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MONTEREY, CALIFORNIA

THESIS

**WHAT STRATEGY SHOULD BULGARIA PURSUE TO
TRACK AND DISRUPT TERROR NETWORKS IN THE
BALKANS?**

by

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March 2014

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TERROR NETWORKS IN THE BALKANS?**

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ABSTRACT

After the political regime in the former Yugoslavia collapsed at the beginning of the 1990s, followed by the ethnic civil wars in Bosnia and Kosovo, the Balkans turned into an arena for the spread of Islamic fundamentalism and terrorism. As a result, the region has posed a potential threat within Europe's borders and beyond. In 2012, Bulgaria became the target of a terrorist attack. Although the attack was directed against Israeli interests, the event revealed a breach in Bulgaria's national security. The purpose of this thesis is to illustrate how Bulgaria could develop a strategy to protect itself from such terrorist threats. Since this thesis relies on open-source historical data, rather than current information, its value-added contribution is the process it demonstrates for collecting and analyzing data, as opposed to recommending a particular strategy.

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LIST OF ACRONYMS AND ABBREVIATIONS

AHP	Analytic Hierarchy Process
ARD	average reciprocal distance
CCCIT	Coordinating Center for Countering International Terrorism
COP	Common Operational Picture
DANS	National Security State Agency
DIVA-GIS	Geographic Information System
FARC	Revolutionary Armed Forces of Columbia
FYROM	Former Yugoslavian Republic of Macedonia
GDP	gross domestic product
GIA	Armed Islamic Group of Algeria
GTD	Global Terrorist Database
IRA	Irish Republican Army
KLA	Kosovo Liberation Army
NATO	North Atlantic Treaty Organization
ORA	Organizational Risk Analyzer
OSCE	Organization for Security and Co-operation in Europe
SDA	Party of Democratic Action
SNA	social network analysis
UN	United Nations
U.S.	United States
WMD	weapons of mass destruction

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I. INTRODUCTION

A. THE BALKAN CONTEXT

One of the most serious unresolved issues of the twenty-first century concerning national security is terrorism. The terrorist attack on the World Trade Center in New York City on 9/11, the attacks in Spain, England, and many other places, have shown that threats and risks to international security are global and borderless. The escalation of terrorism by religious and ethnic groups seems to be growing.¹ In the years after 1990, “wars and political instability provided an opportunity for Al Qaeda and other terrorist groups to infiltrate” many corners of the world, including the Balkans, a region characterized by a significant Muslim population, “weak border controls, and security services.”² The Balkan Peninsula has always been a unique and dynamic region. Currently, peace in the Balkans is tenuous, a consequence of the ethnic and religious conflicts of the last two decades, extremist political leaders, organized crime, paramilitaries, and connections to large networks of international terrorist organizations.³

1. Fertile Ground for Terrorism

In terms of religion, the presence of a Muslim population in the Balkans “fits in well with the global vision of Al Qaeda and its affiliates, which aspire to achieve the triumph of Islamic culture over Western culture (and other Islamic foes), and to establish the ‘Umma’—the community of faithful Muslims which will unite all Muslims and position Islam as the main global force.”⁴ Thousands of fighters, mainly Afghan “alumni,” arrived to fight the Bosnia war, which spread the ideology of radical

1. Vasil Prodanov and Bogdana Tomova, *Risks for Bulgaria of Islamic Fundamentalism and Terrorism* (Sofia, Bulgaria: Bulgarian Scientific Academy, 2005), 17.

2. Steven Woehrel, *Islamic Terrorism and the Balkans*, CRS Report RL33012 (Washington, DC: Library of Congress, Congressional Research Service, July 26, 2005).

3. Prodanov and Tomova, *Risks for Bulgaria of Islamic Fundamentalism and Terrorism*, 14.

4. Shaul Shay, “Islamic Terror and the Balkans,” in *Islamic Terror and the Balkans* (New Brunswick, NJ and London, International Policy Institute for Counter-Terrorism, 2007), 202.

Islamic terror over the Muslim population in Albania, Kosovo, and Macedonia (the Former Yugoslavian Republic of Macedonia, FYROM).⁵

During the war in Bosnia and Herzegovina, a displaced and poor Bosniak population and the Bosnian government accepted the help of Iran in terms of money and weapons, as well as several thousand Islamic radicals and mercenaries.⁶ Many of them were Mujahidin from the Iranian Revolutionary Guard and fighters from Afghanistan.⁷ After the Dayton Peace Agreement in 1995, some of these fighters remained and gained citizenship through marriage or by bribing Bosnian officials.⁸ The importance of Bosnia was mentioned by Bin Laden and others in the high ranks of Al Qaeda as a key militant Islamic cause.⁹ Furthermore, Bosniaks received support throughout and after the war. Various kinds of assistance, including financial aid, was provided by Islamic charities and organizations serving conveniently as fronts for Al Qaeda to plan further attacks in Bosnia and elsewhere.¹⁰ As a result of a radical Islamic presence in the Balkans, the U.S. embassy in Sarajevo as well as U.S. military bases in Bosnia have been targets for numerous terrorist threats after 9/11.¹¹

Bosnia's dangerously loose internal and border security, in addition to high crime rates in Albania in the 1990s, produced an environment conducive for foreign Islamic extremists.¹² Islamic non-government organizations, some of which were fronts for Al Qaeda, were established there after 1991. They participated in the organized attack on the U.S. embassy in Tirana in 1998, resulting in the arrests of several Al Qaeda members.¹³

5. Shay, *Islamic Terror and the Balkans*, introduction.

6. Woehrel, *Islamic Terrorism and the Balkans*, 3.

7. Shay, *Islamic Terror and the Balkans*, introduction.

8. Woehrel, *Islamic Terrorism and the Balkans*, 3.

9. Ibid.

10. Ibid.

11. Ibid.

12. Ibid.

13. Ibid.

The involvement of Islamic terror organizations in Kosovo began in 1998 through the contribution of established terror organizations in Bosnia and Albania.¹⁴ They operated in two main ways by first establishing a network of charities serving as financial support, and secondly by incorporating fighters in combat units alongside the Kosovo Liberation Army (KLA).¹⁵ Similar to the conflict in Bosnia, Islamic charities in Kosovo served as a channel for transferring financial aid to the Muslims in Kosovo, and as a cover for terrorist activities.¹⁶ Also, during the war in Kosovo, evidence indicates that “Islamic instructors” arrived in Kosovo in 1998 from Bosnia, and that members of other terror organizations (e.g., Al Qaeda, the Yemenite organization, the Egyptian Islamic Jihad) participated in the fight together with KLA.¹⁷ There is evidence that these foreign volunteers operated not only in Kosovo, but also helped the separatist Islamic terror organizations in Macedonia.¹⁸

Macedonia, a country mainly divided between Muslim Albanians (30 percent of the population) and Orthodox Christians can be considered as another suitable area for the spread of the ideas and movements of radical Islam in the Balkans.¹⁹ Due to its internal problems created by the combination of ethnic and religious disputes, its economy, and its political weaknesses, Macedonia has become a country that is significantly influenced by outside players such as Albania and Muslims in Kosovo.²⁰ The first evidence of radical Islam in Macedonia was the arrest of a terrorist (with Mujahidin rank), who attempted to detonate an explosive device in a police station in Skopje in 1999.²¹ In subsequent years, other evidence in Macedonia surfaced showing

¹⁴. Shay, *Islamic Terror and the Balkans*, 88.

¹⁵. Ibid.

¹⁶. Ibid., 89.

¹⁷. Ibid.

¹⁸. Ibid., 90.

¹⁹. Ibid., 112.

²⁰. Ibid.

²¹. Ibid., 113.

that some organizations and charities have provided significant support for the creation of radical Islam in terms of manpower (Mujahidin), weapons, and funding.²²

2. Emergence of Criminalization

From an organized crime perspective, the Balkans can be characterized as a suitable region for the trafficking of weapons, drugs, and people. The criminalization process in the Balkans can be described as a result of two basic conditions:²³

- The wars in the former Yugoslavia led to a high level of poverty, corruption and a low level of foreign investments;
- Countries in the Balkans are a “bridge” to illegal ties connecting Europe with Asia and Africa, due to the weak border control implemented by weak governments.

The economies of the countries in the Balkans can be characterized as some of the worst economies in Europe.²⁴ This poor economic environment, connected with continuing ethnic hatred, has led some people to join existing criminal organizations.²⁵ Exemplified by Max Weber’s “loss of the monopoly over power,” different armed groups or criminals have penetrated government structures in these countries to influence others to achieve their own purposes.²⁶ The inefficiency of governments and law enforcement institutions in terms of low detection or proper prosecution of criminals has led to weak border control.²⁷ As a result of these economic and political weaknesses, the Balkans has become an ideal location “for the purchase and sale of illicit goods, including weapons, and transit for terrorists and their recruiters.”²⁸

22. Shay, *Islamic Terror and the Balkans*, 113.

23. Sheila Rom, “Instability and Desperation: The Balkan Link to Terrorism,” *Global Security Studies* 1, no. 3 (Fall 2010): 101–110.

24. According to the *CIA Factbook*, Kosovo has the worst economy in Europe, with the highest unemployment rate, as the Bosnian national GDP decreased significantly during the war. Rom, “Instability and Desperation.”

