiting an organization's dependence on each individual leader. See Thompson, *Organizations in Action*.

⁵⁹ Ideally, I would identify the organizational structure of each group ex ante. However, I was not able to collect data on the structure of enough groups in order to incorporate this data into the large n study. As a result, I utilize case studies as a way to generate theories regarding organizational structure in other chapters of my dissertation.

within two years, the case was coded as a failure. I based the two-year criteria on the United States Department of State designation of Foreign Terrorist Organizations (FTO). "Designations are valid for two years, after which they must be redesignated or they automatically expire. Redesignation after two years is a positive act and represents a determination by the Secretary of State that the organization has continued to engage in terrorist activity and still meets the criteria specified in law."⁶⁰ If an organization no longer engages in terrorist activity, it is removed from the list.⁶¹ As this paper intends to provide policy prescriptions, two years of inactivity provides a practical measure of success.⁶² There were three instances in which an organization technically dissolved after decapitation, yet its members continued to carry out terrorist activity with the same goal, but under a different organization. These cases are coded as failures. For example, following the arrests and suicides of its two founders, the Baader-Meinhof gang became known as the Red Army Faction.⁶³ While Baader-Meinhof no longer existed as a group, the Red Army Faction had the same goals and was formed from the remnants of the Baader-Meinhof. Second, the dependent variable evaluates the degree to which decapitation results in organizational degradation. This data look at changes in the frequency and casualty rate of terrorist attacks over time. In order to determine variance in the rate of attacks following an incident of decapitation, I collected data on Hamas, ETA, and FARC. This data provide for more substantial variation on the dependent variable by looking at whether decapitation affected the number of attacks and the number of individuals killed or injured in each attack. It is important to distinguish between decisiveness and degradation, so that it is possible to look at the effects of decapitation for groups that were able to withstand leadership attacks and carry out activity. Instead of assessing whether an organization collapses or survives a leadership attack, the data on degradation allow for richer analysis of the dependent variable and can be used to understand whether leadership attacks weakened an organization or resulted in an increase in the number and casualty rate of attacks.

⁶⁰ Office of the Coordinator for Counterterrorism, U.S. Department of State, 2001 Report on Foreign Terrorist Organizations, available at <http://www.state.gov/s/ct/rls/rpt/fto/2001/5258.htm>. The 2001 report on foreign terrorist organizations from the office of the coordinator for counterterrorism designates foreign terrorist organizations.

⁶¹ The U.S. Department of State does not require that an organization be inactive for two years in order to be removed from the list of FTOs.

⁶² This is a fairly restrictive criterion for success. Michael Freeman has a much more permissive criteria for evaluating decapitation. See Freeman and McCormick, "Leadership Targeting of Terrorist Groups: A Strategic Assessment." A two-year period of inactivity would send a strong signal that the organization has ceased to carry out activity and is not just regrouping for future attacks. I think that the two-year criterion for inactivity is more useful than looking at decline. An organization may experience a significant decline in activity and still be very active. In order to further understand this distinction, I also look at the change in the number of incidents, deaths, and injuries for three organizations.

⁶³ Sean K. Anderson and Stephen Sloan, *Historical Dictionary of Terrorism* (Lanham: The Scarecrow Press, 2002), 415–16.

Data Collection

In order to systematically identify the conditions under which leadership decapitation is likely to result in the cessation of terrorist activity,⁶⁴ I identified 298 occurrences of leadership decapitation against 96 organizations globally from 1945–2004.⁶⁵ The cases were drawn from an encyclopedia on the history of terrorist organizations,⁶⁶ Lexis-Nexis searches of newspapers, the Memorial Institute for the Prevention of Terrorism (MIPT) database, and the U.S. State Department's Patterns of Global Terrorism. Leadership is defined as either the top leader of an organization or any member of the upper echelon who holds a position of authority within the organization. This definition is admittedly broad. In order to identify the top leader or a member of the upper echelon, I evaluated each case based on existing empirical evidence. If an individual was referred to as a leader or a member of the upper echelon, then that individual was coded as such in the dataset. Members of the upper echelon are individuals referred to as leaders within the organization but were not listed as the "top leader." In order to collect the set of decapitation incidents, I began with a comprehensive list of 169 terrorist organizations and then searched each organization in order to look for cases of leadership targeting. An incident of decapitation refers to the arrest or killing of a leader. I exclude cases where the leader is killed or removed by other members within the organizations. I do not have the universe of cases of leadership decapitation, yet the sample is large enough to evaluate whether and when the removal of a leader results in an organization's demise.

The data was examined according to two different units of analysis. First, I treated each case of decapitation as a separate observation, resulting in 298 observations. However, many organizations experienced multiple decapitations in a single year. In order to limit the amount of bias by over-reporting the significance of certain organizations and variables, I also coded incidents of decapitation by year for each organization, resulting in 187 observations. This dataset includes the number and type of attacks per year and organization. While there was some minor variation in the effect of the independent variables in the different data sets, the conditions under which decapitation was effective remained consistent. I will consider these differences in the next section.

⁶⁴ Bruce Hoffman defines terrorism as "violence—or, equally important, the threat of violence—used and directed in pursuit of, or in service of, a political aim." I define terrorism as violence or the threat of violence used by a non-state actor in the pursuit of a political goal. While this definition does not exclude state sponsored terrorist organizations, I do not consider such cases. See Bruce Hoffman, *Inside Terrorism* (London: Victor Gollancz, 1998).

⁶⁵ I excluded organizations that were formed before 1945.

⁶⁶ See Anderson and Sloan, *Historical Dictionary of Terrorism*.

A study of effectiveness requires looking at the rate of organizational decline for groups that did not undergo decapitation. Once a baseline for organizational decline has been established it is possible to determine the marginal value of decapitation generally and for specific values of the independent variables. As a result, I also created a dataset of 169 terrorist organizations based on the following criteria. First, I identified terrorist organizations that were created after 1945 from Anderson and Sloan's *Historical Dictionary of Terrorism*.⁶⁷ Second, I supplemented this list with groups listed in the *Patterns of Global Terrorism*. Third, I excluded groups that were affiliated directly with a government including government sponsored death squads. While this list does not include all terrorist organizations, I have covered major terrorist organizations in the twentieth century, and the sample is large enough to produce significant results regarding trends over time. This data provide a way to evaluate the rate of organizational collapse and to identify the marginal effect of decapitation on different types of organizations. If the same variables that are correlated with the success of decapitation also result in the decline of organizations that have not experienced decapitation, this would indicate that certain types of organizations are more prone to destabilization in general. Decapitation would thus be unnecessary. I look at whether an organization's age, size, and type have an affect upon the rate of collapse absent decapitation and whether decapitation changes a group's failure or survival rate.

WHEN IS DECAPITATION EFFECTIVE?

This section identifies the conditions under which decapitation is likely to be successful. The data used for this analysis treats organizational activity as a binary variable; an organization is either active or inactive. I use cross tabulations and logit analysis in order to assess the effectiveness of the independent variables and CLARIFY⁶⁸ to identify the probabilities that an organization will collapse given different values of the independent variables. See Table 1 for logit coefficients. The statistical data suggest that organizational age, type, and size are key in identifying when an organization is susceptible to decapitation. Younger and smaller organizations are more likely to cease activity after the removal of a leader. Religious organizations are resilient to decapitation while ideological organizations are more susceptible to collapse.

