Cutting the head off the snake

–Leadership decapitations against transnational and domestic terrorist organizations

Jonathan Andersson

Peace and Conflict Studies C

Bachelor's Thesis, 15 credits

Fall Term, 2017

Supervisor: Ralph Sundberg

Department of Peace and Conflict Research

Uppsala University, Sweden

Table of Contents

List of tables

Introduction

Since 9/11, targeted killings and other measures aimed towards incapacitating leaders and commanders of terrorist organizations have become common practice as part of the war on terror (See Senn & Troy, (2017) for a discussion on the matter). This tactic, often referred to as "leadership decapitation", and defined as the act of killing or capturing the leader, leaders or high-ranking commanders of terrorist organizations, has been employed in large scale to combat terrorist groups by the United States, Russia, and Israel, to mention a few. The reasoning behind the tactic is clear; removing the individuals with operational, ideological, or logistical responsibilities should decrease an organization´s ability to carry out operations, or negatively impact the resolve of individual members. Many would likely agree that decapitations are generally effective based entirely on intuition, but if, and in that case how, effective leadership decapitations are as a counterterrorism tactic is highly debated within academia. Given the status of decapitations as the de facto signature tactic in contemporary counter terrorism campaigns, being able to determine if decapitations even fulfill their intended goal is crucial in order to improve the effectiveness of counterterrorism campaigns. In addition, researchers have argued that with the increased development, presence, and use of autonomous weapons, we can expect this tactic to become even more prevalent in the future (Haas & Fischer, 2017; Senn & Troy, 2017), which further increases the importance of determining how effective leadership decapitations are when used to fight terrorist organizations.

Studies on leadership decapitations and its effectiveness in combating terrorism often comes to very different conclusions and its successfulness is unclear. This gives rise to the question; why do leadership decapitations against terrorist organizations in some cases yield positive outcomes, but not in others? Many studies bring up organizational characteristics, such as size, age, the level of bureaucratization in a group, or the inherent nature of terrorist organizations, as an explaining factor behind why terrorist organizations may or may not be able to resist leader decapitations and adapt to the new circumstances created by their leader's demise. Characteristics such as these are likely important in explaining why leader decapitations display varying results. However, I argue that the successfulness of decapitations also depends on whether an organization operates on a domestic or transnational level. This is because innate traits among terrorist organizations force those operating transnationally to rely more on their leaders, making them more vulnerable towards decapitations. Distinguishing between the two may be very important, as argued by Enders, Sandler, & Gaibulloev, (2011), and doing so could aid in providing knowledge concerning when and under what circumstances

leadership decapitations are an effective counterterrorism measure. I therefore hope to contribute by examining the effects of an important organizational trait that, so far, has not been systematically studied on the outcome of leadership decapitations.

This study employs data from the Global Terrorism Database (GTD) on terrorist activities between 1970 and 2016, and a modified version of Price´s (2012) dataset on leadership decapitations against 116 terrorist organizations between 1970 and 2008. The most important findings indicate that operating transnationally has no significant effect on the change in activity following a leadership decapitation, and that capturing leaders seem to lead to a sharper decrease in activity compared to killing, or killing while in captivity.

Disposition

This paper proceeds as follows; first, the literature and findings on the effectiveness of leadership decapitations will be presented. Second, I will provide a theoretical explanation and hypothesis regarding the expected effect of leadership decapitations on transnational and domestic terrorist organizations. Third, I will go through the datasets, and the data collection and management process concerning the different variables. After that, the results and all the findings of interest will be presented and discussed. And lastly, I will discuss the results, to what extent the question has been answered, and some possible areas for further research and policy implications.

Previous research on leadership decapitations

Studies on counterterrorism and the effectiveness of leadership decapitations mostly consist of case studies on specific terrorist organizations, countries, or regions. For instance, Jordan (2014), and Cronin (2006), in their case studies on al-Qaida, attempt to discover if and under what circumstances al-Qaida should be vulnerable to leadership decapitations, and finds that the US strategy towards al-Qaida is misguided and likely ineffective. Likewise, Wilner (2010), makes a comparative study on four cases of leadership decapitations against the Taliban in Afghanistan, while Byman (2006) discusses how well decapitation tactics have worked for Israel, who has a long history of employing targeted killings.

Quantitative studies on the effects of leader decapitations often yield very varying results and come to different conclusions. Jordan (2009), Carson (2017), and Abrahms & Mierau (2017) find that decapitations are most likely ineffective, and may even have the opposite effect and change the attack pattern of the groups targeted, towards being more

indiscriminate and active, while not having any noticeable effect on the rate of degradation for the affected groups. Decapitations have also been found to decrease violence in the short term, but increase violence in the long run (Phillips, 2015). On the other hand, Price (2012), Johnstone (2012) and Morehouse (2014) show that leadership decapitations are mostly positive, and reduces attacks while increasing the mortality rate of terrorist organizations and the likelihood of government victory, while Jones & Libicki (2008), in one of the most comprehensive studies in the field so far, find that policing and intelligence work aimed at neutralizing key members are the most effective strategy when nonviolent solutions are off the table, indicating that decapitations may yield positive outcomes when used to counter terrorist groups.

Studies on leadership decapitations often mention the traits of individual leaders or organizational characteristics as the explaining factor behind their findings (Jenna Jordan, 2014). It has been argued that the clandestine, violent, and value-based nature of terrorist groups (Price, 2012) or the level bureaucratization and support from the local population may have an impact on a group's ability to resist leadership decapitations (Jordan, 2014). Morehouse, (2014) argues that organizations that are highly centralized should be more negatively affected by decapitations than decentralized ones. Some authors also suggest that the tactics used to decapitate a leader may yield different results, and it has been shown that capturing or killing a leader through conventional means may have positive effects, but that killing leaders with drone strikes have the opposite effect (Lehrke & Schomaker, 2016), a conclusion not supported by Jordan (2014), who shows that the drone campaign against al-Qaida is mostly efficient, especially when combined with other measures. Likewise, D'Alessio, Stolzenberg, & Dariano, (2014) demonstrates that the capture of Shining Path leader Abimael Guzman greatly reduced their frequency of their attacks.

However, regarding these organizational traits, there is a gap in the research in the sense that it is as of yet unestablished whether if and how the level at which a terrorist organization operates affects the way that it will respond to leadership decapitations. This is the gap that I intend to fill by examining whether there is a variation in the change in activity for transnational and domestic terrorist organizations following a leadership decapitation.

Theory

Why should leadership decapitations have varying effects on transnational and domestic terrorist organizations? As will be shown in the following section, terrorist organizations tend to be led by charismatic leaders. These types of leaders can provide two basic functions; convey an ideological message, and provide an operational direction. This is where the vulnerability towards decapitations stems from, and when a leader providing these functions is decapitated, their organization's operational capabilities should decrease. However, transnational organizations should be more vulnerable than domestic ones since the larger areas they operate in forces them to rely more on their leaders to provide these functions. Thus, the decrease in capabilities should be sharper for transnational organization when they are subjected to a leadership decapitated than it is for domestic ones.