25. Rom, “Instability and Desperation.”

26. Shay, *Islamic Terror and the Balkans*, 88.

27. Rom, “Instability and Desperation.”

28. Ibid.

To summarize, although there have been efforts to stabilize security in these countries over the last ten years, the Balkans still must be considered as an area of great interest to international terrorist structures. As Shaul Shay states, “the terror infrastructure and radical Islam in the Balkans pose a threat, not only to stability in the Balkans, but constitute a danger of subversion and terror throughout the European continent and beyond it.”²⁹

B. RADICAL ISLAM AND TERRORISM IN BULGARIA

In recent years, some research has claimed that Bulgaria is not directly threatened by terrorists or Islamic fundamentalists.³⁰ According to this research, moderate Islam as well as amity amongst different ethnic and religious groups exists without jihad.³¹ However, Bulgaria is an integral part of the Balkans and is not an exception to the threat of terror and criminality the region faces.³² In late 1995, for example, there is evidence indicating that after the Dayton Accords, Ayman al-Zawahiri moved Al-Qaida headquarters in the Balkans from Bosnia-Herzegovina to a Sofia suburb in Bulgaria.³³ In mid-November 1995, about 20 senior Islamist commanders met to discuss “the new wave of operation in the aftermath of Fuad Talat Qassim’s August arrest in Zagreb and extradition to Cairo,³⁴ where he was tortured and likely executed. On November 20, 1995, these Islamists “announced” the emergence of their center in Bulgaria, sending a gunman to open fire on the Egyptian Embassy—a reminder to the Egyptian government not to look too closely at the Islamists’ activities in Sofia.”³⁵ In the beginning of 1996,

29. Shay, *Islamic Terror and the Balkans*, 170.

30. Prodanov, *Risks for Bulgaria of Islamic Fundamentalism and Terrorism*, 92.

31. Ibid.

32. Bulgarian Government website, “Bulgarian National Counterterrorism Plan, 2008,” <http://www.strategy.bg/StrategicDocuments/View.aspx?lang=bg-BG&Id=497>

33. Yossef Bodansky, *Bin Laden, the Man Who Declared War on America* (Rocklin, CA: Prima Publishing, 1999), 155.

34. According to Bodansky: “Qassim was one of Zawahiri’s closest personal friends, and his 1995 extradition to Egypt had been a festering wound.”

35. Bodansky, *Bin Laden, the Man Who Declared War on America*, 155.

Zawahiri found Bulgaria as safe place for his activities; he organized travel for 42 Egyptian activists to Bulgaria in order to conduct attacks against Western targets.³⁶

As early as 1992, Bulgaria fell among the countries and territories facing radical Islamists who have undergone jihad—training or experience in real battles.³⁷ Currently, there is a trial against 13 Muslim clerics who are accused of preaching radical Islam, anti-democratic ideology, as well as provoking religious hatred.³⁸ Some of the clerics are accused of membership in the Islamist Foundation Organization Al Waqf al Islami where registration as a religious group has been denied in Bulgaria.³⁹ According to Alex Alexiev, the link with Al Waqf al Islami⁴⁰ is the clearest factor to judge that the defendants are radical Islamists, because “its leadership has well-proven links not only with Islamist, but also with terrorist circles.”⁴¹ He also noted that the money the imams in Bulgaria have generated should not be underestimated and the fight against radical Islam must start by tracing the “enormous funds” that finance Muslim centers in the country.⁴²

On July 18, 2012, in Burgas Airport in Bulgaria, a terrorist attack was carried out against a bus with 42 Israeli tourists.⁴³ This attack resulted in five Israelis killed as well as the Bulgarian bus driver and 32 injured.⁴⁴ According to Alex Alexiev, Bulgaria is threatened by radical Islam because “our country is also seen as part of the Western world as well as part of unbelievers who must be destroyed.”⁴⁵

36. Shay, *Islamic Terror and the Balkans*, 142.

37. Prodanov, *Risks for Bulgaria of Islamic Fundamentalism and Terrorism*, 15.

38. News.bg, “The Trial Against the Imams Continues” (2013), accessed June 10, 2013, http://news.ibox.bg/news/id_281519771

39. Ibid.

40. “This is one Wahhabis organization, financed by Saudi in Eindhoven, The Netherlands. Its mosque, Al Furqaan, is widely known as a center of propaganda and funding of religious extremism in the whole Europe.”

41. Alex Alexiev, “Radical Islam Has Occurred throughout Bulgaria,” OFFNews.bg, December 2012, <http://offnews.bg/index.php/132029/aleks-aleksiev-radikalen-islyam-sheta-v-balgariya>.

42. Ibid.

43. *Wikipedia*, “Burgas Bus Bombing,” 2012, http://en.Wikipedia.org/wiki/2012_Burgas_bus_bombing

44. Ibid.

45. Alexiev, “Radical Islam Has Occurred throughout Bulgaria.”

C. FOUNDATION FOR CURRENT COUNTERTERRORISM STRATEGY FOR BULGARIA

As a member of the European Union and the Euro-Atlantic structures, particularly in NATO, the Republic of Bulgaria has entered into the scope of geostrategic interests of Islamic fundamentalism. The Bulgarian counterterrorism strategy, therefore, must factor in a number of issues:⁴⁶

- Bulgaria is geographically located in the immediate vicinity of the Islamic world as it connects Muslim countries from Asia with Europe;
- Bulgaria has a significant number of Muslim populations with historical roots and ethnic consciousness, mainly from Bulgarian, Turkish and Romani origin (in 2001, Muslims comprised 12.2 percent of the population of Bulgaria).
- Bulgaria is an eastern border of the Europe Union;
- There is the presence in the country of individual supporters of terrorist organizations and their radical formation, as well as their political and the religious beliefs;
- As a member of NATO, Bulgaria participates and continues to participate in the existing peacekeeping missions not only in the Balkans, but also in Afghanistan, Iraq, Lebanon, etc.⁴⁷
- Activities of religious foundations and other non-governmental organizations among the Bulgarian Muslim community aim to consolidate extreme forms of Islam;
- The internal criminal contingent in Bulgaria, and more specifically organized crime, has possible links with terrorist structures;
- The main financial support for the spread of radical Islam comes from petrol-rich countries from the Middle East which have a huge role for the dissemination of radical Islam.⁴⁸

Bulgaria, an ally of the United States in NATO, actively participates in military missions and operations for supporting world peace and in combat against international terrorism. In addition, as a member of the European Union, the country actively adheres to the policy and strategies of the Union in its anti-crime and counterterrorism fight.

46. Bulgarian Government website, "Bulgarian National Counterterrorism Plan, 2008," <http://www.strategy.bg/StrategicDocuments/View.aspx?lang=bg-BG&Id=497>.

47. Ministry of Defense of Republic Bulgaria website, "Missions and Operations," http://www.mod.bg/bg/tema_MissionsOperations.html.

48. Alexiev, "Radical Islam Has Occurred throughout Bulgaria."

According to the National Counterterrorism Plan, specific elements of Bulgarian foreign policy are:⁴⁹

- The interaction of Bulgaria with the partners of the European Union and NATO allies in joint fight against terrorism;
- The coordination, within the framework of the European Union, a common policy in the fight against terrorism in third countries and within the framework of international organizations;
- The implementation of the European Union strategy to combat terrorism and all its updates effective control of radicalization and prevention of terror recruitment networks, protection of critical infrastructure sites, intersection of channels and the mechanisms for the financing of terrorist activities, and prevention of the use of the Internet for terrorist purposes;
- Bulgaria's cooperation with the Council of Europe and Organization for Security and Co-operation in Europe (OSCE); the ratification of the European Convention for the suppression of terrorism and the Convention for the prevention of terrorism, and the Convention against terrorism financing;
- Bulgaria's contribution, together with NATO allies and other partners, to NATO missions in different countries for recovery of statehood, validation of democracy and counteracting terrorist attempts made to destabilize societies in these countries;
- Global planning of Bulgaria's efforts directed at implementation of the UN Security Council's resolution to combat terrorism;

At the national political level, coordination of the activities in the fight against terrorism is carried out by the Council for Security at the Council of Ministers, which organizes and coordinates the activities of the ministries and departments in connection with national security including the fight against terrorism.⁵⁰

At the operational level in the fight against terrorism, the Coordinating Center for Countering International Terrorism (CCCIT) in the National Security State Agency (DANS) functions as a national coordinator on the combat against terrorism.⁵¹ CCCIT implements interaction with other structures involved in the fight against terrorism, specifically security structures in the country as well as with the special foreign services,

49. Bulgarian Government website, "Bulgarian National Counterterrorism Plan, 2008."

50. Ibid.

51. Ibid.

and it centralizes all received operational and technical information.⁵² Also, the Coordinating Center carries out a systematic analysis of the risk of terrorist threats (including threats resulting from activities of Islamic radical groups) and formulates synthesized and prognostic data.⁵³

D. PURPOSE OF THESIS: DEVELOPMENT OF COUNTERTERRORISM STRATEGIES FOR BULGARIA

This thesis derives potential strategies that Bulgaria could use to fight terrorist networks operating not only in its territory, but also in the entire area in the Balkans. These strategies are derived from new methods for collecting and analyzing data on terrorist networks. However, the data-driven strategies only serve as a demonstration of what could be done, not what should be done. Until data on Bulgarian terrorism can be updated and integrated with classified documents, the results should not be taken as a recommendation for current action.

E. THESIS STRUCTURE

Chapter II reviews the literature on counterterror strategies. This chapter outlines military strategies (both kinetic and non-kinetic) as well as non-military strategies, such as law enforcement activities, amnesty programs, development, and financial interventions.

Chapter III summarizes the thesis methodology. The data used for analyzing networks is collected from open-source documents. It consists of people affiliated with terrorist groups in the Balkans, their activities and their connections with criminal organizations in the region. Once collected, the data are uploaded into Palantir for coding and structuring. After some initial analysis, the data are exported to additional software packages to conduct in-depth geospatial, temporal, link and social network analysis.

⁵². Bulgarian government website, “Bulgarian National Counterterrorism Plan, 2008.”

⁵³ Ibid.

Chapter IV presents the results of the data analysis. The chapter begins with results from geospatial and temporal analysis. It then transitions to link analysis and culminates in social network analysis.