⁶⁷ Anderson and Sloan, *Historical Dictionary of Terrorism*.

⁶⁸ CLARIFY: Software for Interpreting and Presenting Statistical Results, Version 2.0, created by Michael Tomz, Jason Wittenberg, and Gary King (Cambridge, MA: Harvard University, 1 June 2001), available at <http://gking.harvard.edu>.

TABLE 1 Logit Model of Terrorist Group Fate After Decapitation

Variable	Coefficient	Standard Error
Age	-.529***	.180
Size	-.188*	.111
Religious	-1.420**	.632
Ideological	1.186*	.667
Separatist	0.423	.576
Arrest or Death	-.282	.454
Top Leader or Upper Echelon	-1.183	.875
Cons	.722	.966
Number of Observations	294	
LR Chi-squared (6)	60.29	
Prob>Chi-Sq.	0.000	

Note: Entries are logit coefficients

* = $p < 0.1$ ** = $p < 0.05$ *** = $p < 0.01$.

Characteristics of Decapitation

First, I looked at specific features of each decapitation. I identified whether the decapitation was an arrest or a death and whether the individual targeted was a top leader or a member of the upper echelon. I predict that the death of a leader should result in the dissolution of an organization more often than the arrest of a leader. It is plausible that terrorist activity can continue and even increase following the arrest of a group's leader. A leader may be able to maintain influence while in prison, and members can engage in further activity to facilitate the release of their leaders.⁶⁹ For example, after the arrest of Baader-Meinhof leaders, the remaining members of the organization continued to carry out terrorist activity in order to free their leaders from prison.⁷⁰ The Black September Organization took nine Israeli hostages at the 1972 Munich Olympics and demanded the release of 236 imprisoned Palestinians and five terrorists being held in Germany, including Andreas Baader and Ulrike Meinhof.⁷¹ While the arrests of Baader and Meinhof did not cause the Munich kidnappings, the arrests were related to the Munich attack. Second, I predict that the removal of a top leader will result in group collapse more frequently than the removal of members of the upper echelon. In most terrorist organizations, the leader has little direct contact with the active members of the organization.⁷² While the leader may be necessary to authorize a specific activity, the upper echelon ensures operational success. While members of the upper echelon may be crucial for carrying out terrorist

⁶⁹ See Cronin, "How Al-Qaida Ends."

⁷⁰ Anderson and Sloan, *Historical Dictionary of Terrorism*, 415.

⁷¹ Hoffman, *Inside Terrorism*, 71.

⁷² See J. K. Zawodny, "Infrastructures of Terrorist Organizations," in *Perspectives on Terrorism*, ed. Lawrence Zelic Freedman and Yonah Alexander (Wilmington: Scholarly Resources Inc., 1983).

TABLE 2 Impact of Leadership and Decapitation Type on Group Fate

	Leader Killed	Leader Arrested	Upper Echelon	Upper Echelon
Remained Active	36 69.23%	55 78.57%	67 93.06%	88 84.62%
Collapsed	16 30.77%	15 21.43%	5 6.94%	16 15.38%

Pearson $\chi^2 = 12.9978$ Pr = 0.005.

acts, the upper echelon can be replaced more easily than a leader. Removing both the upper echelon and the leader should severely hinder the ability of an organization to coordinate and to carry out an activity. The leader, by virtue of the leadership position, obtained a large amount of support. This variable was not statistically significant in the multivariate analysis. The coefficient is, however, negative, indicating that removing the top leader as apposed members of the upper echelon is more effective in killing an organization.

I also looked at whether the decapitation was an arrest or a death. This was not statistically significant in the multivariate analysis. However, I created a variable that combined the leadership variable with whether decapitation was an arrest or death (Table 2). The death of the leader resulted in the collapse of an organization in 30 percent of the cases, and the arrest of the top leader was successful in 21 percent of the cases. The death of the upper echelon was successful in 7 percent of the cases, while the arrest of the upper echelon was successful in 15 percent of the cases. The differences between whether a leader was arrested or killed were not consistent with the hypothesized findings. Arrest was more effective in the case of the upper echelon, while killing the top leader was more effective than arresting the top leader. This finding confirms, in part, the hypothesis that the death of a leader should result in the collapse of an organization more frequently. However, the arrest of the upper echelon is more successful than killing members of the upper echelon. This finding could be explained in part by the argument that arresting members of the upper echelon is more effective because they can provide essential intelligence. Cronin argues, "There is some reason to believe that arresting a leader is more effective in damaging a group than is killing or assassinating him."⁷³ She claims that killing a terrorist leader may increase publicity for the cause and create a martyr that could then attract new members to the organization. Cronin's argument provides a more theoretical basis for the finding that decapitation is rarely effective. An increase in publicity and sympathy can have adverse reactions.

⁷³ Cronin, "How Al-Qaida Ends," 22.

Organizational Type

Classifying terrorist groups is an important step in identifying when decapitation works.⁷⁴ Alex Schmid and Albert Jongman argue that because scientific explanation necessitates the systematic ordering of empirical data, the use of typologies is essential.⁷⁵ Typologies can distinguish between actors, motivations, goals, or purpose.⁷⁶ David E. Long makes an important distinction between ethnic or national organizations and doctrinal organizations. Ethnic/national organizations “seek to achieve or maintain independence or autonomy for a specific ethnic or national group, and doctrinal organizations . . . use political ideologies or religious dogmas to justify terrorist acts intended to redress perceived social, economic, or political grievances.”⁷⁷ These groups have different tactics and, often, different organizational structures. Classifying groups according to purpose is a useful way to make predictions about the relationship between group behavior and organizational structure.

It is also possible to code organizations according to the means by which they try to achieve their goals.⁷⁸ In analyzing the psychology of political leaders, Gerald Post looks at variation in the psychology of members and leaders in organizations with different goals.⁷⁹ Post et al. identify seven indicators of group goals. The group (1) believes that radical change is necessary, (2) believes that violence is necessary, (3) specifies its targets, (4) expands the spread of targets from specific to general, (5) emphasizes the historical sins of a designated group, (6) characterizes group members as righteous, and (7) idealizes the goals of a terrorist group or revolutionary nation. While it is important to understand the means by which a group wishes to change society, target certain groups, or work within the confines of an existing system, I argue that looking at organizational type can capture these indicators.

⁷⁴ See Paul Wilkinson, *Political Terrorism* (London: Macmillan, 1974). Schultz makes an attempt to refine Wilkinson's study and refers to repressive terrorism and “establishment terrorism.” See Richard Schultz, “Conceptualizing Political Terrorism: A Typology,” *Journal of International Affairs* 32 (Spring/Summer 1978). For further analysis on these categories see Grant Wardlaw, *Political Terrorism: Theory, Tactics, and Counter-Measures* (Cambridge: Cambridge University Press, 1989); David Whittaker, ed. *The Terrorism Reader* (London: Routledge, 2001); and Anderson and Sloan, *Historical Dictionary of Terrorism*. Sloan and Anderson reference Schultz in identifying different types of actors. See Anderson and Sloan, *Historical Dictionary of Terrorism*.