The three types of authority

According to Max Weber, authority can be divided into three different classifications; legal, traditional, and charismatic. Legal authority rests on a common belief in enacted rules and those given authority under such rules to issue commands. Traditional authority is based on an established belief in the sanctity of traditions and the legitimacy of those exercising authority under them. Lastly, charismatic authority derives from devotion to the exceptional sanctity, heroism or exemplary character of an individual person, and of the order revealed or ordained by him (Weber, 1968, p. 215). Of all these three types, leadership in terrorist organizations should be derived from the charismatic type of authority, for a few reasons. Firstly, the two prior ones (legal and traditional authority) cannot rightly explain the type of leadership that exists in terrorist organizations. Indeed, a terrorist organization´s entire raison d´etre often revolves around the opposition of such, more traditionally legitimate, types of authority. Terrorist organizations per definition reject the legal frameworks of the areas they operate in, and unless they have operated for a very long time and reached a considerable size, it is unlikely that they have created an organizational system within the organization based on a legal or traditional framework that stipulate a process that provide certain individuals with authority. Secondly, the first two types of authority are derived from a common belief in a particular, formal system, and is therefore based in a context which typically does not exist within such informal groups as terrorist organizations. Charismatic authority, on the other hand, derives its authority directly from the individual(s) in power. Because of this, the leaders of

terrorist organizations have to base their status of power on their charisma, and charismatic individuals should be highly represented as leaders of terrorist organizations.

Charismatic leaders

Weber (1968, p. 241) argues that charismatic authority is "a certain quality of an individual personality by virtue of which he is considered extraordinary and treated as endowed with supernatural. superhuman, or at least specifically exceptional powers or qualities." The concept of charismatic authority carries with it a strong subjectivity, as stated by Weber, once again;

How the quality in question would be ultimately judged from any ethical, aesthetic, or other such point of view is naturally entirely indifferent for purposes of definition. What is alone important is how the individual is actually regarded by those subject to charismatic authority, by his "followers" or "disciples." (Weber, 1968, p. 241-242)

Thus, while charismatic leadership is, by nature, very subjective, I define a charismatic leader as one who has successfully created a cult of personality revolving around his or her own person, whose abilities his or her subjects or members put their faith in. Sometimes, that belief is isolated to those within the group, as indicated in the quote above. In addition, a terrorist leader's influence on their organizations is even stronger compared to other types of leaders, because they are, in most cases, not constrained by any legal or traditional framework, as argued above.

So, a charismatic leader provides their followers with an individual of close to divine abilities that these followers unite around, but what concrete benefits does charismatic leaders provide to their organizations? Freeman (2014) points out two basic functions that leaders of terrorist organizations perform in their position as a charismatic leader; provide inspiration, and operational direction. A leader creates inspiration by propagating a central message or ideology, which creates an overarching goal for the organization, and points to the strategies by which the organization shall reach those goals. This points to the importance of having a charismatic leader that can convey the functions to their followers in a credible and believable way. Removing leaders that propagate an ideological message risks disrupting terrorist organizations' activities by causing them to lose focus, shift ideology (towards becoming more moderate or extreme), or create fractions and splinter groups. The loss of an operational leader may cause the group to lose strategic decision-making, expertise, training, fundraising, logistics, making attacks less likely to succeed and reach the desired outcomes (Freeman, 2014,

p. 671). For leadership decapitations to be effective, the leader that is neutralized must provide at least one of these functions, and the effectiveness is highest when both functions are provided by one leader. Given these negative effects that the loss of a leader can lead to, one should expect to see a decrease in activity (activity is meant here as the number of attacks perpetrated by an organization) when a terrorist organization experiences a leadership decapitation, because the decapitation weakens organizational capabilities.

In short, a terrorist organization is led by a charismatic individual, who invokes a strong belief in that individual's abilities among his or her followers, and gains the ability to influence the organization they represent, and by virtue of that provides an ideological message and operational direction for the organization. Removing such a type of leader should decrease the capabilities of the organization they lead, and make them less active. While this framework could apply to many different terrorist organizations, I argue that organizations that operate on a transnational level should be even more vulnerable to leadership decapitations, because of the specific nature of these organizations, which forces them to rely more on their leaders than Domestic organizations.

Domestic and transnational terrorist organizations

To understand how the impact of decapitations differ between transnational and domestic terrorist organizations, it is necessary to determine more closely what distinguishes them. Enders et al., (2011) describes domestic terrorism as "homegrown, in which the venue, target, and perpetrators are from the same country. Thus, domestic terrorism has direct consequences for only the venue country, its institutions, citizens, property, and policies." Transnational terrorism, on the other hand, concern more than one country through its victims, targets, supporters, or perpetrators. While this is a good distinction in itself, their article and definitions focus on individual attacks, and not organizations, which makes it quite crude when applied at terrorist organizations, meaning that the definitions must be slightly altered. Therefore, I define a domestic terrorist organization as a terrorist organization whose activities and goals only strive to achieve political, social or economic change in a single country. On the other hand, a transnational terrorist organization is one who wants political, social or economic change for two or more countries.

Terrorist organizations have certain traits that make them naturally vulnerable to changes in leadership. First off, the type of leadership that exists within terrorist organizations makes them vulnerable. Grusky (1960) states that succession always leads to instability. How

much instability is caused, however, depends on the specific roles of the predecessor and successor, and conditions within the group, such as inter-member relations. Since terrorist organizations are led by charismatic leaders they are more vulnerable towards decapitations in the long run, since this type of leadership is structurally unstable (Grusky, 1960). The successor of a removed charismatic leader cannot hope to inspire his or her followers and generate the same kind of emotions as well as the one who originally gained leadership through his or her charisma, even in those cases when a successor is handpicked by the previous leader. Thus, removing the leader of a terrorist organization, which is often of the charismatic type, should cause instability within the organization to arise, which in turn should lead to a disruption of activity.

However, terrorist organizations are also, by nature, violent, value-based, and clandestine, according to Price (2012). This increases their vulnerability to changes in leadership even further. Terrorist organizations both commit and are exposed to violence themselves. To increase survivability in such environments, they become extremely cohesive, and cohesive organizations are at greater risk of facing instability during leadership change (Grusky, 1960). Value-based organizations have difficulties surviving leadership change because they require leaders to possess a unique set of skills linked to their charismatic personality, and because there are not the same incentives for successors to assume leadership as in other organizations (Price, 2012), such as profit-based ones, making succession more difficult. A terrorist organization's ability to survive and maintain operational security depends heavily on their ability to avoid detection from actors that would fight them, be they law enforcement, intelligence services, or armed forces. This means that leaders also have a disincentive to institutionalize their operations and keep the number of individuals informed about their tactics at a minimum (Price, 2012). In turn, this forces terrorist organizations to rely heavily on their leader and his or her closest circle of trustees, which further complicates succession, and makes them more vulnerable to leadership decapitations. Leaders also have a less altruistic motive for hiding their tactics (Price, 2012); to avoid being violently ousted from their position by an opposing faction within the organization, they deliberately make themselves more important to the organization by keeping vital knowledge contained within a small circle of individuals. This incentive may even be stronger than one might think, since it is rather common for terrorist leaders to be struck by paranoia (Galanter & Forest, 2006).