Chapter V discusses the results of the analyses. It then identifies three alternative strategies to disrupt the Balkan networks. Based on a comparative analysis, one strategy is recommended to counter terrorism in the Balkans.

Chapter VI concludes the thesis, summarizes the findings and recommendations, and recommends follow-on research.

II. LITERATURE REVIEW OF COUNTERTERRORISM STRATEGIES

Three decades ago, terrorists wanted to elicit public sympathy in order to achieve their ideology-motivated goals.⁵⁴ After the Cold War, the number of terror attacks significantly increased. Terrorism also has changed its form and nature and now is directed “against civilians, not governments or their institutions” in order to achieve its political and economic goals.⁵⁵ The process of globalization led to the establishment of “network-centric terror organizations.”⁵⁶ Their objectives have broadened by the expansion of their activities and include the distribution of the world’s resources and the destruction of Western countries mainly by threatening human security.⁵⁷ Terrorists have evolved in their abilities to use the new technologies and in their tactics; they are well trained and equipped; often they rely on criminal and illegal activities.⁵⁸ As a result they have been able to achieve mass casualty attacks throughout the world, such as attacks of September 11, London bombing, and Madrid bombing.

Today there is not a single strategy to combat terrorism, or a common theory of anti-terrorists operations, because a strategy can be effective in the fight with a particular terror group, operating in a particular region, but it might not work against another one.⁵⁹ Consequently, a strategy has to be based on both “particularly the nature of the government under attack and the most important operational features of the relevant

54 . Mikhail Rykhtik, “Asymmetric Threats and Counter-Terrorism Strategies in Russia,” in *National Counter-Terrorism Strategies: Legal, Institutional, and Public Policies Dimensions in the U.S., UK, France, Turkey, and Russia*, ed. Robert Ortung and Andrey Makarychev (Washington, DC: The NATO Programme for Security through Science: IOS Press, 2006), 167.

55. Rykhtik, “Asymmetric Threats and Counter-Terrorism Strategies in Russia,” 167.

56. Ibid.

57. Ibid.

58. Ibid.

59. Kurt Campbell and Richard Weitz, *Non-Military Strategies for Countering Islamist Terrorism: Lessons Learned from Past Counterinsurgencies* (Princeton, NJ: Princeton University Press, 2006).

terrorist groups.”⁶⁰ As a result, for the purpose of this approach we separate general counterterrorism strategies into two main groups: military strategies and non-military strategies.

A. MILITARY STRATEGIES

There are various centers for collecting and analyzing data about “dark networks i.e., illegal and covert networks.”⁶¹ Although much attention has been paid to the collection of data connected with dark networks, there are not so many sources exploring and comparing strategies for disruption of these networks in terms of “balancing their potential gains with their likely potential costs.”⁶² Furthermore, focusing on capturing and eliminating “designated high value targets” is not a silver bullet, because as General Flynn and his coauthors have claimed, “merely killing insurgents usually serves to multiply enemies rather than subtract them.”⁶³ Consequently, strategies focused on population also have to be considered.⁶⁴ To provide some coherence among the different military strategies, Roberts and Everton (2011)⁶⁵ offered a framework that organized generic strategies into two main types: Kinetic and Non-kinetic.⁶⁶ The former is based on force measures to “eliminate or capture network members and their supporters and employs the usage of bombs and bullets to pursue the campaign.”⁶⁷ The latter is not based on “bombs and bullets” but rather applies non-coercive means to neutralize dark networks, such as “the reconstruction of war-torn areas, intelligence, and psychological operations.”⁶⁸

60. Campbell and Weitz, *Non-Military Strategies for Countering Islamist Terrorism: Lessons Learned from Past Counterinsurgencies*.

61. Nancy Roberts and Sean Everton, “Strategies for Combating Dark Networks,” *Journal of Social Structure* 12 (2011): 2, www.cmu.edu/joss/content/articles/volume12/RobertsEverton.pdf.

62. Ibid.

63. Ibid., 3.

64. Ibid.

65. Since the rehabilitation strategy of the Roberts and Everton structure of strategies is not military, I removed it to the non-military strategies section of this chapter.

66. Roberts and Everton, “Strategies for Combating Dark Networks,” 3.

67. Ibid.

68. Ibid.

The kinetic strategies are aggressive actions aimed at neutralizing, capturing or eliminating terrorists and their supporters by removing key actors in a network, or by disrupting “key ties or links among individuals, groups or organizations.”⁶⁹ Based on that, Roberts and Everton divide kinetic strategies into targeting and capacity-building strategies.⁷⁰ The former can be conducted in three ways: Person-Targeting (“man-hunting operations”), Group-Targeting (operations concentrated on teams, groups, or subsets of a particular terror network) and Organization-Targeting (operations focused on an entire terror organization).⁷¹ The latter is focused on “training and advising host-nation security forces to become a professional force.”⁷²

The Non-kinetic strategy, in turn, involves less aggressive means aimed to undermine terror networks “more with the diplomatic and economic tools of national power than with the military forces.”⁷³ There are different means for leading this strategy, which can be allied for the purpose of this thesis and are as follows:

- **Institution-Building** strategy uses “Civil Affairs forces that provide humanitarian and civic” support for reconstruction of the countries after the war (Bosnia and Herzegovina, Kosovo, etc.), which can be achieved by “building healthy host-government institutions of governance, rule of law, and economic development.”⁷⁴
- **Psychological Operations** practice the dissemination of information for influencing the behavior of population of a country, counterterrorist propaganda in terms of spreading “disaffection and dissidence among adversaries to reduce their will to fight and ultimately to induce their surrender.”⁷⁵

⁶⁹. Roberts and Everton, “Strategies for Combating Dark Networks,” 4.

⁷⁰. Ibid.

⁷¹. Ibid.

⁷². Ibid.

⁷³. Ibid.

⁷⁴. Ibid., 5.

⁷⁵. Ibid., 6.

- **Information Operations** are based on “electronic warfare and computer network operations to combat terrorism.”⁷⁶ The former is used “to control the electromagnetic spectrum or to attack the adversary.”⁷⁷ The latter is used for supporting military operations to control networked computers and IT systems. Both operations can be used “to attack, deceive, degrade, and disrupt information operations capabilities and to deny, exploit, and defend electronic information and infrastructure.”⁷⁸

Both generic approaches can be applied to a country or a group outside one’s borders.⁷⁹ For an example, Bulgaria could pursue both approaches toward disrupting terrorist networks that operate within its territory and outside its borders in neighboring countries (e.g., the Balkans). These strategies also can be pursued with other countries. Furthermore, the Kinetic and Non-kinetic approaches to countering terrorism can be developed using social network analysis to highlight terrorist networks.⁸⁰

B. NONMILITARY STRATEGIES

Although, the use of military force has an essential role in the fight against terrorism,⁸¹ Ami Pedahzur argues that “the war model,” conducted not only by Israel but also by other countries for combating terrorism, is “flawed not only because it undermines civil liberties, as many have argued in the past, but also because it is unsuitable for the challenges of terrorism and causes the security establishment to deviate from dealing with other, more imminent threats.”⁸² He recommends that politicians should consider the fact that the terrorism is a form of “psychological warfare” led by paramilitary forces, and as a result counterterror strategies should be transformed in a “defensive model.”⁸³ In addition, in order to address terrorism adequately governments

⁷⁶. Roberts and Everton, “Strategies for Combating Dark Networks,” 6.

⁷⁷. Ibid.

⁷⁸. Ibid.

⁷⁹. Ibid.

⁸⁰. Ibid., 7.

⁸¹. William C. Banks, Renee de Nevers, and Mitchel B. Wallerstein, *Combating Terrorism, Strategies and Approaches* (Washington, DC: CQ Press, 2008), 327.

⁸². Ami Pedahzur, *The Israeli Secret Services & the Struggle against Terrorism* (New York: Columbia University Press, 2010), 135.

⁸³. Pedahzur, *The Israeli Secret Services & the Struggle against Terrorism*, 144.

need to “understand the role of non-state actors, including criminals, as a threat to state security,”⁸⁴ because “criminals and terrorists intersect in many ways.”⁸⁵ As a result, non-military approaches should be considered as well. They can be achieved by:

- law enforcement
- amnesty program
- winning public support
- development strategy
- financial strategy

1. Law Enforcement

As the senior UN official in Kosovo Bernard Kouchner said, “The lesson of Kosovo was that peacekeeping missions need to arrive with a law-and-order kit made up of trained police, judges, and prosecutors and a set of draconian security laws. This is the only way to stop criminal behavior from flourishing in a vacuum of authority.”⁸⁶ Statistically, regarding the effectiveness of law enforcement “as of mid-2003, the police in over 100 countries had arrested more than 3,000 suspects linked to al -Qaeda, while the military had captured only 650 enemy combatants.”⁸⁷ Police, unlike soldiers, are the main link between a local population and the government security institutions, and usually provoke less stress when applying their tactics—regular patrols, surveillance, patient observation, establishing a bond with the community leadership, tracking terror networks and individuals, information gathering about terrorists rather than the use of soldiers with their “search-and-destroy” or mass detention operations.⁸⁸ Another important function of law enforcement is to “disrupt terrorist financing that includes by uncovering links between terrorists and organized criminal groups. Many modern

⁸⁴. Louise Shelley, “Countering Terrorism in the U.S.: The Fallacy of Ignoring the Crime—Terror Nexus,” in *National Counter-Terrorism Strategies: Legal, Institutional, and Public Policies Dimensions in the U.S., UK, France, Turkey, and Russia*, ed. Robert Ortung and Andrey Makarychev (Washington, DC: The NATO Programme for Security through Science: IOS Press, 2006), 212.

⁸⁵. Shelley, “*Countering Terrorism in the U.S.: The Fallacy of Ignoring the Crime – Terror Nexus*,” 203.