⁷⁵ Alex P. Schmid and Albert J. Jongman, *Political Terrorism: A Guide to New Actors, Authors, Concepts, Databases, Theories, and Literature* (Amsterdam: North-Holland Publishing Co., 1988), 39.

⁷⁶ I use the terms purpose and goals interchangeably in the paper.

⁷⁷ David E. Long, *The Anatomy of Terrorism* (New York: The Free Press, 1990), 29.

⁷⁸ See Gerald M. Post, Keven G. Ruby, and Eric D. Shaw, “The Radical Group in Context: 1. An Integrated Framework for the Analysis of Group Risk for Terrorism,” *Studies in Conflict and Terrorism* 25 (April 2002); and Gerald M. Post, Keven G. Ruby, and Eric D. Shaw, “The Radical Group in Context: 2. Identification of Critical Elements in the Analysis of Risk for Terrorism by Radical Group Type,” *Studies in Conflict and Terrorism* 25 (April 2002).

⁷⁹ See Gerald Post, *Leaders and Their Followers in a Dangerous World* (Ithaca: Cornell University Press, 2004).

Most ideological groups, for example, seek radical social change. Separatist groups try to set up a separate state or change their political status within a particular country. Like ideological groups, religious groups also advocate radical social change. While it is important to understand group means, this study focuses instead on a group's particular goals.

In the dataset created for this study cases are coded as religious, ideological, or separatist.⁸⁰ Ideological organizations aim to transform society according to a political ideology and include Marxist, Leninist, social revolutionary, fascist, and white-supremacist organizations. There are however problems in categorizing terrorist groups. Long argues that, "no attempt to sort terrorist groups into categories can be entirely successful."⁸¹ Hezbollah, for example, can be classified as both separatist and religious, while the PKK pursues both nationalist and Marxist goals.

In order to allow for this overlap, I treat each category as a distinct dummy variable so that organizations can also be coded as religious/separatist, separatist/ideological, and ideological/religious.

The susceptibility of organizations to decapitation should vary based on organizational type. According to theories of charismatic leadership, religious and millenarian organizations should be more likely to have a charismatic leader than other types of organizations and should thus be more likely to fall apart.⁸² Ideological organizations would seem likely to have a leader who is crucial in perpetuating and teaching the ideology upon which the organization is based. While separatist organizations often have local networks that are responsible for much of the operations, the presence of a top leader with charismatic attributes would make separatist organizations also vulnerable to decapitation. The charismatic leadership model would thus overpredict the occurrence of collapse following decapitation.

The literature on social network analysis explores variation in the ability of different group types to withstand attacks. Cynthia Stohl and Michael Stohl argue that ties between actors in an ethnically based organization tend to be more insular as they recruit from a known and closed group of potential participants.⁸³ The narrow distance between actors allows for efficient transmission of information and fosters robustness. Their study finds that in ethnically based organizations, smaller networks have very strong hubs that can be identified and removed, potentially weakening the local network, while the larger overarching organization is highly resilient. Moreover, ideological or doctrinal movements, such as the German Red Army Faction

⁸⁰ I use the term separatist as opposed to ethno-nationalist to avoid analytical confusion over the meaning of "ethno." It can be argued that religious organizations are also ethno-nationalist.

⁸¹ Long, *The Anatomy of Terrorism*, 29.

⁸² See Carlton-Ford, *Cults and Non Conventional Religious Groups*; and Galanter, *Cults: Faith, Healing, and Coercion*.

⁸³ See Cynthia Stohl and Michael Stohl, "Networks, Terrorism, and Terrorist Networks," (University of California at Santa Barbara, 2002).

and certain American militia organizations “are much easier to penetrate and join.”⁸⁴ Because membership is based on ideological belief and not ethnic identity, the organizations are easier to penetrate, and it should be easier to identify and target key leaders. The random destruction of cells and key actors can make the organization more vulnerable.

I predict that ideological organizations will be most susceptible to leadership decapitation. Ideological groups seem likely to be dominated by an influential figure whose removal would weaken the focus and purpose of the organization. Furthermore, Audrey Kurth Cronin argues that right and left wing groups often have a difficult time persisting over generations. These groups “were notorious for their inability to articulate a clear vision of their goals that could be handed down to successors after the first generation of radical leaders departed or were eliminated.”⁸⁵ Religious organizations should be most difficult to destabilize after the removal of a leader.⁸⁶ Studies in network analysis have found that religious organizations tend to be more decentralized and are thus harder to weaken. Moreover, religion has a sacred element that inspires a level of dedication not seen in other movements, resulting in greater resilience and longer lifespan.⁸⁷ Religion is often integral to individual identity, particularly to those involved in religiously motivated terrorist organizations. According to Stohl and Stohl identity based organizations, which can include both religious and separatist organizations, are hard to penetrate. Religious and separatist movements also tend to have a strong base of community support.⁸⁸ Cronin argues that “broader popular support is usually the key to the greater average longevity of ethnic-nationalist/separatist groups in the modern era.”⁸⁹ Thus separatist organizations should also be highly resistant to leadership decapitation.

The dataset confirms these predictions and shows that religious organizations are the least likely to fall apart after decapitation while ideological organizations are the most likely to suffer from leadership targeting (see Table 3). Less than 5 percent of religious groups ceased activity after decapitation compared to 25 percent of nonreligious organizations. Decapitation was successful against 32 percent of all ideological organizations, while decapitation

⁸⁴ Ibid.

⁸⁵ See Cronin, “How Al-Qaida Ends,” 23.

⁸⁶ An important caveat needs to be added here. I assume that religious groups tend to be decentralized in structure. However, there are a number of religiously motivated terrorist organizations that are centralized. For example, Hamas’ leadership is more centralized, while other aspects of the organization are more decentralized. Lashkar-e-Taiba in Pakistan/Kashmir is highly centralized. For the purposes of theory building, I assume that religious groups tend toward decentralization.

⁸⁷ See David C. Rapoport, “Fear and Trembling: Terrorism in Three Religious Traditions,” *American Political Science Review* 78, no. 3 (September 1984).

⁸⁸ See Audrey Kurth Cronin, “Behind the Curve: Globalization and International Terrorism,” *International Security* 27, no. 3 (2002/2003): 40. For a discussion on the decline of different types of terrorist organizations see Seth G. Jones and Martin C. Libicki, *How Terrorist Groups End: Lessons for Countering Al-Qa’ida* (Santa Monica, CA: RAND, 2008).

⁸⁹ See Cronin, “Behind the Curve,” 40.

TABLE 3 Impact of Typology on Organizational Fate

	Separatist	Religious	Ideological
Remained Active	125	111	80
Collapsed	15 10.71%	5 4.31%	39 32.77%

Pearson $\chi^2(5) = 38.6852$ Pr = 0.000.

was successful against only 7 percent of all nonideological groups. Finally, while the bivariate results show that separatist organizations are highly resistant to leadership attacks, the variable capturing separatist organizations was not statistically significant in the multivariate logit analysis. Thus, the remainder of this discussion will focus on religious and ideological groups. These statistics remain virtually unchanged when looking at the data per year. I used CLARIFY to estimate the likelihood of organizational disintegration. Holding all other variables at the mean and varying organizational typology, the data show that ideological organizations are 24 percent more likely than religious organizations to fall apart after decapitation.