Charismatic leadership in transnational organizations

While all three traits and the instability created by succession in organizations led by charismatic leaders make terrorist organizations inherently vulnerable to decapitations, the clandestine and value-based traits should be even more prominent among transnational organizations and they should thus be more vulnerable to leadership decapitations than domestic organizations. In short, this is caused by the fact that, because transnational terrorist organizations operate over a larger geographical area, and that those areas transcend national borders, their reliance on their leader is further enhanced in relation to domestic terrorist organizations. The borders created by the large base of operations, in turn, creates organizational boundaries which limits the extent to which members of or factions within the organization can create inter-personal relationships with other members of the organization which could grant them a sense of cohesion or connection with each other. They must therefore rely on their leader, whom they all share a strong sense of faith for, to create this connection. Compare for instance, a terrorist organization such as the Baader-Meinhof Group, a small, urban organization that operated in West Germany in the 1970's, to al-Qaida. While al-Qaida exceeds the 1,000-member mark, according to Jones & Libicki's (2008) dataset, and operates using cells in many different countries, Baader-Meinhof's membership were believed to not exceed 100 (between 10 and 99), at its height (Jones & Libicki, 2008), and many of its members seemed to have close personal relationships with one another (BBC, 2007). Even though it may have been possible for inter-group relationships to emerge between most of the members in the Baader-Meinhof Group, which were centralized, local, and small, it certainly cannot occur within such a decentralized, widespread, and large organization as al-Qaida. They must therefore rely on their leader to create that common sense of belonging and goal by fulfilling the two overall functions of propagating an ideological message and pointing out an operational direction. This makes their role even more important for value-based organizations that operates on a level that transcends national borders, since these organizations lack other formal or informal linkages, and are forced to rely more on their common values to create some cohesion.

Furthermore, transnational organizations become intrinsically more clandestine than domestic ones. As Price (2012) stated, leaders in terrorist organizations have incentives to avoid being open in regard to how they operate, to maintain organizational and operational security. In terrorist organizations that operate in multiple countries, that incentive is enhanced further. Attempting to send information to factions within the organization that operates in different parts of a single country, region or even city may be risky enough when your organization is

being actively chased down by local or national governments, and could lead to organizational disruption of varying severity; from a planned attack, to locations and/or identities of high-ranking decisionmakers being revealed. Spreading information about organizational decisions or specific tactics in large areas, and especially attempting to send it across national borders, which are in most cases controlled and surveilled in one way or another, should increase the risk of disruption even further. This forces these organizations to rely even more on the leader to spread easily distributed and less vital information, such as the two basic functions mentioned above; a central ideological message, and an operational direction for the group. These two different functions, or messages, should optimally be general enough to not threaten the organization if they are revealed, and if that is the case, they can very easily be distributed through more open channels. This could be as simple as spreading a recorded speech on social media or other forums.

To summarize this entire section: terrorist organizations operate under certain conditions which causes them to attract leaders of the charismatic type. Because terrorist organizations are led by charismatic leaders, they are structurally unstable, making them vulnerable towards leadership decapitations. These leaders fulfill two basic functions; they propagate a central ideological message, and point out an operational direction by which the organization shall reach those goals. Terrorist organizations are most vulnerable towards leadership decapitations when a leader performs both functions. This means that when a leader of a terrorist organization is neutralized, it should display a decrease in activity. Also, they display additional traits that should make them more vulnerable towards leadership decapitations; their violent, value-based, and clandestine nature. However, the latter two traits should be more emphasized among transnational terrorist organizations. This forces them to rely more on their leaders to perform the two basic functions that charismatic leaders fulfill. Thus, the decrease of activity that one could expect to witness when terrorist organizations suffer a leadership decapitation should be even stronger for groups that operate on the transnational level. This leads to the following hypothesis:

Hypothesis: When leaders of transnational terrorist organizations are decapitated, those organizations should display a change in activity that is more strongly negative compared to the decrease for domestic organizations.

Research design

Datasets and unit of analysis

The dataset used for this thesis is based on the dataset used in Price´s (2012) article *Targeting Top Terrorists: How Leadership Decapitation Contributes to Counterterrorism*. Several major changes were made to Price's original dataset, which will all be discussed in the next paragraphs.

Price´s (2012) original dataset included 207 terrorist organizations that operated between 1970 and 2008, and 203 cases of leadership decapitations. This dataset does have some benefits to it; first, only groups that have committed at least four attacks, with at least one resulting in casualties, are included. This was done to exclude groups with low activity, and those that may not have gained any attention from a national government. However, groups that are included on the terrorism lists of any major state powers are also included even if the attack criterion is not met. Second, it only includes primary leaders or co-leaders. Some quantitative studies on leadership decapitations also include other high-ranking commanders, such as Lehrke & Schomaker (2016), but I deem this criterion to only include leaders and co-leaders to be more in line with my theorized effect, so I believe Price's dataset is preferable.

Price's dataset was not used in its original form. Instead, some changes were made. First off, Price focused on the effects of leadership decapitations on mortality rates for groups that experienced decapitations relative to groups that did not. He was therefore interested in variation between groups that did and did not experience decapitations. I, on the other hand, am interested in variation between domestic and transnational groups that have experienced decapitations. Therefore, all groups that did not experience decapitations were removed, that is, all groups with the value "0" for the variable "exp.decap" (experienced decapitation). When these groups are removed, the dataset consists of 131 groups. Secondly, the unit of analysis was changed. While Price were interested in the mortality rates of groups, the focus of this study is the effects of individual decapitations on the activities of the targeted groups. Therefore, the unit of analysis was changed from terrorist groups to specific decapitations. Since many organizations in the dataset have experienced multiple decapitations, it will allow for a more intuitive analysis if the unit is changed, by making the coding of some variables, such as age and prior decapitations, easier. To exemplify, the units are renamed and reorganized into "Red Brigades (BR) - Brigate Rosse, decap 1", "decap 2", "decap 3" instead of only "Red Brigades (BR) - Brigate Rosse", and becomes three individual observations. Thirdly, several individual

cases, both single decapitations and entire groups, had to be removed due to lack of available data. This includes all decapitations that took place in 1970 or earlier, who had to be removed since no data on the dependent variable exists prior to that year. Other cases had to be removed since it was not possible to gather enough data to be able to determine whether they should be considered domestic or transnational.[1] Lastly, to complete the dataset, several new variables had to be created. These variables were coded by hand, and the process will be discussed in more detail below.

The second dataset, which was used to code the dependent variable, is the Global Terrorism Dataset (GTD), maintained by the National Consortium for the Study of Terrorism and Responses to Terrorism (START). The GTD was used to collect data on the number of attacks committed by the groups in Price's dataset. The GTD collects information from open source material on violent events between 1970 and 2016, and currently includes around 170 000 observations. The GTD does have some limitations, mostly in regard to its wide inclusiveness, and does include many cases that may be considered acts of organized criminality, insurgency operations, or war related (Lehrke & Schomaker, 2016). It also includes many attacks where it was not possible to designate any perpetrators (currently, the perpetrator is coded as unknown for around 70 000 observations), and attacks against properties which resulted in no casualties or injuries. In other words, far from all incidents included could be considered acts of terrorism. Despite these limitations, it is still the most comprehensive and detailed database of terrorism incidences in existence (Carson, 2017). In any case, this inclusiveness should not be an issue for this study, since the list of terrorist organizations that are included is gathered from a completely separate dataset, and I can filter out all observations that are not attributed to the organizations I am interested in. This inclusiveness may even be beneficial given the purpose of this thesis, which emphasizes quantity of attacks, making this database more valid and reliable. Using the GTD to gather data on terrorist group activity is therefore the natural choice.

After all these changes were made, the unit of analysis had been changed to individual decapitation events, and the dataset now consists of 182 leadership decapitations against 116 terrorist organizations from 1971 to 2008. Of these decapitations, 47 were conducted against organizations that were coded as transnational, and 135 against domestic organizations.

---

[1] A full list on which decapitations and groups that were removed with an accompanying motivation for the decision is available in appendix A.