⁸⁶. Ibid., 210.

⁸⁷. Campbell and Weitz, *Non-Military Strategies for Countering Islamist Terrorism: Lessons Learned from Past Counterinsurgencies*.

⁸⁸. Ibid.

terrorist groups, like some insurgents, derive substantial funds from narcotics trafficking and other illicit activities.”⁸⁹ Furthermore, the deterrence effect of law enforcement could be a useful tool to combat terrorism by demonstrating that the government under attack is able to judge suspected terrorists, or to prevent others from joining to terrorism.⁹⁰ In addition, law enforcement can be used to reduce terrorist recruitment by disrupting places where such activities occur.⁹¹ This can be achieved by monitoring and/or closing radical mosques and schools;⁹² for instance, in France police and security services have an access to all kinds of data and can use all forms of interception, physical surveillance, monitoring of speeches, sermons and literature from Salafist mosques, and other Islamic fundamentalist activities in the country, which have resulted in the arrests of dozens Islamic fundamentalists.⁹³

2. Amnesty Programs

This counterterrorism strategy is expressed by dividing a terrorist group into subgroups.⁹⁴ This can be achieved by amnesty programs (that encourage defections among terrorists), division of a group into different ethnic, tribes and national components, if it consists of such, and empowering Islamic moderates, etc.⁹⁵ Also, rehabilitation can be used to influence “moderate preachers to counsel terrorists and to instill in them a more balanced view of Islamic teaching.”⁹⁶

89. Campbell and Weitz, *Non-Military Strategies for Countering Islamist Terrorism: Lessons Learned from Past Counterinsurgencies*.

90. Banks, *Combating Terrorism, Strategies and Approaches*, 138.

91. Lynn E. Davis and Melanie W. Sisson, *A Strategic Planning Approach: Defining Alternative Counterterrorism Strategies as an Illustration* (Santa Monica, CA: RAND Corporation, 2009), 12.

92. Davis and Sisson, *A Strategic Planning Approach: Defining Alternative Counterterrorism Strategies as an Illustration*, 12.

93. Gary J. Schmitt, “France: In a League of Its Own,” in *Safety, Liberty, and Islamist Terrorism: American and European Approaches to Domestic Counterterrorism*, ed. Gary J. Schmitt (Washington, DC: The AEI Press, 2010), 111.

94. Campbell and Weitz, *Non-Military Strategies for Countering Islamist Terrorism: Lessons Learned from Past Counterinsurgencies*.

95. Ibid.

96. Roberts and Everton, “Strategies for Combating Dark Networks,” 6.

3. Winning Public Support

In many cases, most terrorists and insurgents are dependent on the population not only for logistical support in the sense of information, food, shelters, but also for employing recruits.⁹⁷ As a result, winning public support is an important strategy for both host and foreign countries in order to reduce terrorist activities, although it would not have instant effect.⁹⁸ This strategy can be accomplished through different campaigns, such as:⁹⁹

- Influence campaigns aimed at both religious leaders, who play a vital role in the recruitment process and deliver religious justification for violence,¹⁰⁰ and local political leaders “in order to undermine the credibility of religious and ideological justifications for suicide and the killing of innocents and Muslims.”¹⁰¹ Such a campaign should be done by carefully and discretely funding a leader or a group.¹⁰²
- Influence campaigns showing Western values. Economic policies could create business partnerships with “Muslim business leaders who appreciate the benefits of cooperation with Western institutions” in order to support “moderate Muslim elites as well as acquiring information about their extremist rivals.”¹⁰³ Furthermore, campaigns to influence the broader Muslim population, for example, the U.S. disaster relief campaign to Muslims after the December 2004 Asian Pacific Tsunami demonstrated “U.S. concern to alleviate Muslim suffering” and led to weakening public “support for terrorism in many Muslim countries.”¹⁰⁴

97. Campbell and Weitz, *Non-Military Strategies for Countering Islamist Terrorism: Lessons Learned from Past Counterinsurgencies*.

98Ibid.

99Ibid.

100. Jarret M. Brachman and William F. McCants, “Stealing Al Qaeda’s Playbook,” *Studies in Conflict & Terrorism* 29, no. 4 (2006): 5–22.

101. Davis and Sisson, *A Strategic Planning Approach: Defining Alternative Counterterrorism Strategies as an Illustration*, 11.

102. Brachman and McCants, “Stealing Al Qaeda’s Playbook,” 5–22.

103. Campbell and Weitz, *Non-Military Strategies for Countering Islamist Terrorism: Lessons Learned from Past Counterinsurgencies*.

104. Ibid.

- De-legitimizing terrorism using a strategy showing that genocide, piracy and slavery are outcomes of terrorism, which “are now considered beyond the bounds of proper behavior.”¹⁰⁵ Also, it has to highlight distortion activities of Islam extremists and their sacred principles in order to discredit their propaganda and to empower moderate Muslims.¹⁰⁶ This can be achieved by funding effective media campaigns, “but in a very low key and indirect manner,” to turn “Muslim public opinion against the jihadists” by “broadcasting images of jihadi attacks that have killed Muslim children.”¹⁰⁷ Rather, a message showing that jihadists have killed thousands of Muslims and non-Muslims might provoke negative public opinion toward terrorists.¹⁰⁸

4. Development Strategy

Since international terrorism is considered as a political act, and no country can overcome it on its own, diplomatic cooperation between countries is “the cornerstone of a comprehensive, long-term, international counterterrorism strategy that seeks to politically discredit, operationally disrupt, and eventually defeat the most violent groups.”¹⁰⁹ The indirect support of foreign governments is needed to fight with terrorists, because as defense analysts Steven Metz and Raymond Millen have noted about contemporary counterterrorism, “the key to success is not for the U.S. military to become better at counterinsurgency, but for the U.S. military (and other elements of government) to be skilled at helping local security and intelligence forces become effective at it.”¹¹⁰ As a result the United States, for example, has supported friendly governments by providing training, intelligence and financial aid in order to improve their counterterror

¹⁰⁵. Campbell and Weitz, *Non-Military Strategies for Countering Islamist Terrorism: Lessons Learned from Past Counterinsurgencies*.

¹⁰⁶. Ibid.

¹⁰⁷. Brachman and McCants, “Stealing Al Qaeda’s Playbook,” 19.

¹⁰⁸. Campbell and Weitz, *Non-Military Strategies for Countering Islamist Terrorism: Lessons Learned from Past Counterinsurgencies*.

¹⁰⁹. Michael A. Sheehan, “Diplomacy,” in *Attacking Terrorism: Elements of a Grand Strategy*, ed. Audrey K. Cronin and James M. Ludes (Washington, DC: Georgetown University Press, 2004), 98.

¹¹⁰. Campbell and Weitz, *Non-Military Strategies for Countering Islamist Terrorism: Lessons Learned from Past Counterinsurgencies*.

abilities.¹¹¹ This type of U.S government policy can have beneficial effects against terrorists, such as:¹¹²

- Improvements in intelligence, law enforcement and military defense capability;
- Promotion of political and economic reforms. “Strengthening secular education” and discrediting radical Islam and anti-Western propaganda;
- Creation of a multinational coalition to combat terrorism, which is able to control WMD proliferation and support multilateral anti-terrorism intelligence sharing. In addition, international cooperation is significantly important to limit the support from states to terrorists,¹¹³ and can be achieved by political, moral and economic pressure on these states.¹¹⁴

5. Financial Strategy

The knowledge, gained from past counterterrorism actions, shows that any terrorist group depends on support across the borders. For instance, the Japanese Red Army directed such activities against Israel for the Palestinians. IRA operators provided training support to the FARC in Columbia.¹¹⁵ Nowadays, “not only is the al-Qaeda network inherently multinational, but even terrorist groups that conduct strikes inside a single country rely on transnational support,”¹¹⁶ which usually “comes from some states, charity associations, and donations ostensibly for humanitarian purposes that are then transferred to terrorists organizations.”¹¹⁷ As a result, a strategy for interrupting financial support for terrorists is important.¹¹⁸ This strategy can be achieved by decreasing “the availability of informal and illegal mechanisms of funds transfer, including implementing

¹¹¹. Campbell and Weitz, *Non-Military Strategies for Countering Islamist Terrorism: Lessons Learned from Past Counterinsurgencies*.

¹¹². Ibid.

¹¹³. Ibid.

¹¹⁴. Rykhtik, “Asymmetric Threats and Counter – Terrorism Strategies in Russia,” 173.

¹¹⁵. Campbell and Weitz, *Non-Military Strategies for Countering Islamist Terrorism: Lessons Learned from Past Counterinsurgencies*.

¹¹⁶. Ibid.

¹¹⁷. Rykhtik, *Asymmetric Threats and Counter-Terrorism Strategies in Russia*, 173

¹¹⁸. Davis and Sisson, *A Strategic Planning Approach: Defining Alternative Counterterrorism Strategies as an Illustration*, 11.

regulatory mechanisms to monitor charitable donations and increasing efforts to detect money laundering, black market activity, and drug trade.”¹¹⁹

C. SUMMARY

International terrorism is constantly evolving in its tactics and strategies. Consequently, counterterrorism strategies have to evolve as well.¹²⁰ In order to develop an effective strategy, the first step is to collect data on the threats, identify groups responsible for the threats, and investigate what behavior, trends and vulnerabilities each group presents since different approaches are needed for different terror organizations.¹²¹

In selecting a strategy both military and nonmilitary strategies need to be considered, with the full understanding that it is possible to combine them,¹²² as long as resources are available. In addition, any counterterror strategy has to consider “the balance between values such as civil liberties, and the empowering of law enforcement agencies at home, as well as the balance between rigorous counterterrorism and international law abroad.”¹²³

This thesis demonstrates a process for selecting a strategy or a combination of strategies that Bulgaria could pursue in order to fight terrorism in the Balkans. Most importantly, it illustrates how a strategy could emerge from a careful analysis of networks operating over the last two decades in the Balkans.