I also look at organizational structure as a possible explanation for these results. If certain types of organizations are more likely to develop specific structures, then structure itself is an important component of group resilience to decapitation. Much of the literature on social network analysis argues that hierarchical organizations are easier to destabilize than decentralized organizations. The resilience of religious organizations and the high rate of collapse for ideological organizations are consistent with this perspective. It is frequently argued that terrorist organizations, and especially religious organizations, have evolved and are becoming more decentralized in structure. Local diffuse networks are more adaptive, stronger, and more resistant to counterterrorism measures.⁹⁰ The resilience of religious organizations and the weakness of ideological organizations to decapitation would seem to bolster this claim. The analysis of organizational age and size provide further evidence for the claim that organizational structure is a key causal mechanism.

Organizational Age

The third variable measures the age at which an organization experienced decapitation. This variable was coded according to when an organization began conducting terrorist activity. I looked at the number of years that an organization had been active at the time of decapitation. Organizations were

⁹⁰ See Zanini, "Middle Eastern Terrorism and Netwar"; David Tucker, "What Is New About the New Terrorism and How Dangerous Is It?" *Terrorism and Political Violence* 13, no. 3 (2001); and Arquilla and Ronfeldt, *Networks and Netwars: The Future of Terror, Crime, and Militancy*.

coded in ten-year increments. I predict that as an organization becomes older it should be less susceptible to leadership decapitation. While there is little analysis on the effect of age, Martha Crenshaw has looked at the life cycles of terrorist organizations.⁹¹ She argues, "Possibly, there is a threshold point, beyond which the extremist organization becomes self-sustaining. The younger the organization, the greater the likelihood of its ending."⁹² Older organizations have had more time to develop complex structures and should be more likely to withstand leadership decapitation than younger organizations. The assumption is that complex organizations are harder to combat, as there may be overlap between operational units. I will also look at the life span of organizations that have not experienced decapitation. If younger organizations tend to be more likely to collapse absent decapitation, then those organizations should be more susceptible to decapitation.

There is also a substantial literature on the relationship between age and the survival rate of organizations. In a 1965 paper Arthur Stinchcombe argued that a higher number of new organizations fail than old organizations.⁹³ He referred to this trend as a "liability of newness" and argued that newer organizations depend upon new, costly roles and tasks that have yet to be learned. The invention of new roles can put constraints on capital and creativity. Moreover, social interaction can lack a common normative basis, and stable linkages between members are not yet developed.⁹⁴ While the liability of newness thesis is widely accepted, studies have questioned its empirical roots and tested its accuracy.⁹⁵ Generally these studies find that younger organizations have a higher rate of failure than older organizations. As a result, I predict that young organizations should be less likely to survive leadership attacks.

Age was highly significant in both the cross tabulations and the multivariate analysis. The oldest organizations, those that had been active for over forty years, were always resistant to decapitation, while decapitation was successful against 29 percent of groups that had been active for less than ten years (see Table 4). Groups in the middle of the age continuum fell apart at a more similar, lower rate. Using CLARIFY to show how changes in the independent variables influence the probability of surviving decapitation, I varied organizational typology and age while holding all other variables at

⁹¹ Her study focuses on organizations that were active in the post-World War II period and that used terrorism as a strategy of opposition to regimes in power.

⁹² Crenshaw, "How Terrorism Declines," 79.

⁹³ Arthur Stinchcombe, "Organizations and Social Structure," in *Handbook of Organizations*, ed. J. G. March (Chicago: Rand McNally, 1965).

⁹⁴ Josef Bruderl and Rudolf Schussler, "Organizational Mortality: The Liabilities of Newness and Adolescence," *Administrative Science Quarterly* 35 (September 1990).

⁹⁵ See *ibid.*; John Freeman, Glenn R. Carroll, and Michael T. Hannan, "The Liability of Newness: Age Dependence in Organizational Death Rates," *American Sociological Review* 48, no. 5 (1983); and James Ranger-Moore, "Bigger May Be Better, but Older Is Wiser? Organizational Age and Size in the New York Life Insurance Industry," *American Sociological Review* 62, no. 6 (1992).

TABLE 4 Impact of Age on Organizational Fate

	0–10 Years	11–20 years	21–30 Years	31–40 Years	41+ years
Remained Active	93 70.99%	79 92.94%	29 90.62%	28 84.85%	17 100.00%
Collapsed	38 29.01%	6 7.06%	3 9.38%	5 15.15%	0 0.00%

Pearson $\chi^2 = 23.6827$ Pr = 0.000.

TABLE 5 Probability of Organizational Collapse After Decapitation

	Young	Old	Small	Large
Religious	5%	.8%	5%	2%
Ideological	39%	8%	39%	18%
Separatist	24%	4%	25%	9%

the mean (see Table 5). First, I looked at the rate of decline for young organizations. Young ideological organizations are 34 percent more likely to fall apart than young religious organizations and 15 percent more likely to fall apart than young separatist organizations. Age has less of an effect on older organizations when varying organizational typology. The oldest ideological organizations are 7 percent more likely to fall apart than the oldest religious organizations and 4 percent more likely to fall apart than separatist organizations. However, when holding organizational typology constant, age has a much more significant effect. Young ideological organizations are 31 percent more prone to disintegration than old ideological organizations, young separatist organizations are 20 percent more likely to fall apart than older ones, and finally young religious organizations were only 4 percent more prone to fall apart than older religious organizations. These findings were similar when compared to the yearly data. These results signal two trends regarding organizational susceptibility to leadership targeting. First, decapitation has been most successful against younger organizations. Second, the weakness of ideological organizations is apparent when looking at age as well. Young ideological organizations are easier to destabilize than religious or separatist organizations. Older ideological organizations are much more resilient than young organizations. Age and organizational type are the two strongest predictors of when decapitation will be successful.

In order to further understand the explanatory power of organizational structure, I looked at the relationship between group age and type. If organizations have become more decentralized in the past twenty years, then the majority of these groups should be younger in age. Accordingly, if religious

TABLE 6 Impact of Size on Organizational Fate

	0–25 members	26–100 members	101–500 members	500–1000 members	1001– 5000 members	5000– 10,000 members	10,000+ members
Remained Active	11 45.83%	17 58.62%	64 90.14%	30 88.24%	62 95.83%	16 64.00%	42 91.30%
Collapsed	13 54.17%	12 41.38%	7 9.86%	4 11.76%	3 4.17%	9 36.00%	4 8.70%

Pearson $\chi^2 = 52.8680$ Pr = 0.000.

organizations are more decentralized in nature, they should also be younger. The data indicate that almost 90 percent of all religious organizations are less than twenty years old. In fact, only one religious organization in the decapitation dataset is over thirty years old. While, a majority of ideological and separatist organizations are also under twenty years of age, the percentage was significantly smaller: 67 percent of ideological organizations and 63 percent of separatist organizations were under twenty years of age. Thus the lifespan of an organization can provide a means to understand the relationship between organizational typology and structure.

Organizational Size

Finally, organizational size should also have an effect upon the success of decapitation. This variable is coded according to the number of active members. Larger organizations should have more time to develop complex structures that would make an organization more resilient to leadership decapitation. As a group grows in size, it is more likely to become specialized, which allows for the redundancy necessary to withstand an attack on its leadership. Larger organizations are also more likely to rely upon the planning and operation of localized networks, which are stronger and more resistant to attacks. James March and Herbert Simon argue that there is less interaction between the group and the individual in larger communities.⁹⁶ Limits to exposure would imply that individuals tend to operate more independently in larger organizations. Thus larger organizations should be more resilient in the face of leadership decapitation.