The dependent variable

The dependent variable measures the change in activity after a terrorist organization experiences a leadership decapitation. I operationalize this by calculating the average amount of attacks committed by the group five years prior to a decapitation, and comparing it to the average in the five years following, using the data on terrorist attacks available in the GTD. To avoid the skewed effects that may appear because of the varying size of the different groups, the change is expressed as a percentage, rather than a change in pure numbers. Since Price's dataset does not provide an exact date of when a decapitation occurs, and simply lists the year, I calculate the average from the five full calendar years preceding and following a leadership decapitation. So, if a decapitation occurred in 1980, I will gather the numbers from 1975 through 79, and 1981 through 85. It should be mentioned that in those cases where a decapitation occurs within five years from an organization's founding, I will draw an average from those calendar years during which the organization existed. This was also done when a decapitation occurred within five years from 1970, since no data is available before that year. However, I will not do that in cases where an organization stopped existing within five years following a decapitation. This is because there may be cases where an organization was so badly affected by the decapitation that they seized operations entirely, and calculating the average from those years during which the organization still operated would systematically remove that outcome, which is something that should be avoided. For some cases, it was not possible to gather data using full calendar years, for various reasons, but mostly because a leader was decapitated during the first year of an organization's existence. In such cases, I looked up the exact date the leader was decapitated to determine which attacks took place prior. In a few extreme cases an organization had no attacks registered prior to a decapitation. This would not have been an issue if the change in activity was reported in figures, but since I decided to use percentages, calculating that change would have been mathematically impossible. I therefore decided to give those cases the lowest possible value, one attack, and draw an average according to the rules outlined above. Although this is not an optimal solution, it is necessary. Regardless, I do not think that this will have a very great impact on the validity or reliability of the measurement or the findings. To exemplify, a terrorist organization with zero attacks prior and five after should be considered as having a very sharp increase in activity. In figures, this would be five, but it would not be possible to express in percent. Giving it a value of 0,2 (1/5) would mean an increase of 2400%, which reflects this remarkable change quite well, even though some tinkering with the numbers was necessary.

Other, similar studies sometimes examine how leadership decapitations affects the mortality rates of the groups that are struck. However, since the theory goes that leadership decapitations should cause a terrorist organization to lose its capability to perform attacks, it is more logical and valid to examine the change in the amount of attacks committed, which is a better proxy for organizational capabilities than mortality rate or rate of declination. Additionally, some studies also include measurements of the lethality of attacks, such as people killed or wounded, or if property damage occurred. However, such measurements have the downside of being arbitrary and heavily dependent on random circumstances surrounding an attack, such as location and time, or number of civilians present at the moment. It therefore does not measure an organization's capabilities as well as the frequency by which it undertakes attacks, and would be a poor measurement. Acquiring numbers for such measurements would also be difficult, and may perhaps not even exist in many instances, while also being very time consuming. Thus, while it may be interesting to examine if the lethality of attacks performed by terrorist organizations, calculating the change in activities is preferable in terms of validity, reliability and the time frame.

The independent variable

The independent variable is a categorical variable that distinguishes between domestic and transnational terrorist organizations. In the previous section, domestic terrorist organizations were defined as terrorist organizations whose activities and goals only aims to create political, social or economic change for a single country. On the other hand, a transnational terrorist organization is one whose activities and goals aims to achieve these changes in two or more countries. Based on this distinction, I create an operationalization to guide in the coding process. The two key terms in both definitions are "activities" and "goals". Therefore, I created two different criteria by adding two different variables which both need to be coded as "1" in order for a terrorist group to be considered transnational: Firstly, the group must have a goal or goals that comprises two or more countries. For example, if a terrorist group wants independence for a specific region in a given country, that group will be considered domestic, and be given the value "0" for that variable. If the region comprises more than one country, the group will be considered transnational, and be given the value "1". Unfortunately, data on such goals are not readily available in either Price´s dataset or the GTD. Because of this, this variable will have to be coded by hand, which necessitates some mentioning of the sources used to this purpose. I primarily do this by consulting the information available on actors in armed conflicts from the Uppsala Conflict Data Program (UCDP) or the Mapping

Militant Organizations database, maintained by Stanford University. If no information regarding a goal can be found in either of these databases, specific case material was used to determine an organization's goal(s). While it was possible to find reliable information on the goal of individual terrorist organizations without much difficulty in most cases, when it came to very obscure organizations especially, I was sometimes forced to rely on what little I was actually able to find. The reliability of some of these sources could definitely be questioned, particularly in terms of proximity, such as news articles. Some sources may also be considered biased, such as statements from the organizations in question, which I on one hand would agree to, but on the other, this is not necessarily a problem since it may be closer to reality to determine the goal of a terrorist organization based on their own subjective idea of what they want to achieve.

As for the second criteria, the group must have committed attacks in at least two different countries, regardless of which those countries may be. For example, one of the countries may be the same country as the one where the group was formed, or it may be several completely unrelated countries. However, there is one exception to this rule; if a group has committed attacks in only one country, they could still be considered transnational if that country differs from the one they were founded in, and if they fulfill the goal criteria. Data on the location of attacks is available in the GTD, and it will be used to determine whether a group has committed attacks in different countries. If an organization fulfills both these criteria, it will be coded as transnational. In total, 33 organizations out of 116 are coded as transnational, who experienced 47 decapitations among themselves. The 83 domestic organizations experienced 135 decapitations.[2] I want to clarify that the reason there are more decapitations than organizations is because many of them have experienced more than one.

It is possible to argue that one should only consider where a terrorist organization have committed their attacks as a determinant of whether a terrorist organization should be considered transnational or not. While there may be some truth to that, I believe it necessary to include some extra measure, as the vast majority of all the organizations included in the dataset would be considered transnational otherwise, even some that many would not consider transnational. For instance, four of the five Northern Irish organizations in the dataset would be considered transnational by only considering the pattern of their attacks, meaning it would make for a poor measurement. However, even though this measurement including the two criteria

---

[2] An example of how the independent variable was coded for one category each is available in appendix B. Additionally, a full list of the coding of all organizations is available upon request.

makes for a more valid measurement, it is still quite a crude tool. The problem of some organizations being coded as transnational when they should be considered national is still there, although it is much less severe. This measurement could also be considered less reliable due to the inherent subjectivity in determining the goal of terrorist organizations. There might be some truth to this, but I believe that my attempt to resolve this by stating exactly what I consider their goal to be, and where the information originated from, (again, this is available in a separate document) makes this more reliable than it might first seem.

Control Variables

I include controls for the ideology of the organization experiencing a decapitation, its peak size, its age when a decapitation occurs, the method by which a leader is decapitated, how many previous decapitations a group has experienced when a given decapitation occurs, if the individual decapitated was an organizations founder, and if multiple decapitations occurred simultaneously (and in that case, how many). Jordan (2009), has found that religious organizations are highly resistant towards decapitations compared to political ones, and it has been argued that decapitations may sometimes backlash because of a martyrizing effect. Some studies on counterterrorism has also been able to find a backlash effect (Carson, 2017). Therefore, it makes sense to control for ideology, which is available in Price's dataset and were gathered from Jones and Libicki's (2008). The different organizations in the dataset are divided into four different categories: left wing, right wing, nationalist, and religious. Based on these categories, four different dummy variables were created, giving each organization a value of 1 for the ideology it ascribes to, and 0 for the other three.

Jordan (2014) shows that terrorist organizations that successfully develop a bureaucratized system are more capable of effectively resisting leadership decapitations. Such organizations have a clear division of work and responsibilities, and follow established rules and procedures. This makes it easier for them to replace leaders whenever they are suddenly removed and maintain their operations without any significant disturbances. While it would make sense to control for the level of bureaucratization within the terrorist organizations in the dataset, that is seldom possible since such organizations have strong incentive to not reveal anything regarding their organizational structure. However, as organizations grow in size, their level of bureaucratization increases (Grinyer & Yasai-Ardekani, 1981). This means that one can expect that the larger a terrorist organization becomes, the more effectively it can cope with the loss of a leader, and the change in activity should be smaller when compared to small groups.