¹¹⁹. Davis and Sisson, *A Strategic Planning Approach: Defining Alternative Counterterrorism Strategies as an Illustration*, 11.

¹²⁰. Audrey K. Cronin, “Conclusion: Toward an Effective Grand Strategy,” in *Attacking Terrorism*, ed. Audrey K. Cronin and James M. Ludes (Washington, DC: Georgetown University Press, 2004), 285.

¹²¹. *Ibid.*

¹²². *Ibid.*, 293.

¹²³. *Ibid.*, 297.

III. METHODOLOGY

A. INTRODUCTION

This chapter describes the research process used to answer the thesis question. The process consists of three basic steps: data collection and data structuring; data analysis; strategy development and strategy selection.

B. NETWORK DATA COLLECTION AND DATA STRUCTURING

Since Bulgaria is located in the Balkans, the main part of the analysis examines the terror networks operating not only in the country, but also in other countries in the region. Most of the terror networks analyzed in this approach were formed after the collapse of Yugoslavia, basically during the wars in Kosovo, Bosnia and Herzegovina with a strong support from outside the borders of the Balkans. In order to track and analyze the evolution of radical Islamic terrorist organizations operating in the Balkans, the first step was to collect the data.

The collected data documents terror events that occurred in the Balkans from 1990 to present day (2013) and are drawn from the Global Terrorism Database and Jane's database. The data consist of about 755 events, information about the types of events, dates of events, as well as their geographical coordinates. Geospatial data sets also were collected from DIVA GIS and Narodov Mira Greg. In addition, data about the people and organizations connected to terrorist groups operating in the Balkans were drawn from English and Bulgarian books, news and journals. All data was then uploaded into a program called Palantir for coding and structuring necessary to perform the analysis described below.

C. DATA ANALYSIS

Data analysis is a crucial step in developing a counterterrorism strategy¹²⁴ at the national and even at a tactical level.¹²⁵ The latter is important in the process of tracking terrorist activities because terror networks rely heavily on their local cells that operate tightly together with limited information of the larger organization.¹²⁶

Currently, there are many data collection techniques for fighting terrorist organizations. This thesis uses geospatial analysis, temporal analysis, link analysis and social network analysis.

1. Geospatial and Temporal Analysis

Two software packages were used to conduct geospatial analysis—Palantir and ARC-GIX. Palantir’s visualization of terror events revealed the pattern of terrorist events over time, their geospatial distribution through time and their relationship to the ethnic distribution in the Balkans.

2. Link Analysis

Link analysis is a method of analyzing networks consisting of different types of entities (for example, people, buildings, cars, locations, events) and different ties between them.¹²⁷ In this case, Palantir was useful in creating an overall picture of how people and organizations are interconnected by events and activities.

3. Social Network Analysis

After structuring and conducting the initial analysis in Palantir, the data were exported to Social Network Analysis (SNA) programs. In contrast to Link Analysis, SNA is focused on ties between similar objects (for example, people, organizations) in order to

124. Lawrence Cline, “Intelligence and Combating Terrorism,” in *Fighting Back: What Governments Can Do about Terrorism*, ed. Paul Shemella (Stanford, CA: Stanford Security Studies, 2011), 193.

125. John J. Le Beau, “Intelligence and Counterterrorism: Examining the Crucial Tools of Secrecy and Cooperation,” in *Toward a Grand Strategy against Terrorism*, ed. Christopher C. Harmon (New York: McGraw Hill Companies, 2011), 195.

126. *Ibid.*, 196.

127. Sean F. Everton, *Disrupting Dark Networks* (New York: Cambridge University Press, 2012), 6.

analyze their social interaction patterns and speculate how these patterns affect their behavior.¹²⁸ SNA is a methodology based on mathematics, anthropology, psychology and sociology, “where individuals are reduced to nodes and their relationship to links.”¹²⁹ In other words, SNA is based on the assumption that the “behavior of actors is profoundly affected by their ties to others; the networks in which they are embedded” affect what they do, say, and believe.¹³⁰ Consequently, SNA provides empirical data to a social context.¹³¹

There are a number of SNA programs. This research relies on UCINET, ORA, and Pajek, each of which has its strengths and weaknesses.¹³² UCINET is the most popular software for SNA, because it comprehensively assesses measures of network topography, actor centrality, identifies subgroups, and also “includes tools for selecting subsets of files, merging and stacking datasets,” and allows easy data export and import in different formats.¹³³ The other program, Pajek, “does not include as many algorithms as UCINET,” however it can handle very large datasets and allows “users to visualize networks in two or three dimensions.”¹³⁴ Unlike UCINET and Pajek, ORA allows users to analyze networks based on “a report containing a series of related measures,” also the software “includes features for simulating various scenarios, geospatially analyzing and mapping social networks, and creating different useful charts.”¹³⁵ The disadvantage of ORA’s report – based approach is “that sometimes it includes inappropriate metrics for a particular network (estimating closeness centrality in a disconnected network) which can lead to assumptions that some actors are most important than they really are.”¹³⁶ For

¹²⁸. Everton, *Disrupting Dark Networks*, 7.

¹²⁹. Stuart Koschade, “A Social Network Analysis of Jemaah Islamiyah: The Applications to Counterterrorism and Intelligence,” in *Studies in Conflict and Terrorism* 29, no. 6, (2006): 589–605.

¹³⁰. Everton, *Disrupting Dark Networks*, 7.

¹³¹. Ibid.

¹³². Everton, *Disrupting Dark Networks*, 49.

¹³³. Ibid., 50.

¹³⁴. Ibid., 62.

¹³⁵. Ibid., 69.

¹³⁶. Ibid., 70.

this research, UCINET and ORA are used to estimate metrics and to manipulate the data, while Pajek is used for robust visualizations of the network.¹³⁷

The relational data sets were analyzed by using different metric families found in the field of SNA, such as network topography, subgroups, centrality measures, brokers and bridges in the network.¹³⁸

4. Data Fusion

The final part of data analysis is data fusion where all the results from different analysis are combined and aggregated to provide a common operating picture of terror networks operating in the Balkans. This picture consists of information about both central people (terrorists, politicians, religious leaders, etc.) who are connected to other people in the network and central organizations. It also includes information about the location of terror events over the period from 1990 to the present.

D. STRATEGY OPTIONS AND STRATEGY SELECTION

The final part of the thesis involves strategy development and strategy selection. Building on the fused data, three potential counterterrorism strategies surface and are considered. The selection of a preferred strategy is based on the following criteria: limitation of civil liberties; available resources for implementation; potential threats to people and critical infrastructure; limitations of implementation; and potential effectiveness of strategies. Utilizing the Analytic Hierarchy Process (AHP) as a decision making tool, one strategy is recommended to counter terrorism in the Balkans.

137. Everton, *Disrupting Dark Networks*, 74.

138. *Ibid.*, 8–14.

IV. DATA ANALYSIS

The purpose of this chapter is to demonstrate how to analyze the collected and structured data about terror networks. It consists of four analytical steps: geospatial, temporal, link, and social network analysis (SNA). The final part of this chapter is a data fusion of all analyses in order to create a common operational picture¹³⁹ about the modus operandi of terror networks operating in the Balkans.¹⁴⁰ This overview consists of information about the most important people (terrorists, politicians, religious leaders, etc.) and terror organizations, in addition to information about the location of terror events over the period in this study. Most importantly, it will inform the development and selection of a counterterrorism strategy¹⁴¹ in the next chapter.

The analysis begins with a review of the ethnic distribution in the Balkans countries. As can be seen in Figure 1, the region consists of many ethnic groups.¹⁴² In addition to ethnicity distribution, religion is spread among the ethnic groups in terms of Orthodox Christianity (Serbs, Macedonians, and Bulgarians), Catholicism (Slovenians and Croatians), and Islam (Bosnians, Muslim Bulgarians, and Albanians).¹⁴³ As a result, the Balkans has been historically regarded as a “transit area, [a] bridge between different cultural worlds, and as a range through which people, ideas and merchandise passed.”¹⁴⁴

¹³⁹. Common Operational Picture (COP) offers a standard overview of an incident, providing incident information that enables the Incident Commander and any supporting agencies to make effective decisions.

¹⁴⁰. Common Operational Picture (ArcGIS 10), *ArcGIS*, <http://www.arcgis.com/home/item.html?id=1d90b418b78e40158914bd5178b6892f>.

¹⁴¹. Ibid.

¹⁴². Shay, *Islamic Terror and the Balkans*, 19.

¹⁴³. Ibid.

¹⁴⁴. Ibid.



Figure 1. Ethnic distribution in the Balkans. The image was created through the use ArcGIS software programs.

After the collapse of Yugoslavia and the ensuing ethnic conflicts in the Balkans, the area “became a focal point of attraction to Islamic terror entities.”¹⁴⁵ During the civil war in Bosnia and Herzegovina (1992–1995) several thousand warriors, mainly Afghan “alumni” and Al Qaida members arrived there to fight against the Serbs and also to train “Muslim Bosnian fighters.”¹⁴⁶ They formed Mujahidin brigades with the support of Ilija Izetbegovic—a leader of Party of Democratic Action (SDA) and Muslim leader in

¹⁴⁵ Shay, *Islamic Terror and the Balkans*, xi.

¹⁴⁶ Ibid.