Decapitation is less effective against larger groups (see Table 6). The smallest organizations were highly susceptible for collapse. Groups with fewer than twenty-five members, fell apart 54 percent of the time, and those with between twenty-six and one hundred members fell apart 41 percent of the time. Organizations in the middle range fell apart with a lower frequency,

⁹⁶ James G. March and Herbert Simon, *Organizations* (Cambridge: Blackwell, 1993), 89.

TABLE 7 Relationship Between Size and Age for Decapitation

	Young Group (0–10 years)	Old Group (41+ years)
Small Group (0–25 members)	38.89% remained active 61.11% collapsed	No cases of decapitation
Large Group (5,000 + members)	52.17% remained active 47.83% collapsed	100% remained active 0% collapsed

groups with between five thousand and ten thousand members fell apart in 36 percent of cases. Finally, decapitation was successful against only 9 percent of groups with over ten thousand members. These results were largely unchanged when looking at the incidents per year. Using CLARIFY and varying group type indicates that the smallest ideological organizations are 34 percent more likely to fall apart than small religious organizations and are 14 percent more likely to fall apart than small separatist organizations (see Table 5). This provides support for the claim that smaller organizations are easier to destabilize and that small ideological organizations are particularly susceptible to decapitation.

Young organizations have higher rates of failure than old organizations, but these findings may be due to heterogeneity in the population. The liability of newness may in fact be a liability of smallness, and it is thus necessary to control for size.⁹⁷ James Ranger-Moore finds that large groups almost always have lower failure rates. Freeman et al. argue that there is both a “liability of newness” and a “liability of smallness” with respect to the rate of organizational dissolution. It is necessary to look at how size and age interact. Table 7 shows that young, small organizations are most susceptible to failure after decapitation, followed by young, large organizations, and then by old, large organizations. The upper right hand cell is empty because there were no cases of decapitation against small and old organizations. This could be due to the fact that older organizations are larger in size. Consistent with the liability of newness thesis, older organizations have lower rates of failure in part because they are larger and stronger. The most illustrative aspect of this chart is that age is the critical explanatory variable. It has a much stronger effect on the success or failure of decapitation than size.

Finally, there is an important relationship between group size and structure. If larger organizations are more likely to develop decentralized structures, then religious organizations should be larger. I also expect separatist organizations to be larger given that they often have a large base of community support. The mean size for religious organizations is 9,123 members, and the mean size for both ideological and separatist organizations is about

⁹⁷ Freeman, Carroll, and Hannan, “The Liability of Newness”; and Ranger-Moore, “Bigger May Be Better.”

2,460 members. While there are no religious organizations in the dataset with fewer than twenty-five members, almost 20 percent of ideological organizations have fewer than twenty-five members, and only 1.5 percent of separatist organizations have fewer than twenty-five members. That religious organizations are clearly larger in size is consistent with the claim that they tend to be more decentralized in structure, while ideological organizations, which are often portrayed as hierarchical tend to be smaller than religious or separatist organizations.

EFFECTIVENESS OF DECAPITATION

In order to evaluate the effectiveness of decapitation, it is essential to understand the sources of organizational decline. Martha Crenshaw proposes three possible explanations for the decline of terrorist organizations: “physical defeat of the extremist organization by the government, the group’s decision to abandon the terrorist strategy, and organizational disintegration.”⁹⁸ Crenshaw argues that the removal of leaders from positions of power does not always cause the defeat of a terrorist organization. Destroying its organizational structure, causing large-scale attrition, or blocking recruitment are also largely ineffective counterterrorism measures. She argues that, “decisive defeats are rare in the absence of other contributing factors, such as organizational disintegration.”⁹⁹ Furthermore, groups can experience disunity and disagreements over strategy. Power struggles can also reduce group cohesiveness. Crenshaw suggests that terrorist organizations may experience cycles of strength and weakness. Audrey Kurth Cronin also examines the decline and demise of terrorist organizations. She examines seven broad explanations for decline in order to evaluate U.S. counterterrorism policies toward al Qaeda: decapitation, failure to transition to the next generation, achievement of group goals, transition to legitimate political process, undermining of popular support, repression, and transition from terrorism to other forms of violence. Her study illustrates the need for understanding sources of organizational decline in formulating counterterrorism policies.¹⁰⁰

I find that overall organizations decline at a higher rate absent decapitation. Decapitation was successful in 17 percent of the 298 cases. However, in order to understand the significance of this success rate and to assess fully the effectiveness of decapitation it is necessary to establish a baseline rate of decline for groups that did not have their leaders targeted. Thus, I looked at

⁹⁸ Crenshaw, “How Terrorism Declines.”

⁹⁹ *Ibid.*, 79.

¹⁰⁰ Specifically, Cronin argues that targeting bin Laden will not kill al Qaeda. She argues that al Qaeda is not driven by a cult of personality. Consistent with the results in this study, Cronin also argues that decapitation is unlikely to be effective against nonhierarchical organizations, but her conclusions are based on a limited amount of evidence. See Cronin, “How Al-Qaida Ends,” 40.

the patterns of decline for groups that did not undergo decapitation. Utilizing terrorist group (as opposed to incident of decapitation) as the unit of analysis, 53 percent of decapitated terrorist groups fell apart, while 70 percent of groups that have not experienced decapitation are no longer active. The rate of decline is almost 20 percent less for decapitated organizations. However, in order to understand when decapitation is likely to be effective and to identify the conditions of organizational decline, I will look at the marginal utility of decapitation for different values of the independent variables. It is thus necessary to look at differences in the rate of decline for groups that have and have not had their leaders removed.

The previous section evaluated the effect of key variables on individual incidents of decapitation, thus identifying the tactical consequences of targeting certain types of organizations. This section looks at terrorist organizations more broadly in order to determine the marginal effect that decapitation has over an organization's otherwise expected lifespan. This data can provide important information regarding which organizations states should and should not try to target. I consider the effect that an organization's size, age, and type have upon its lifespan and whether decapitation changes this rate of collapse. The data in this section show that decapitation is not a productive counterterrorism strategy. It is actually less effective than not targeting a group's leadership. While decapitation is still successful against certain types of groups, in many cases, organizations that have not had their leaders removed have a higher rate of collapse. Decapitation is actually counterproductive against large, old, and religious groups.