A similar, positive, relationship should also exist regarding the age of an organization (Grinyer & Yasai-Ardekani, 1981), and therefore, as a terrorist organization grows older, it becomes more bureaucratized and is able to resist decapitations more efficiently. For that reason, I include variables for both the age and size of a group, so that they can act as a proxy for the level of bureaucratization within an organization. Measurements of the size of a group is gathered from Jones and Libicki (2008) and displays the peak size that the group reached during the course of its existence. It can take on the values 10 (meaning that an organization had an estimated peak size of 10-99), 100 (100-999), 1 000 (1 000-9 999), and 10 000 (10 000-99 999). Obviously, gathering data on the size of terrorist organizations at the time they experienced a decapitation would be preferable for the purpose of analysis, while also being more valid, but data availability makes this the only realistic option. This option is also more reliable, since it is often very difficult to find figures on the size of terrorist organizations that are consistent, with large ranges and different sources making different assessments being an issue. Age measures for how long an organization has been in existence when a specific decapitation occurred, and is available in Price (2012).

It has been found that the method by which a leader is decapitated could affect how the organization responds, and lead to both a negative and positive change in the activity of terrorist organizations (Lehrke & Schomaker, 2016), and therefore I control for the method by which a leader was removed. This may be caused by different psychological responses that are triggered in the remaining members after their leader is neutralized. Lehrke & Schomaker (2016) argued that killings by a drone may trigger a martyrizing effect which increase the resolve of the remaining members, making them more active, and that incarcerating leaders have strong positive effects. The different methods, taken from Price (2012) are "kill", "capture", and "both". While it should be obvious what the kill and capture options entail, "both" means that the leader that was decapitated was first captured, and then killed while imprisoned. It should also be noted that while the kill option includes anytime a leader is killed, capture and both are only included if the leader is captured by a state, and not, for instance, a rivaling organization (Price, 2012). Just like the control for ideology, the method is controlled for by creating three dummy variables named after each of the methods and giving the value 1 for the method that corresponds to each individual decapitation.

Organizations that has previously experienced a decapitation should be able to resist following decapitations better than those who experience their first decapitation, since their previous experiences should make them conclude that it is necessary to create mechanisms

which aids in the transition from one leader to the next. In practical terms, this may be as easy as creating a simple chain-of-command which instructs exactly who should take command when the leader is removed. This is measured with a continuous variable giving each individual decapitation a number ranging from zero and upwards, depending on how many prior ones that has struck an organization. Thus, an organization's first decapitation is given the value "0", the second "1" and so on.

According to the proposed theory, the founder of a terrorist organization should be of the charismatic type, and fulfill two overall functions related to the operations of their organization. The successor of that leader should also not be able to fulfill these functions as efficiently as their predecessor. This means that the change in activity should be larger when the leader that is decapitated were also the founder of the organization. This is controlled for by creating a binary variable called "founder.decap" and giving each decapitation in the dataset a 0 if the individual decapitated was not the founder, and 1 if the individual was.

Lastly, the analysis controls for when several leaders of an organization are decapitated at the same time. This is done since one can expect that the more leaders that are removed at the same time, the larger the accumulated impact on the operational capacity of the organization will be. This is measured by creating two variables called "multiple.decap" and add.decap" (additional). The first one is a binary variable that is coded 1 every time more than one decapitation occur at the same time. The second is a categorical one which measures how many additional decapitations occur beyond any specific one, so that when two occur simultaneously, both will be given the value 1, and when three happen, they will be given the value 2, to delineate that two happened in addition to the one in question.

To determine the effect of the level of operations on a terrorist organization's ability to resist leadership decapitations, I ran several regressions including the aforementioned variables, and the results are presented in the section below. R was used to analyze the gathered data.

Results and Analysis

The main findings are presented in table 2. First however, a note on the reporting of the findings. When the dataset was imported into R, the percentage figures were changed to their corresponding decimal values, meaning that a decrease of -20 percent became -0,2, for instance, which explains why the results are presented the way they are. This may be a bit counterintuitive at first, since they are meant to convey estimated changes in percentages, and a decrease by 2 (–200%, that is) does not make much sense. What these results display is actually the estimated change in activity expressed in percentage points. Thus, the –2.048 reported for transnational organizations, actually means that the change is 205 percentage points lower than the change for national ones.

Table 1 presents a number of descriptive statistics for the dependent variable across the two categorizations of the independent variable. As the low medians tell, the majority of the cases in both categories display a decrease in activity following a decapitation. However, it is also important to note that there are some cases in both categories which display extreme increases in activity, with the highest among transnational organizations being 7233,33 percent, while the domestic organizations have two (sic!) observations who both display 15300 percent increases (minimum values are not included since they are –100 percent for both categories). These cases could, in turn, be a major cause of the large standard deviations. In a later analysis, these and some more observations will be treated as outliers since they could influence the results to a very large extent, and will thus be omitted.

Table 1. Descriptive statistics for DV across both values of IV

Category for IV	N	Mean	Median	Sd	Max
Transnational decapitations	47	2.085	–0.083	10.69	72.333
National decapitations	135	4.105	–0.5	20.058	153

Before doing the multiple regression, I ran a difference of means test (Welch's t-test) to examine whether there is a statistically significant variation between the changes in activity for transnational and domestic terrorist organization. The test resulted in a p-value of 0.3866 and a 95 percent confidence interval of -2.576 – 6.617, meaning that the relationship is not statistically significant, and that the null hypothesis cannot be rejected at this stage. Next, I ran a multiple regression in the manner outlined underneath.

Table 2. OLS regression measuring the effect of operating transnationally on the change in activity following leadership decapitations.

Variables	A	B	C	D
Transnational	–2.048	-1.992	-1.947	-1.596
	(3.403)	(3.373)	(3.316)	(3.281)
Religious	10.364	10.156	9.642	9.403
	(8.531)	(8.412)	(8.293)	(8.278)
Nationalist	7.01	6.91	6.758	6.439
	(8.392)	(8.336)	(8.171)	(8.151)
Left Wing	11.284	11.12	10.929	10.573
	(8.158)	(8.106)	(7.989)	(7.967)
Right Wing	–	–	–	–
	–	–	–	–
Size	–0,0002	–	–	–
	(0.00087)	–	–	–
Age	–0.169	-0.168	-0.163	-0.193
	(0.162)	(0.156)	(0.152)	(0.147)
Previous Decapitations	–1.52	-1.435	-1.593	–
	(3.157)	(2.095)	(2.061)	–
Founder	–0.122	–	–	–
	(5.0008)	–	–	–
Additional Decapitations	4.775 **	4.771 **	4.503 **	4.749 **
	(2.759)	(2.737)	(2.648)	(2.625)
Kill	–0.556	-0.518	–	–
	(2.849)	(2.828)	–	–
Both	–2.953	-3.345	–	–
	(6.088)	(5.887)	–	–
Capture	–	–	–	–
	–	–	–	–
Intercept	-3.874	-4.028	-4.035	-4.182
	(9.597)	(8.146)	(7.851)	(7.839)
N	182	182	182	182
Adjusted R^2	-0.01559	–0.004	0.005	0.007

Notes: DV is the change in activity for terrorist organizations following a leadership decapitation.
Standard error in parenthesis.
Significance codes: 0.01: '***' 0.05: '**' 0.1: '*'

A regression which includes all control variables can be seen in model A. The findings seem to point towards there being a shift in activity towards the negative following leadership decapitations. Additionally, that decrease is sharper for the organizations that operate on a transnational level. Unfortunately, none of the findings are statistically significant except for the variable measuring additional decapitations, meaning that terrorist organizations display an increase in activity when multiple leaders are decapitated simultaneously. These findings may be a consequence of the remarkably large standard error many variables display, which is more than twice as large as the estimated changes for some. It is also important to note the remarkably low adjusted R^2 value, which is negative, indicating that the model explains very little of the

variation between the variables. The low value is probably caused by several of the added control variables not improving the fit of the model, so that the value gradually decreases as the amount of control variables increases. Naturally, one should then omit some control variables in an attempt to improve the model's fit. Therefore, I ran more analyses without controlling for certain variables.