Bosnia.¹⁴⁷ Also, Muslims in Bosnia received significant support from Iran.¹⁴⁸ After the end of the Bosnian war, although Mujahidin units were disbanded, a thousand of these foreign fighters stayed in Bosnia.¹⁴⁹ Their presence combined with corruption, low government power and weak public security has made Bosnia a haven for criminals and terrorists.¹⁵⁰ Furthermore, Islamic terror influence has spread into Kosovo and in Macedonia as well.¹⁵¹ As a result, the Balkans Islamic extremist activities have turned the area into a platform from which to threaten global security.¹⁵² For example, there is evidence of links to the September 11 attacks, the “Millennium” attacks and terrorist activities in France, Germany, Britain, Spain and Italy.¹⁵³

A. TEMPORAL ANALYSIS

Based on the Global Terrorist Database (GTD) data set, Palantir visualized temporally these terror events committed in the Balkans from 1991–2013 (Figure 2). The data include 755 terror events committed by not only terrorist organizations but by individuals. The majority of the terror events were unattributed to a particular group and many were random acts of violence connected with sectarian/ethnic conflicts. There is a total of 755 events—374 bombings (shown in red), 246 assault attacks (dark blue), 59 assassinations (blue), 47 facilities and infrastructure attacks, 21 hostage kidnappings (Purple), and 1 hijacking.

¹⁴⁷. Shay, *Islamic Terror and the Balkans*, xi.

¹⁴⁸. Ibid.

¹⁴⁹. Ibid.

¹⁵⁰. Shay, *Islamic Terror and the Balkans*, xii.

¹⁵¹. Shay, *Islamic Terror and the Balkans*, xiii.

¹⁵². Ibid.

¹⁵³. Shay, *Islamic Terror and the Balkans*, 123–177.

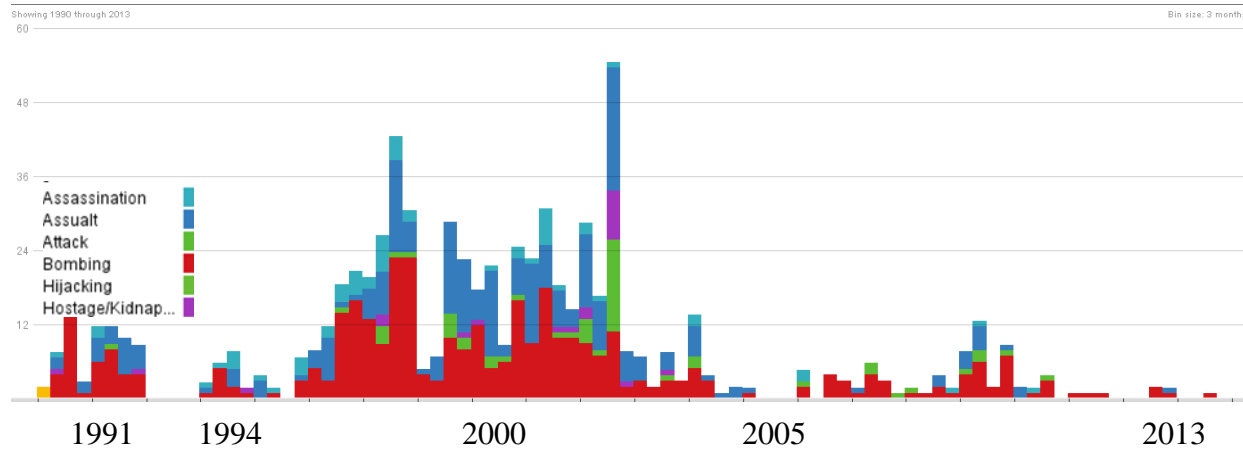


Figure 2. Terror events in the Balkans (1991–2013).

As seen in Figure 2, there were relatively few violent events during the time period of the Bosnian War from 1992 to 1995. From 1991 to 1995 most of the events occurred in Bosnia, where over 100,000 civilians and soldiers were killed. Consequently, El Mujahedeen terrorist activities were not part of the data since they were officially part of the Muslim Bosnian Army until they were forced to disband in accordance with the Dayton Peace Accords in 1995.¹⁵⁴ After the Bosnian war until the beginning of the Kosovo war in February 1998, most terror attacks occurred in Bosnia, Kosovo and Albania.

Another spike in terror events was recorded after the Bosnian war and before as well as during the war in Kosovo (1998–1999). Many of the events from this time period occurred in Bosnia, Kosovo and Albania. In Kosovo, this was a result of the movement of many fighters from Bosnia to support their brothers in the KLA, a group that was listed as a terrorist organization, but after the war in Kosovo it was disarmed in 1999.¹⁵⁵

¹⁵⁴. Shay, *Islamic Terror and the Balkans*, 39–73.

¹⁵⁵. *Ibid.*, 81–86.

B. GEOSPATIAL ANALYSIS

A geospatial analysis was conducted of the same terror events used for the temporal analysis. Figure 3 is a heat map visualization of those violent attacks. The heat map shows the majority of attacks occurred in the Balkans, which are clustered mainly in Kosovo, Bosnia, Albania, and Macedonia. The largest cluster is in Kosovo, characterized by 161 events. The heat map density displays areas with a radius of 10 km.

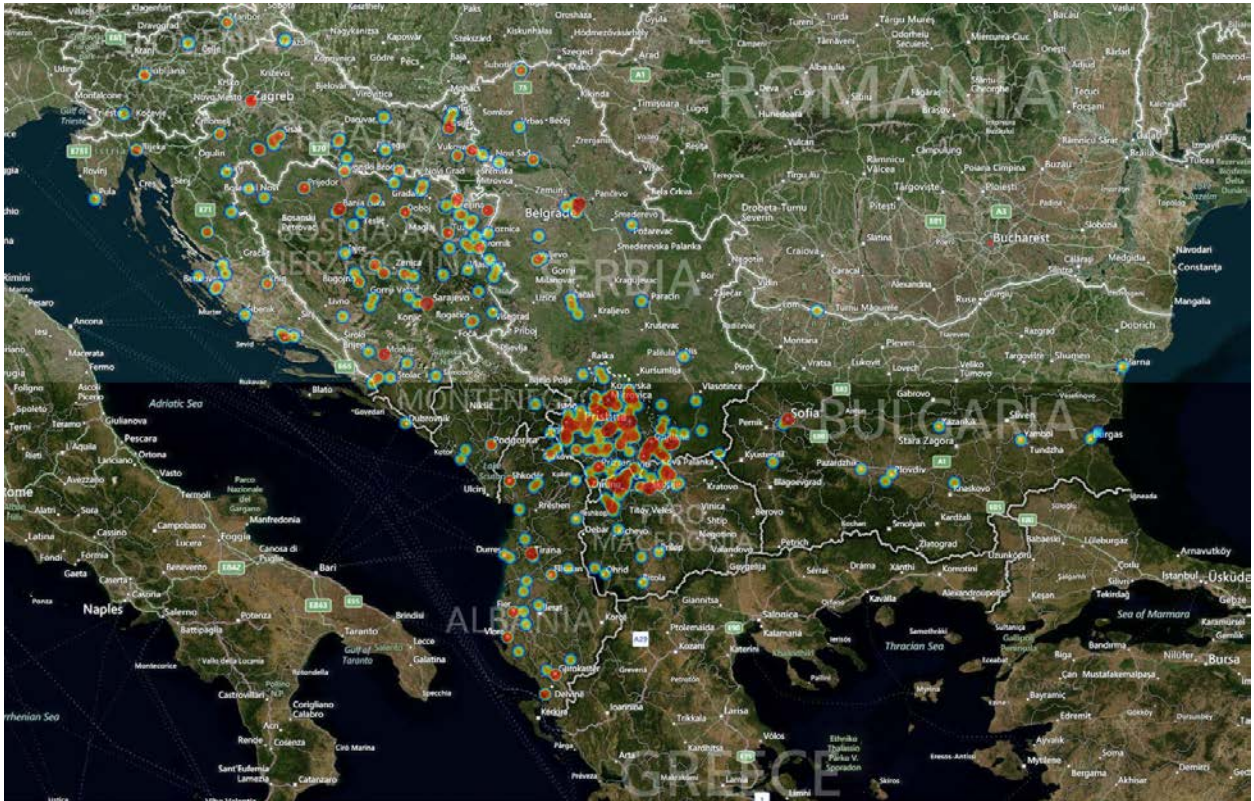


Figure 3. Terrorist events in the Balkans (1991–2013).

Figure 4 shows terror events committed in Bulgaria over the last two decades. According to GTD the total number of terror events is 36, including 25 bombings, 3 assault attacks, 6 assassinations, 1 hostage kidnapping, and 1 hijacking.¹⁵⁶ As seen in the visualization of terrorist acts committed in Bulgaria over the last 20 years, there have not been a large number of terror activities compared with other Balkan countries. The hot

¹⁵⁶ Global Terrorism Database, <http://www.start.umd.edu/gtd/>.

spot of terror events is in the capital—Sofia, which is the largest city in Bulgaria. There is only one religious-based event, which was a bombing attack against a mosque in the city of Kazanluk committed in 1996.¹⁵⁷ There is an event against the Yugoslav Consulate in Sofia, but it was committed by an unknown perpetrator.¹⁵⁸ Most of the events are based on a political and business agenda.¹⁵⁹ Of particular interest to this study is the last terror act committed at the airport of Burgas, which was directed by Hezbollah against Israeli tourists visiting Bulgaria.