Organizational Age

While decapitation is more likely to result in the dissolution of younger than older terrorist organizations, in order to evaluate its effectiveness, it is necessary to look at how age also affects groups that have not undergone leadership targeting (see Table 8). This table compares the rate of decline for groups that have experienced leadership decapitation to those that have not. The bottom row identifies the marginal value of decapitation—that is the

TABLE 8 Marginal Value of Leadership Decapitation by Terrorist Group Age

	0–10 years	11–20 years	21–30 Years	31–40 Years	41–50 years	50+ Years
Rate of Collapse for Decapitated Groups	28 80.00%	16 66.67%	5 31.25%	2 13.33%	0 0.00%	0 0.00%
Rate of Collapse for Non-Decapitated Groups	29 87.88%	11 73.33%	6 50.00%	3 37.50%	0 0.00%	0 0.00%
Marginal Value of Decapitation	–7.00 %	–6.66%	–18.75%	–24.17%	N/A	N/A

TABLE 9 Marginal Value of Leadership Decapitation by Terrorist Group Size

	0–25 members	26–100 members	101–500 members	500–1,000 members	1001–5,000 members	5,000+ members
Rate of Collapse for Decapitated Groups	10 76.92%	12 85.71%	12 50.00%	2 25.00%	5 33.33%	9 47.37%
Rate of Collapse for Non-Decapitated Groups	3 75.00%	6 75.00%	5 45.45%	5 71.43%	9 69.23%	7 70.00%
Marginal Value of Decapitation	+1.92%	+10.71%	+4.55%	–46.43%	–35.90%	–22.63%

differential rate of decline between groups that have had their leaders removed and those that have not. Table 8 shows that the marginal value of decapitation is negative for groups under forty years of age; these groups are more likely to disintegrate absent decapitation. The lifespan of organizations that have had their leaders removed is actually longer than it would be otherwise. Groups under ten years of age that have had their leaders removed fell apart 7 percent less than those that did not. Decapitated organizations between thirty-one and forty years old fell apart about 25 percent less frequently. This data support the claim that decapitation is not an effective counterterrorism strategy and that older groups are more difficult to destabilize.

Organizational Size

The data on size provide further evidence that leadership targeting is not an effective strategy (see Table 9). Decapitation has a small positive utility for groups with fewer than five hundred members. For groups with fewer than twenty-five members, the rate of decline is 2 percent higher than the baseline rate of decline for groups of the same size. Decapitation is 11 percent more effective for groups with between twenty-six and one hundred and 5 percent more for groups with between 101 and five hundred members. However, once a group exceeds a membership of five hundred, the utility of decapitation is negative. In fact, for groups with between five hundred and one thousand members, decapitated groups fall apart 46 percent less than they would otherwise. Overall, this data indicate that decapitation has little benefit as a counterterrorism strategy and is in fact highly counterproductive for larger groups. These findings are consistent with the claim that decapitation is more effective against small organizations.

Organizational Type

Consistent with the earlier data on organizational type, Decapitation is more effective against ideological organizations than religious organizations (see

TABLE 10 Marginal Value of Leadership Decapitation by Terrorist Group Type

	Non- ideological	Ideological	Non- Separatist	Separatist	Nonreligious	Religious
Rate of Collapse for Decapitated Groups	12 28.57%	39 72.22%	38 64.41%	13 35.14%	42 64.38%	4 17.39%
Rate of Collapse for Non-Decapitated Groups	22 59.46%	27 79.41%	28 71.79%	21 65.62%	45 76.27%	4 33.33%
Marginal Value of Decapitation	-30.89%	-7.19%	-7.38%	-30.48%	-11.89%	-15.95

Table 10). Ideological organizations are more likely to fall apart than religious groups whether or not decapitation is taken into consideration. However, across all types of organizations, groups whose leaders have been targeted have a lower rate of decline. The marginal value of decapitation is negative for ideological groups, while the marginal utility of decapitation is even lower for religious and separatist groups. Ideological groups that had their leaders removed fall apart 7 percent less often than those that did not. Religious groups that have undergone decapitation are 16 percent less likely to fall apart than those that did not. Finally, separatist groups that have had a leader removed are 31 percent less likely to cease activity than separatist groups that have not. This data support the argument that decapitation is not an effective strategy. Given that religious groups are more resilient overall, it is surprising that decapitation has less utility against separatist than religious organizations. The difference between the utility of decapitation against religious and separatist organizations could be due to the fact that separatist organizations have a large base of community support that can ensure a group's survival in the face of counterterrorism measures.

Not only does this data show that decapitation is ineffective, it is actually counterproductive. In many cases groups that do not undergo decapitation have higher rates of collapse. As an organization ages, it becomes more resistant to leadership targeting and the marginal utility of decapitation also decreases. Organizational size shows a slightly different result. Decapitation may be effective against smaller groups, but it is counterproductive against larger groups. Finally, while decapitation is counterproductive across all types of organizations, the marginal utility varies. Decapitation is rarely an effective strategy, yet there are certain cases where it can work. Despite a very low or negative marginal utility, decapitation is successful in certain cases. Small, young, and ideological groups tend to be susceptible to leadership removal. The next section will evaluate how decapitation affects changes in the frequency and lethality of terrorist attacks.

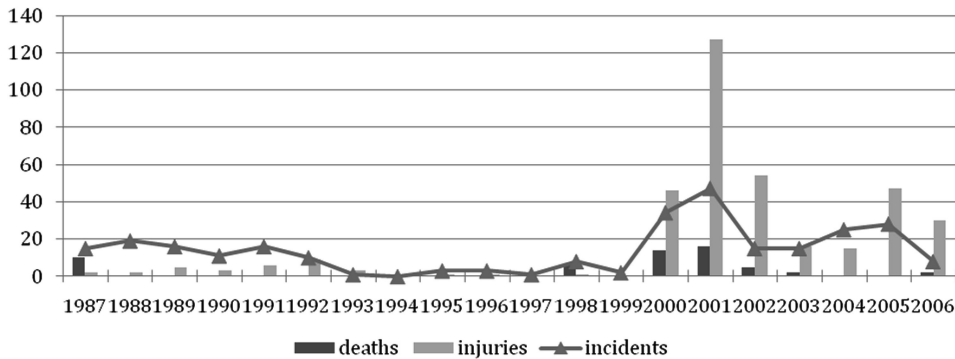


FIGURE 1 ETA—Total Number of Attacks, Deaths, and Injuries.

It seems puzzling that decapitation is often less effective than not targeting a group's leadership. While statistical analyses in this study are important for establishing trends, it is insufficient to account for this paradox. The independent variables provide a way to identify when decapitation is effective and to develop a theory of organizational structure. However, in order to understand why decapitation is often counterproductive, it is necessary to conduct qualitative analyses. Taking current international relations theory into account, it seems plausible that like states, terrorist groups want to ensure their survival. If groups face a threat to their survival, they should increase their strength and level of resolve in order to prevent collapse. This increase in resolve could make an organization more resilient to counterterrorism measures like leadership targeting. However, in order to test the plausibility of this claim, it is necessary to look inside specific cases of decapitation.

ORGANIZATIONAL DEGRADATION

While the decisiveness of decapitation is an important measure of effectiveness, I also consider the extent of organizational degradation by identifying whether decapitation affects the number and lethality of terrorist attacks. I collected data on the number of attacks, deaths, and injuries for two years before and after each instance of decapitation for ETA, FARC, and Hamas.¹⁰¹ First, I will look at ETA.¹⁰² Figure 1 shows the overall number of terrorist

¹⁰¹ The data was collected from the MIPT Terrorism Knowledge Base. See <http://www.mipt.org/>. The Terrorism Knowledge Base is no longer functional. These three organizations were chosen in order to obtain variation on group type: ETA is separatist, FARC is ideological, and HAMAS is religious. While HAMAS is classified as both religious and separatist, I felt that it was important to evaluate the Hamas data. Israel has aggressively targeted the leaders of Hamas, and as a result it has become an important test case for decapitation.