First, I removed the controls for size and founder, which both had very miniscule effects. Furthermore, since the size and age variables are both meant to act as a proxy for the level of bureaucratization in an organization, there may be a strong multicollinearity between them, which could be one additional factor explaining the low adjusted R^2 value, and in that case, it makes sense to omit one of them to see if the fit will improve. These results are seen in model B, which do display an improved R^2, although no major shifts in the estimates occurred. The next step, which can be viewed in model C, was to remove the variables measuring the methods used to decapitate. These variables are both statistically insignificant, and display very high standard errors. Lastly, the variable measuring previous decapitations was omitted. These results are presented in model D. As more variables are omitted the adjusted R^2 value gradually increases and the p-value, which is not included in the table, did in fact decrease from around 0.6 to 0.3, which is quite a considerable change. However, the large p-value still indicates that there is a considerable risk that this relationship was found due to random chance. So, although the fit of the model does gradually improve, not much can be said about the results. All the variables except the one measuring additional decapitations are still statistically insignificant, indicating that these do not perform well when trying to predict the effectiveness of leadership decapitations, suggesting that there may be different phenomena providing explanatory strength. The amount of attacks that occurred simultaneously was also quite small, so even though the change is significant, it is still not possible to make much inference based on this. However, I do not believe these findings means that the theory should be discarded just yet, and I instead ran some robustness checks, to see if changing the specifications of the model could affect the findings in any way. These checks did return some other interesting findings, which will be discussed in the section below.

Robustness checks

First off, I ran a regression that is exactly similar to the first one, with the only difference being that I only considered the location of attacks, and disregarded the goals of the organizations. One could argue that whether a terrorist organization is transnational or not is

more properly determined by examining where they commit their attacks, and I believe it could be interesting to examine if and how the results may shift depending on how the independent variable is specified. Basically, this only means that the independent variable was changed from the level of operations, which is a combination of the two criteria in the research design, to the location of attacks, i.e. the second criteria only, meaning that the transnational organizations are now those that are coded 1 for "attack.tnat". In practice, this means that some of the cases that were previously coded as domestic becomes transnational by making this category more inclusive. The process then followed the same steps as the regression bellow, with more control variables being gradually omitted. Doing this, the results shifted strongly against my theory, although the results are still insignificant. In the first regression which includes all controls, the independent variable shifted direction, meaning that transnational organizations become more active in relation to domestic organizations, with an increase of around 600 percentage points relative to national ones, and the effect also became statistically significant by 0.05. While the adjusted R^2 value displayed only a marginal shift, the p-value of the model decreased substantially, from 0.27 in the first regression to around 0.05 in the last one. This indicates that there may be an increase in activity for transnational terrorist that is actually sharper than domestic organizations, although it is not possible to make much inference based on these findings either, because this categorization is so inclusive that many terrorist organizations that should not rightly be considered transnational are categorized as such.

An issue with data collection and management was the abundant set of large outliers in the dependent variable, which I try to solve here by omitting the most extreme cases. The large outliers were not a consequence of errors in the data collection or management process. Instead, they were caused by the way the dependent variable was measured. Expressing the change in percentages means that no case can receive a decrease larger than -100%, but an increase could theoretically be infinitely large. To exemplify, a terrorist organization that went from 10 attacks/year prior to a decapitation and 0.2 attacks after decreased their activity by 98%, while an organization going from 0.2 to 10 would increase theirs by 4900%. These influential cases could potentially skew the findings immensely. I therefore ran a regression while excluding the most influential cases with the highest increases in activity, 8 in total. The line was drawn at that point because when all cases are sorted from highest to lowest, there seems to be quite a linear progression up until that point, where the increases instead become exponentially larger. To illustrate, the difference between the 182nd and 9th case is 1200%, (–100 to 1100 percent) while the range between the 8th and the 1st is 12920%, and in the highest

echelon, the difference between adjacent cases is sometimes in the thousands, making this the natural breaking point.

These regressions are available in appendix C. Perhaps surprisingly, running all the regressions without the outliers did not change much regarding the independent variable. The effect is still not significant, and the adjusted R^2 is still very low. One interesting finding, however, was that there is a decrease in activity for the kill and capture methods that is significant by 0.05 and 0.01, respectively. These methods seem to cause a change in the activity of the organizations struck that is 187 and 202 percentage points lower in relation to the reference category "both". Another good sign is that the p-value of this regression is 0.03, which means that there may in fact be a systematic relationship here. This is very much in line with findings in previous studies, in that the method by which a leader is decapitated may have an impact on the way an organization will respond.

To summarize, not much can be said about the results. The only concrete findings I was able to gather was that killing or capturing a leader seems to be more effective than first capturing and then killing a leader while in captivity (i.e. both). This is not that surprising since this method is arguably the most extreme measure of the three. The other two is only to be expected consequences of counterterrorism campaigns, and thus something both the terrorist organizations targeted in campaigns should be prepared for. In contrast, the act of indiscriminately killing an individual that is already in captivity, and thus cannot cause any immediate harm at the moment, carries with it an inherent aspect of brutality, and requires a certain amount of cold determination. Assuming that leadership decapitations often creates a backlash or martyrizing effect, it may be that the effect is enhanced when a leader is decapitated using this method, which could be considered more extreme than the others, by triggering a stronger emotional response among the remainder of the organization, and giving them more motivation to intensify their operations.

Concerning the relationship between changes in activity and the dichotomy of transnational and domestic organizations, it is not possible to determine whether one actually exists. Although a negative relationship between operating transnationally and change in activity was found, the results were insignificant, which did not change even when the model specification to make the designation "transnational" extremely inclusive, to the point at which it is not possible to make inferences. The high p-values and low adjusted R^2 in the original regression means that the model does not provide much explanatory strength, and it may very well be the case that there is no relationship between operating transnationally and experiencing

a sharper decrease in activity following a leadership decapitation, or, alternatively, the choice of method used for the analysis was suboptimal.

Summary and conclusions

Summary

The purpose of this study was to examine how different terrorist organizations react when their leaders are neutralized. Do they become more active, less active, or do they perhaps even collapse entirely? I made the argument that terrorist organizations that operate transnationally should be more vulnerable to leadership decapitations than those that operate domestically. When terrorist leaders are decapitated, the operational capacity of their organizations should decrease due to a number of reasons, such as increased risk of fragmentation or a loss of strategic decision-making, for instance. However, in addition to these risks, transnational organizations should be more vulnerable towards decapitations due to the fact that the larger areas they operate in makes it more difficult for them to create any interpersonal relations or operational cohesion within their organization. This forces them to rely more on their leaders, in relation to domestic organizations, to create this sense of unity, by propagating an ideological message and pointing out an operational direction. This means that the decrease in activity that one could expect to witness within terrorist organizations should be sharper in transnational organizations.