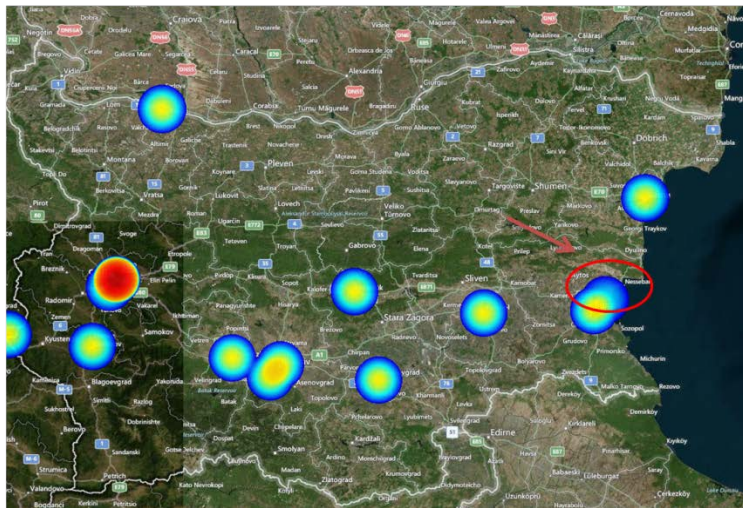


Figure 4. Terrorist events in Bulgaria (1991–2013) and Burgas Bombing.

C. LINK ANALYSIS

Link analysis is a method of analyzing networks consisting of different types of entities (for example, people, buildings, cars, locations, events) and the different ties between them.¹⁶⁰ In order to conduct a link analysis, the collected data on radical Islam terrorist activities over the past 20 years in the Balkans were analyzed.

¹⁵⁷. Global Terrorism Database, <http://www.start.umd.edu/gtd/>.

¹⁵⁸. Ibid.

¹⁵⁹. Ibid.

¹⁶⁰. Everton, *Disrupting Dark Networks*, 6.

Since the data were based on individuals and organizations dating back to the early 1990s, many of the people were subsequently killed or detained, and some of the organizations have disbanded; however, in order to determine the *modus operandi* of terrorists over the last two decades they were not eliminated from the data. In total, as can be seen in Figure 5, the structured data that the histograms present consists of 260 people, 35 terrorist organizations and 16 charitable organizations. All of these entities and events are connected by 769 links. Figure 6 shows the breakdown of entities, links and events.

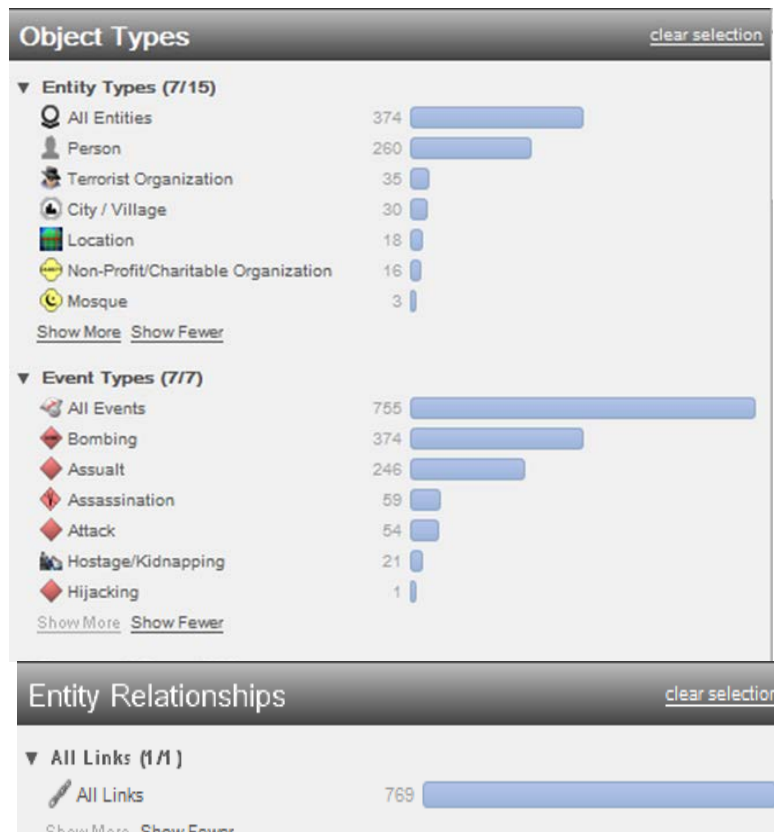


Figure 5. Entities visualized in Palantir histogram.

D. SOCIAL NETWORK ANALYSIS (SNA)

As can be seen from the temporal analysis, terrorist activities in the Balkans have decreased in the late 2000s. This is a result of the presence of NATO and UN forces in Bosnia and Kosovo. Since the current data about terrorist activities is classified and most terrorists operating in the past have been killed or captured, and terror organizations are disbanded, the analysis is based on their past activities and *modus operandi* in order to provide some insights to possible future action. .

SNA of these data enables a deeper analysis beyond link analysis. SNA focuses on ties between similar objects (ties between different people or ties between organizations). For this research, SNA is conducted on two levels: 1) the agent level—to explore the existing configuration of relations between people involved in terror activities in the Balkans and 2) the organizational level—to understand the pattern of interactions between different terror organizations.

1. SNA of Agent-by-Agent Network

In order to achieve this analysis a one-mode aggregate network is created¹⁶¹ based on relations between people.¹⁶² In addition to one-mode data (agent-by-agent), two-mode networks,¹⁶³ which are known as affiliation networks, were derived.¹⁶⁴ SNA assumes that if two people participated in the same event or shared the same organization (e.g., political, charity, religious, terror, etc.), “they are much more likely to interact with one another than two randomly selected people” which can be used as a “source of social ties.”¹⁶⁵ This assumption can be applied to analysis of the Balkans since the area and organizations are not large and people in an organization are most likely to know each other. In order to conduct SNA of this network, ORA, UCINET, and Net Draw were utilized to obtain basic metrics: network topography, centrality measures, subgroups,

¹⁶¹. “One-Mode Network is a network that consists of a single set of actors.”

¹⁶². Everton, *Disrupting Dark Networks*, 402.

¹⁶³. “Two-Mode network consists of two sets of actors or one set of actors and one set of events.”
Everton, *Disrupting Dark Networks*, 403.

¹⁶⁴. Everton, *Disrupting Dark Networks*, 102.

¹⁶⁵. Ibid.

brokers, bridges and structural holes. An overall picture of the agent-by-agent network based on all connections is displayed in Figure 6.

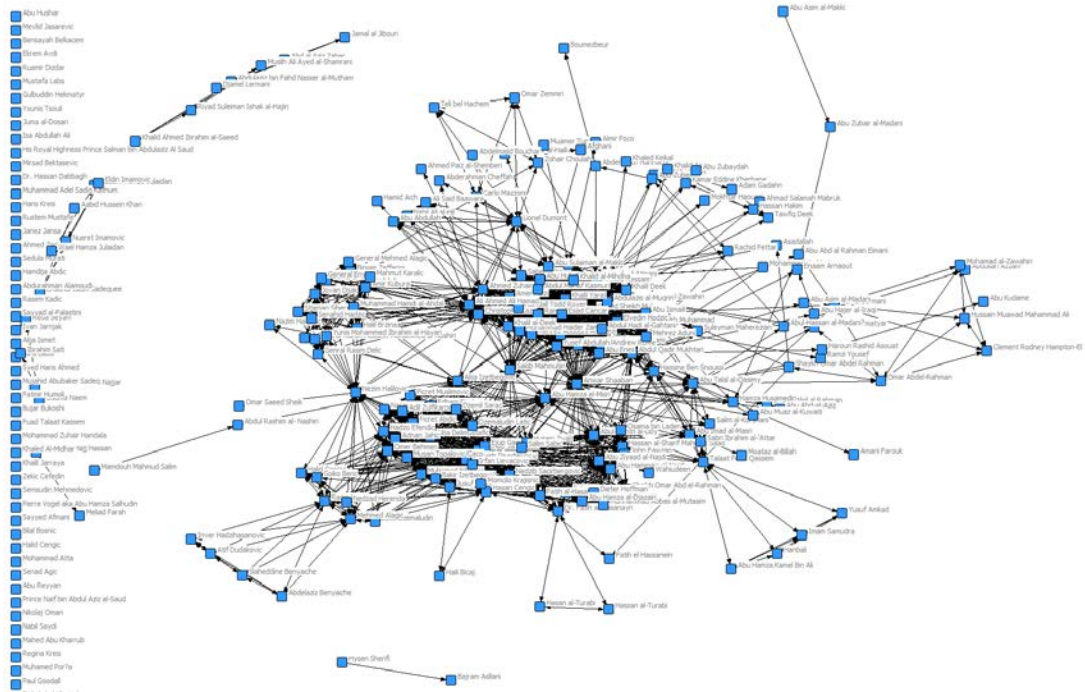


Figure 6. Agent-by-agent network visualized in NetDraw.

a. Network Topography Metrics

The topography of a network illustrates its overall structure, and has a significant influence on its members.¹⁶⁶ For instance, in more dense networks, there are more links between people, meaning “it is easier for people to monitor the behavior of others and prevent them from engaging in deviant behavior.” As a result, people are more likely to follow the norms and behavior of the network.¹⁶⁷ Density of a network is equal to the number of actual ties over the number of possible ties of a network.¹⁶⁸ Since the ties between the actors are aggregated, the network has to be dichotomized before calculating

¹⁶⁶. Everton, *Disrupting Dark Networks*, 10.

¹⁶⁷. Ibid.

¹⁶⁸. Ibid., 12.

its density in order to count only its real ties rather than its valued ties.¹⁶⁹ UCINET is able to dichotomize the network and calculate density.¹⁷⁰ The results in our case are as follows: density is 0.049, total number of ties in the network is 3311 and the average degree is 12.735.¹⁷¹ The density of the network shows that 4.9 percent of the total possible ties in the network exist, which for a network with 260 nodes, means that the network is not very dense. This makes sense given that the Balkans have been typically used as a “spring board” for jihadists to venture into other countries to stage operations (e.g., Millennium Attack, 9/11, Roubaix Gangs, Montreal Terror Cell, etc.)¹⁷² The average degree, which is “the average number of ties of each actor,” can be used to calculate “how ‘dense’ a network is.”¹⁷³ For this particular network, it is normal for it to be sparse, since the network was analyzed for a long period of time (20 years) and most of its actors were not constant residents in the Balkans. The average distance of the network (Table 1) indicates a higher speed of information diffusion amongst the actors in the network, since average distance is the average length between all actors.¹⁷⁴ Network diameter shows the dispersion of a network, and usually networks with large diameters are more decentralized.¹⁷⁵

Relation	Diameter	Average distance	Fragmentation	Distance-weighted fragmentation
Individual Network	7.000	2.560	0.586	0.808

Table 1. Diameter, Average distance and Distance-weighted fragmentation.