¹⁰² ETA experienced one case of decapitation in 1989, four in 1992, one in 1995, two in 1999, one in 2000, one in 2001, four in 2003, and four in 2004.

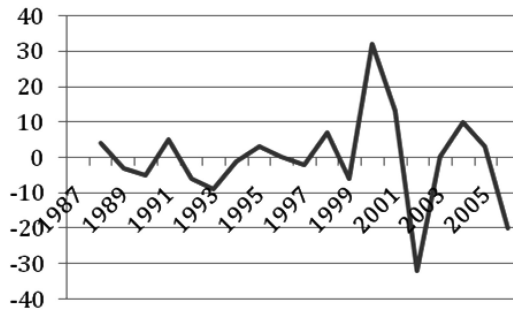


FIGURE 2 ETA—Change in the Number of Incidents.

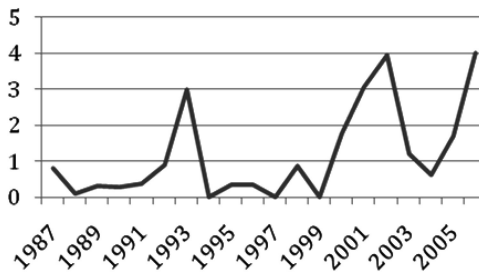


FIGURE 3 ETA—Number of Casualties Per Incident.

attacks, deaths, and injuries from 1987–2006. Figure 2 graphs the change in the number of incidents from one year to the next. The effect of decapitation on the number of attacks is not consistent. There was a slight drop in the number of incidents after 1989 and 1992. After having experienced the removal of two leaders in 1999, there was a large increase in the number of incidents. However, after one leader was removed in 2001, ETA saw an equally large decrease in the number of incidents. Figure 3 shows an increase in the casualty rate for almost every year following decapitation.¹⁰³ In 2000, 2001, and 2002 this number increased dramatically. After having experienced four cases of decapitation in 2003, there was a significant decrease in the casualty rate, but then after having four leaders removed in 2004, the number of casualties increased most rapidly in 2005 and 2006. While decapitation does not seem to have a consistent effect on the number of incidents, attacks generally became more deadly in the years immediately following decapitation.

Hamas, a religious and separatist group, is more resistant to leadership attacks than ETA. Hamas experienced decapitation in 1995 and 1996, and with the start of the second intifada, Israel increased its efforts and removed leaders every year from 2001–2004. Figure 4 shows the overall number of terrorist attacks, deaths, and injuries from 1993–2004. Figure 5, which charts

¹⁰³ Casualty rate is the sum of deaths and injuries divided by the number of terrorist attacks.

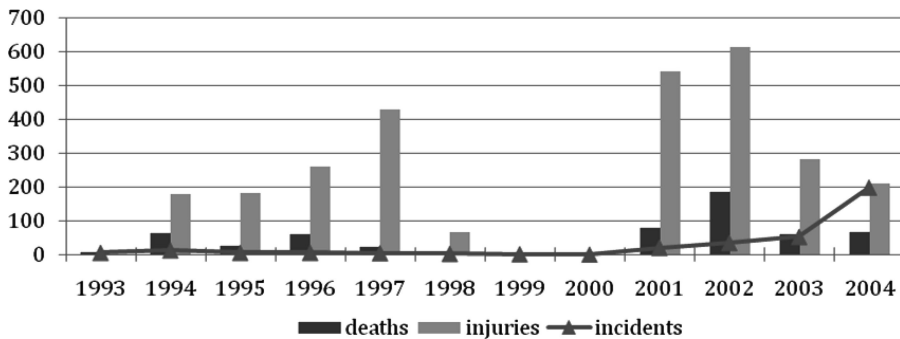


FIGURE 4 Hamas—Total Number of Attacks, Deaths, and Injuries.

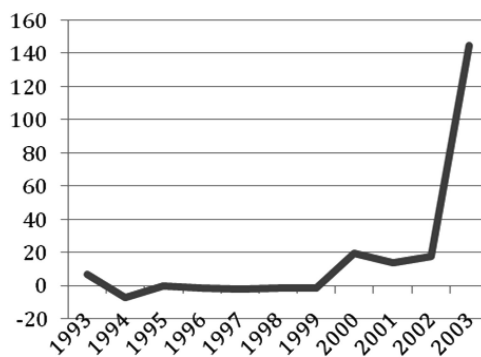


FIGURE 5 Hamas—Change in the Number of Attacks.

changes in the number of terrorist attacks, shows that decapitation had little effect on the number of terrorist attacks following 1995 and 1996. However, the number of incidents increased dramatically after 2001. While this jump can be explained by the start of the second intifada, after having carried out fifty-two attacks in 2003, the number of attacks increased to 197 in 2004. This dramatic increase indicates that Hamas was not impacted by four years of sustained decapitation attempts and in fact became stronger. While the number of attacks increased, figures 4 and 6 show that the casualty rate decreased significantly after 2001. Byman makes a similar point; he claims that after continual decapitations Hamas carried out more, but less lethal, attacks.¹⁰⁴ While Hamas' attacks became less dangerous over time, the huge increase in the number of attacks indicates that not only was Hamas able to continue its activities in the face of repeated attacks to its leadership, it gained strength as the intifada continued. Pedahzur explains that Hamas has a strong structure of local networks making the organization very difficult to destabilize.

¹⁰⁴ Byman, "Do Targeted Killings Work?"

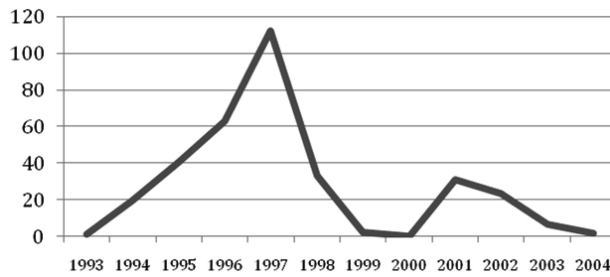


FIGURE 6 Hamas—Number of Casualties Per Incident.

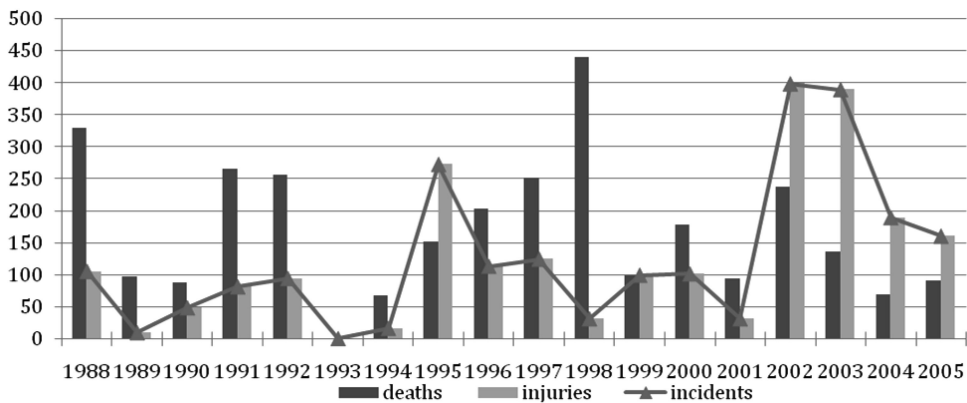


FIGURE 7 FARC—Total Number of Attacks, Deaths, and Injuries.