Conclusions

What can be said about the relationship between changes in activity and the level of operations? In short, not much. While I did find that there is a sharper decrease in activity for transnational terrorist organizations in comparison to domestic organizations, none of the findings were statistically significant. Even when running a simple bivariate hypothesis test, no significant relationship was found, nor when influential cases are omitted. This either means that no relationship exists, or that the model was unable to properly determine how the relationship manifests. The low goodness-of-fit in all the models means that it does not explain much of the variation in the dependent variable, and even though this study did find a relationship between the dependent and independent variable that was in line with the theorized effect, this relationship may simply have been found by chance, and the alternative hypothesis cannot be supported. This indicates that the level of operations does not influence the change in activity following a leadership decapitation. Likely, there are other factors that terrorist organizations across the spectrum may display regardless of the level they operate at which explains how well they can adapt to leadership decapitations.

However, I also believe that the results may, at least in part, be a consequence of the approach and method used in this study. As pointed out in the research design, the operationalization of the independent variable is quite crude, and there are also some variables that may display quite high degrees of multicollinearity. An example mentioned previously is the variables age and size, which are proxies of the degree of bureaucratization. While there is not much inference to be made regarding the findings, they may still open up for further research into the issue.

It is clear that if one would want to examine how leadership decapitations affect terrorist organizations using a quantitative framework, one would have to determine very carefully what kinds of variables to include. However, I also think that a different approach entirely to this question could be quite fruitful. The only real distinction between transnational and domestic organizations is the quite vague idea that transnational organizations are those whose operations transcends national borders. Reducing that general idea into two rather basic criteria when there are several other factors that should be taken into account, such as funding, organizational structure or the presence of cells, and links to other organizations, might not be a proper approach. As was mentioned in the design part of this study, there were some groups that were coded as transnational when they should be considered domestic and vice versa, such as the Irish National Liberation Army, the Provisional Irish Republican Army or the PKK. Given the fact that I studied this question with a quantitative framework, it was necessary due to the number of cases and the time frame, but a different type of study may be able to reveal more regarding transnational terrorist organizations and leadership decapitations. A comparative case study with a smaller number of cases may be able to study in more detail exactly what distinguishes transnational terrorist organizations from domestic organizations while also examining how the organizations change following a leadership decapitation in more ways than just considering activity. Such a study could for instance, examine the structure of individual organizations more thoroughly, which several previous studies points to as being highly relevant. This study attempted to control this for using size and age, but the low estimates for both variables indicates that these variables reflect the structure of terrorist organizations quite poorly. A different take on this question might make it possible to draw more inferences regarding the relationship between the level of operations and the ability to resist leadership decapitations by being much more in depth regarding the wide variety of important characteristics that different terrorist organizations could display, and that could be relevant in relation to their ability to adapt to the new circumstances that arise following a leadership

decapitation. Does an organization external funding? Do they recruit from the general population, or specific ethnic groups? Do they maintain cells in different countries? These are the types of questions such a study could examine.

While there was no significant relationship between the dependent and independent variables, I made some interesting findings regarding the method used for decapitations, which in turn has some policy implications, that will be discussed below.

The results show that killing may not be the optimal method to neutralize terrorist leaders. Capturing a terrorist leader seems to be the most efficient counterterrorism tactic compared to the other lethal alternatives (kill and both). This is in line with much previous research in the field, which has found that killing terrorist leaders may have unforeseen negative consequences, and that some methods in particular, such as drone strikes, are particularly counterproductive. Capturing terrorist leaders are for instance more efficient in terms of increasing the mortality rate of terrorist organizations (Price, 2012), while also not enticing them to target civilians, as targeted killings may (Abrahms & Mierau, 2017). In addition to other benefits, such as those mentioned here, the findings in the study show that capturing terrorist leaders also reduces the activity of the organizations struck to a larger extent than those whose leaders are killed or die in captivity. I believe this is likely caused by the fact that capturing a terrorist leader nets the same benefits, such as loss of strategic decision making, while avoiding the negative outcome of creating a backlash effect, call to arms, or public outcry. Regardless, these findings further enhance the importance of studying the effectiveness of different methods employed in targeted killings and leadership decapitations.

Likewise, concerning policy implications, these results support positions held in several previous studies on leadership decapitations, that contemporary counterterrorism tactics, heavily focused around targeted killings with the use of drones or more conventional warfare, may not be the optimal approach to combat terrorist organizations. Instead, a different outlook may be necessary, one that is mainly aimed at neutralizing terrorist leaders through non-lethal means as a primary course of action. This is very much in line with Jones and Libicki's (2008) findings that the most efficient non-peaceful strategies are those that put much more emphasis on traditional policework and intelligence operations, rather than armed force. Counterterrorism strategies that want to promote efficiency would thus firstly have to prioritize such work. The second, and perhaps more important step, is to make sure that leaders in captivity are not subjected to indiscriminate murder while imprisoned, and instead receive a trial under a (preferably) independent court of law, where that individual can receive a sentence

that properly corresponds to the severity of the crimes he or she has committed. According to my findings, this should reduce the risk of a response from the remaining members of their organizations which entails increased violence. In simple terms, counterterrorism strategies should focus more on incarceration and trials, and less on drones and Guantanamo Bay. In all seriousness though, while one should not prematurely declare measures focused on targeted killings a failure, it is still important to be aware that contemporary counterterrorism doctrines emphasizing targeted killings or other lethal tactics are neither god given nor set in stone, and must instead be continually scrutinized and judged for what they are.

Bibliography

Abrahms, M., & Mierau, J. (2017). Leadership Matters: The Effects of Targeted Killings on

Militant Group Tactics. *Terrorism and Political Violence*, *29*(5), 830–851.

https://doi.org/10.1080/09546553.2015.1069671

BBC, 2007, *Who were the Baader-Meinhof gang?*, updated 2007-02-12, retrieved 2017-12-

12, URL: http://news.bbc.co.uk/2/hi/europe/6314559.stm

Byman, D. (2006). Do Targeted Killings Work? *Foreign Affairs*, *85*(2), 95.

https://doi.org/10.2307/20031914

Carson, J. V. (2017). Assessing the Effectiveness of High-Profile Targeted Killings in the

"War on Terror": A Quasi-Experiment. *Criminology & Public Policy*, *16*(1), 191–220.

https://doi.org/10.1111/1745-9133.12274

Cronin, A. K. (2006). How Al-Qaida Ends: The Decline and Demise of Terrorist Groups.

International Security, *31*(1), 7–48.

D'Alessio, S. J., Stolzenberg, L., & Dariano, D. (2014). Does Targeted Capture Reduce

Terrorism? *Studies in Conflict & Terrorism*, *37*(10), 881–894.

https://doi.org/10.1080/1057610X.2014.941437

Enders, W., Sandler, T., & Gaibulloev, K. (2011). Domestic versus transnational terrorism:

Data, decomposition, and dynamics. *Journal of Peace Research*, *48*(3), 319–337.

https://doi.org/10.1177/0022343311398926

Freeman, M. (2014). A Theory of Terrorist Leadership (and its Consequences for Leadership

Targeting). *Terrorism and Political Violence*, *26*(4), 666–687.

https://doi.org/10.1080/09546553.2012.751912

Galanter, Marc & Forest, James J.F., 2006, "Cults, Charismatic Groups, and Social Systems:

Understanding the Transformation of Terrorist Recruits," in Forest, ed., *The Making of*

a Terrorist: Recruitment, Training, and Root Causes,Westport, Conn.: Praeger Security International, pp. 51–70.

Grinyer, P. H., & Yasai-Ardekani, M. (1981). Strategy, Structure, Size and Bureaucracy. *The Academy of Management Journal*, *24*(3), 471–486. https://doi.org/10.2307/255569

Grusky, O. (1960). Administrative Succession in Formal Organizations. *Social Forces*, *39*(2), 105–115. https://doi.org/10.2307/2574148

Haas, M. C., & Fischer, S. C. (2017). The evolution of targeted killing practices: Autonomous weapons, future conflict, and the international order. *Contemporary Security Policy*, *38*(2), 281–306.

Jones, S. G., & Libicki, M. C. (2008). *How terrorist groups end: lessons for countering Al Qa'ida*. Santa Monica, CA: Rand.

Jordan, Javier. (2014). The Effectiveness of the Drone Campaign against Al Qaeda Central: A Case Study. *Journal of Strategic Studies*, *37*(1), 4–29. https://doi.org/10.1080/01402390.2013.850422

Jordan, Jenna. (2009). When Heads Roll: Assessing the Effectiveness of Leadership Decapitation. *Security Studies*, *18*(4), 719–755. https://doi.org/10.1080/09636410903369068

Jordan, Jenna. (2014). Attacking the Leader, Missing the Mark: Why Terrorist Groups Survive Decapitation Strikes. *International Security*, *38*(4), 7–38. https://doi.org/10.1162/ISEC_a_00157

Lehrke, J. P., & Schomaker, R. (2016). Kill, Capture, or Defend? The Effectiveness of Specific and General Counterterrorism Tactics Against the Global Threats of the Post-9/11 Era. *Security Studies*, *25*(4), 729–762. https://doi.org/10.1080/09636412.2016.1220199

Morehouse, M. (2014). It's Easier to Decapitate a Snake than It Is a Hydra: An Analysis of Colombia's Targeted Killing Program. *Studies in Conflict & Terrorism*, *37*(7), 541–566. https://doi.org/10.1080/1057610X.2014.913118

Phillips, B. J. (2015). What Is a Terrorist Group? Conceptual Issues and Empirical Implications. *Terrorism and Political Violence*, *27*(2), 225–242. https://doi.org/10.1080/09546553.2013.800048

Price, B. C. (2012). Targeting top terrorists: How leadership decapitation contributes to counterterrorism. *International Security*, *36*(4), 9–46.

Senn, M., & Troy, J. (2017). The transformation of targeted killing and international order. *Contemporary Security Policy*, *38*(2), 175–211. https://doi.org/10.1080/13523260.2017.1336604

Wilner, A. S. (2010). Targeted Killings in Afghanistan: Measuring Coercion and Deterrence in Counterterrorism and Counterinsurgency. *Studies in Conflict & Terrorism*, *33*(4), 307–329. https://doi.org/10.1080/10576100903582543

Weber, Max. Economy and Society. Edited by Roth, Guenther and Wittich, Claus. 2nd edition. Berkley; University of California Press

Appendix A – Removed decapitations and organizations

Individual decapitations removed

Lack of data on attacks prior to 1970 means that these decapitations were removed from Price's dataset: African National Congress' only decapitation, both decapitations for the Black Panthers in 1967 and 1969, Guatemalan Party of Labor's first decapitation in 1966 (out of three), all three decapitations for the Baader-Meinhof Group which occurred in 1970, the only one for the Peronist Armed Forces in 1968, the first two out of four for the Montoneros in 1970, and the only one for the Independent Armed Revolutionary Forces (MIRA).

Entire organizations removed

Arab Communist League (ACO): had to be dropped due to lack of data on their goal. Time constraints forced me to drop this group entirely.

Popular Front for the Liberation of Palestine - Int'l Operations - also Special Operations Group (PFLP-SOG): Were dropped since they have no attacks ascribed to them in the GTD. To control if that were the case, I gathered the date of a hijacking that they have been accused of committing, and in the GTD, that attack was ascribed to the PLO. It is therefore likely that any attacks committed by PFLP-SOG is ascribed to other groups, and because of that I cannot code the dependent variable for them.

Jagrata Muslim Janata Bangladesh (Awakened Muslim Masses of Bangladesh) or JMJB: Were removed since the GTD ascribes them no attacks, making it impossible to code the change in activity. Same issue as PFLP-SOG. Some sources have made the claim that JMJB is an alternative name for JMB, which may explain this problem.

October 8 Revolutionary Movement (MR-8): Were removed because of the same issue as JMJB and PFLP-SOG.

Additional changes to organizations in the dataset

Irish National Liberation Army – General HQ Faction: At first, the variables "total.decaps" and "kill" were coded "0". However, the coding of other variables (such as "exp.decap") shows that the founder of this faction, Hugh Torney, was killed during the groups existence. This happened in 1996 (McDonald & Holland, 2010). This was most likely a mistake by Price, and these variables were therefore given the value 1.

Source: McDonald, Henry, Holland, Jack, 2010, *INLA: Deadly Divisions*, Dublin: Poolbeg Press Ltd

Appendix B – Independent variable coding

Below are two examples of how coding process of the independent variable looks, one for each value the variable can take on. A full list of all organizations is available upon request.

Transnational organization

Armed Islamic Group (AIG): Was founded with the goal of erasing the secular Algerian government and establish a state based on Sharia law, and wanted to promote global jihad through its actions. (Vriens, 2009). Have committed attacks in Algeria, France, Belgium, and Tunisia. They are thus coded as transnational.

Vriens, Lauren, 2009, Council on Foreign Relations, *Armed Islamic Group (Algeria, Islamists)*, archived 2009-05-27, retrieved 2017-12-18, URL: https://www.cfr.org/backgrounder/armed-islamic-group-algeria-islamists

National Organization

Armed Forces of National Liberation (FALN): Wanted to achieve Puerto Rican independence (Sater, 1981). Have committed attacks in the US (the US and Puerto Rico) only. They are coded as national.

Source: Sater, William F.. 1981. *Puerto Rican Terrorists: A Possible Threat to U.S. Energy Installations?*. Santa Monica, CA: RAND Corporation, 1981. https://www.rand.org/pubs/notes/N1764.html. Also available in print form.

Appendix C – OLS regression with omitted outliers

Variables	A	B	C
Transnational	-0.177	-0.151	0.141
	(0.42)	(0.419)	(0.399)
Religious	0.699	0.594	–
	(1.046)	(1.04)	–
Nationalist	0.466	0.413	–
	(1.026)	(1.024)	–
Left Wing	-0.332	-0.372	–
	(1.004)	(1.003)	–
Right Wing	–	–	–
	–	–	–
Size	-0.0001	–	–
	(0.0001)	–	–
Age	-0.026	-0.026	-0.029
	(0.02)	(0.02)	(0.02)
Previous	-0.392	-0.39	-0.508
	(0.387)	(0.387)	(0.385)
Founder	-0.562	-0.587	-0.769
	(0.617)	(0.616)	(0.613)
Additional	-0.632 *	-0.635 *	-0.663 **
	(0.343)	(0.343)	(0.332)
Kill	-1.873 **	-1.702 **	-1.62 **
	(0.741)	(0.719)	(0.718)
Capture	-2.021 ***	-1.859 **	-1.935 ***
	(0.749)	(0.73)	(0.73)
Both	–	–	–
	–	–	–
Intercept	3.157 **	3.015 **	3.267 ***
	(1.382)	(1.374)	(0.948)
N	174	174	174
Adjusted R	0.0602	0.06063	0.04664

Notes: DV is the change in activity for terrorist organizations following a leadership decapitation.
Standard error in parenthesis.
Significance codes: 0.01: '***' 0.05: '**' 0.1: '*'