I expected that FARC would be weakened by decapitation given the susceptibility of ideological organizations to counterterrorism measures, yet FARC remained active after undergoing sustained decapitation efforts in 1990, 1991, 1995, 1996, and every year from 1998–2004.¹⁰⁵ Figure 7 shows the overall number of terrorist attacks, deaths, and injuries from 1988–2005. Figure 8 measures the change in the number of attacks. In 1991 FARC carried out 124 terrorist attacks, and after having undergone decapitation, the number of incidents dropped to fifty-three in 1992. Terrorist incidents continued to decrease over the next year and then increased again in 1994. Over the next eleven years the number of incidents was highly variable, and there does not seem to be a direct correlation between decapitation and the frequency of terrorist attacks. In certain years the organization was highly active, and there were significant decreases in other years, but these changes do not correspond to sustained leadership attacks. Figure 9 shows that the casualty rate was also unaffected by decapitation. There was a spike in the casualty rate after certain instances of decapitation, while at other times decapitation resulted in a substantial decline in the number of deaths and injuries per incident.

¹⁰⁵ Data was collected from the Global Terrorism Database. See <http://www.start.umd.edu/data/gtd/>.

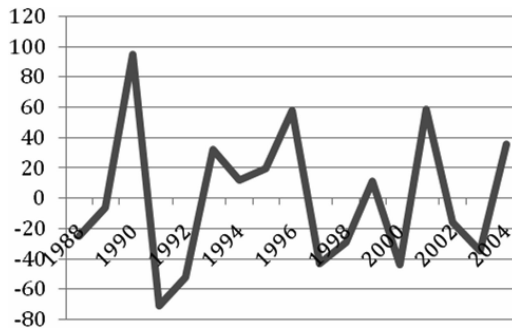


FIGURE 8 FARC—Change in the Number of Attacks.

After 2000 the casualty rate increased by over 100 percent after having experienced seven years of leadership decapitation. These findings suggest that decapitation seems to have little effect upon the ability of FARC to inflict damage. This runs counter to hypotheses that ideological organizations should be more likely to cease activity after decapitation. The ability of FARC to carry out attacks seems unrelated to the occurrence of decapitation. The major spikes in activity did not occur immediately following decapitation. However, FARC is a larger and older organization, so age or size could be driving the results. While decapitation was not effective in the case of FARC, decapitation seems to have counterproductive consequences in religious and separatist organizations.

POLICY IMPLICATIONS

The data presented in this paper show that decapitation is not an effective counterterrorism strategy. While decapitation is effective in 17 percent of all cases, when compared to the overall rate of organizational decline, decapitated groups have a lower rate of decline than groups that have not had their leaders removed. The findings show that decapitation is more likely

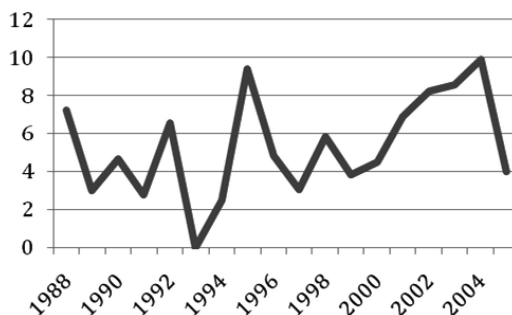


FIGURE 9 FARC—Number of Casualties Per Incident.

to have counterproductive effects in larger, older, religious, and separatist organizations. In these cases decapitation not only has a much lower rate of success, the marginal value is, in fact, negative. The data provide an essential test of decapitation's value as a counterterrorism policy.

There are important policy implications that can be derived from this study of leadership decapitation. Leadership decapitation seems to be a misguided strategy, particularly given the nature of organizations being currently targeted. The rise of religious and separatist organizations indicates that decapitation will continue to be an ineffective means of reducing terrorist activity. It is essential that policy makers understand when decapitation is unlikely to be successful. Given these conditions, targeting bin Laden and other senior members of al Qaeda, independent of other measures, is not likely to result in organizational collapse. Finally, it is essential that policy makers look at trends in organizational decline. Understanding whether certain types of organizations are more prone to destabilization is an important first step in formulating successful counterterrorism policies.

This study illustrates the need to develop a new model for understanding the effectiveness of leadership decapitation. Extant analyses on leadership decapitation are unable to account sufficiently for variability in the success of decapitation. This study suggests that a group's age, type, and size are critical to identifying when decapitation will result in the cessation of terrorist activity. As an organization becomes older and larger, it is much more likely to withstand attacks on its leadership. All organizations need to replenish both members and leaders, and older organizations will have developed the networks and support systems necessary to replenish key members. This argument is consistent with the organizational literature on bureaucratic organizations.¹⁰⁶ As an organization ages and grows, it is also more likely to become bureaucratized and to develop a division of labor based on specialization.¹⁰⁷ It should be easier for organizations with a higher degree of specialization to replace leadership. The model of the firm may also be useful in understanding the strength of terrorist organizations. Early in its creation a firm should have a higher likelihood of falling apart. These variables suggest that the dynamic nature of organizations is essential to predicting when decapitation will be effective and can provide a richer basis for social network models of organizational strength and weakness. Existing approaches do not consider organizational change and are thus unable to account for variation in the rate of organizational collapse. The two dominant models that have been used to understand decapitation assume that an organization's vulnerability is based on static and unchanging characteristics regarding the role of a leader or the structure of an organization.

¹⁰⁶ Perrow, *Complex Organizations: A Critical Essay*.

¹⁰⁷ Ibid. 47.

The significance of organizational typology may signal an important relationship between organizational structure and a group's susceptibility to decapitation. Ideological organizations are most likely to fall apart after decapitation, while religious groups are highly resilient. There are two implications that can be derived from this finding. First, the charismatic model is insufficient to account for these findings. If religious and separatist organizations are more likely to have a charismatic leader then these organizations should be more likely to fall apart when the charismatic leader is removed. I argue that the resilience of religious organization can be attributed in part to the fact that many of these groups are older and larger. Second, it is frequently assumed that religious and separatist organizations are more decentralized in structure, while ideological organizations are more hierarchical.¹⁰⁸ The literature on social network analysis argues that decentralized organizations are less likely to suffer setbacks than hierarchically structured organizations. Initial findings support this claim. I argue that the weight of key organizational variables provides a more nuanced understanding of organizational structure and can account for more variability in the success of decapitation.

Overall, this study shows that we need to rethink current counterterrorism policies. Decapitation is not ineffective merely against religious, old, or large groups, it is actually counterproductive for many of the terrorist groups currently being targeted. In many cases, targeting a group's leadership actually lowers its rate of decline. Compared to a baseline rate of decline for certain terrorist groups, the marginal value of decapitation is negative. Moreover, going after the leader may strengthen a group's resolve, result in retaliatory attacks, increase public sympathy for the organization, or produce more lethal attacks. Based on these findings, it seems imperative that policy makers consider not only the overall effectiveness of decapitation as a counterterrorism measure but also the potential for adverse consequences.

¹⁰⁸ As noted earlier, this is not true in all cases. There are a number of religious groups that take on a more centralized structure.