¹⁶⁹. Everton, *Disrupting Dark Networks*, 147.

¹⁷⁰. Ibid.

¹⁷¹. Ibid.

¹⁷². Shay, *Islamic Terror and the Balkans*, 123–177.

¹⁷³. Everton, *Disrupting Dark Networks*, 147.

¹⁷⁴. Ibid., 137.

¹⁷⁵. Ibid.

Network fragmentation and distance-weighted fragmentation, in turn, “measure the degree to which a network is fragmented,” as the former is the number of actors who are not connected to each other; the latter measures distance between actors.¹⁷⁶ The scores demonstrate that the network is not highly fragmented. This signifies that the network is cohesive enough to provide support for jihadist activity. A useful tool of UCINET measures how the network fragmentation and distance-weighted fragmentation is changed by the removal of an actor. The actors whose displacement will fragment the network most strongly and change scores the most are shown in Table 2.¹⁷⁷

Actors	Network Changed Fragmentation	Percent Change in Fragmentation (%)
Abdul Qadir Mukhtari	0.609	0.057
Talaat Fuad Qassem	0.607	0.051
Khalil Deek	0.602	0.040
Fateh Kamel	0.600	0.034
Alija Izetbegovic	0.595	0.016
Abu - Zubeida	0.592	0.016
Christophe Caze	0.592	0.016
Amer Azizi	0.592	0.016
Osama bin Laden	0.592	0.016
Ahmed Zuhair Handala	0.592	0.016

Table 2. Node-level fragmentation measures.

Fragmentation scores of all actors of the network are placed in the table which enables comparison among the scores. The scores of the actors do not differ greatly from the highest to the lowest scores, which means that the actors in the network are well connected. Also, the network is not highly centralized, a point that can be supported by measuring network centralization (Table 3).

¹⁷⁶ Everton, *Disrupting Dark Networks*, 138.

¹⁷⁷ Ibid., 145.

Relation	Degree centralization	Eigenvector centralization	Betweenness centralization	Closeness centralization
Individual Network	20.62%	22.93%	5.37%	45.09%

Table 3. Centralization scores.

Table 3 presents network centralization scores. “The larger a centralization index is, the more likely it is that a single actor is very central, whereas the other actors are not.”¹⁷⁸ Network centralization is based on different centrality measures (betweenness, closeness, eigenvector and degree)¹⁷⁹ and is equal to the “difference between the network’s largest centrality score and each actor’s centrality score to estimate variance of actor centrality.”¹⁸⁰ As can be seen from both scores this network is decentralized, which fits the Balkans context, since there have been several terror organizations operating there rather than just one. The closeness centralization has high value compared with other centralizations, because they were calculated by UCINET based on “reciprocal distance between actors” (which can be applied to this network since there are many isolates).¹⁸¹

Finally, summarizing all topography measures, the agent-by-agent network can be characterized as relatively decentralized, “flat,” relatively sparse and relatively highly dispersed, with the ability for fast diffusion of information amongst its actors.¹⁸²

b. Centrality Measures

These measures demonstrate the potential power of an actor based on its position in the network.¹⁸³ **Degree centrality** estimates the number of ties an actor has to other actors (number of actor’s ties divided by all actors’ ties) and means that an actor with a

¹⁷⁸. Everton, *Disrupting Dark Networks*, 152.

¹⁷⁹. These will be explained in the analyses of centrality measures.

¹⁸⁰. Everton, *Disrupting Dark Networks*, 152.

¹⁸¹. Ibid., 154.

¹⁸². Ibid., 169.

¹⁸³. Everton, *Disrupting Dark Networks*, 402.

high degree of centrality score has more opportunity to directly influence others within a network.¹⁸⁴ In order to obtain the number of each actor's ties, the data have to be dichotomized and then analyzed (in this case, with UCINET tools).¹⁸⁵ **Closeness centrality** assesses how close (on average) each actor is to all other actors, meaning that an actor with an elevated closeness centrality score has accessibility within a network, has more of an opportunity to directly impact its members and serves as a point for a possible rapid diffusion of resources and information.¹⁸⁶ To calculate this measure, firstly, for a disconnected network (such as this one), the average reciprocal distance (ARD) between actors in the network was used.¹⁸⁷

The next centrality measure is **betweenness centrality**, which measures the extent to which each actor is positioned on the shortest route between all other actors in a network.¹⁸⁸ Simply put, an actor with a high betweenness centrality score implies brokerage potential which controls access to information and resources.¹⁸⁹ A disadvantage of this measure, which has to be taken into account, is that “there is no guarantee that two actors will always follow the shortest path between them.”¹⁹⁰ The last centrality measure is **eigenvector centrality**, which “assumes that ties to highly central actors are more important than ties to peripheral actors.”¹⁹¹ All centrality measures are calculated by UCINET and are shown in Table 4.¹⁹²

184. Ibid., 207.

185. Ibid., 213.

186. Ibid., 207.

187. Ibid., 217.

188. Ibid., 210.

189. Ibid.

190. Ibid.

191. Everton, *Disrupting Dark Networks*, 208.

192. Ibid., 217.

Betweenness centrality	Closeness centrality	Degree centrality	Eigenvector centrality
Anwar Shaaban (5.600)	<i>Sakib Mahmuljin</i> (41.570)	<i>Anwar Shaaban</i> (25.483)	Sakib Mahmuljin (25.846)
Abdul Qadir Mukhtari (4.967)	Anwar Shaaban (41.570)	Sakib Mahmuljin (23.938)	<i>Anwar Shaaban</i> (25.521)
Sakib Mahmuljin (4.584)	Abdul Qadir Mukhtari (40.476)	Abdul Qadir Mukhtari (23.552)	Abdul Qadir Mukhtari (24.099)
Christophe Caze (3.152)	Christophe Caze (40.154)	Christophe Caze (21.236)	Christophe Caze (23.385)
Abu Hamza el – Misri (2.898)	Ali Ahmed Ali Hamad (39.704)	Ali Ahmed Ali Hamad (20.077)	Fateh Kamel (23.070)
Fateh Kamel (2.786)	Fateh Kamel (38.739)	Fateh Kamel (19.305)	Ahmed Ressam (22.966)
Ahmed Zuhair Handala (2.427)	Ahmed Zuhair Handala (38.674)	Mustafa Ceric (18.919)	Ali Ahmed Ali Hamad (22.881)
Ahmed Ressam (2.281)	Ahmed Ressam (37.967)	Ahmed Zuhair Handala (18.919)	Ahmed Zuhair Handala (22.799)
Abu Ismaili (2.279)	Abu Sulaiman al – Makki (37.838)	Irfan Liekacovic (18.533)	Abu Sulaiman al – Makki (22.796)
Ali Ahmed Ali Hamad (2.233)	Khalil Deek (37.066)	Dervish Djurdjevov (18.533)	Karim Said Atmani (22.747)

Table 4. Normalized Centrality measures of actor-by-actor network.

Figure 7 shows the visualized degree of centrality in NetDraw, where actors with a higher degree of centrality score appear larger.

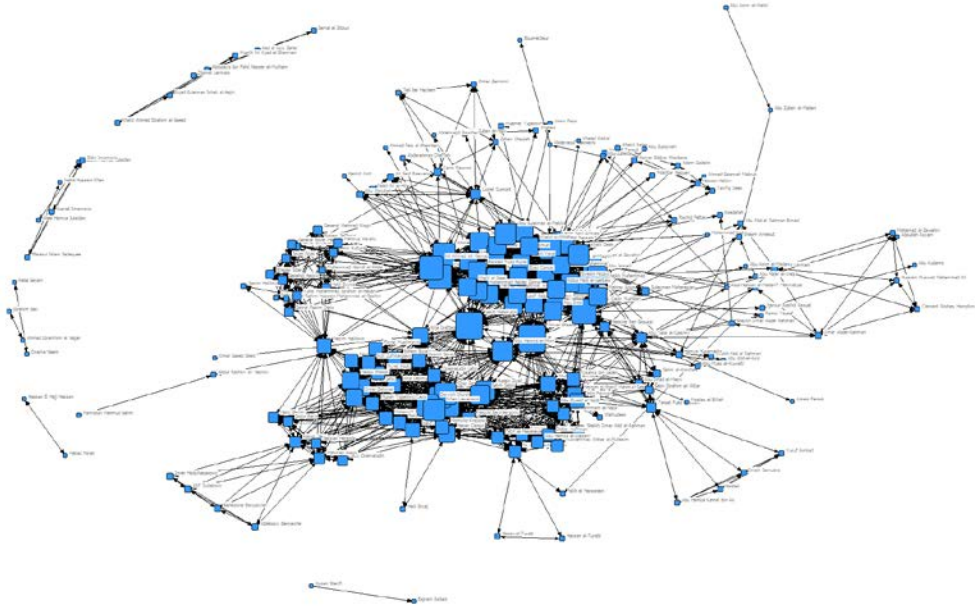


Figure 7. Degree centrality in agent-by-agent network visualized in NetDraw.

Figure 8 shows visualized closeness centrality in NetDraw, where actors with a higher closeness centrality score appear larger.

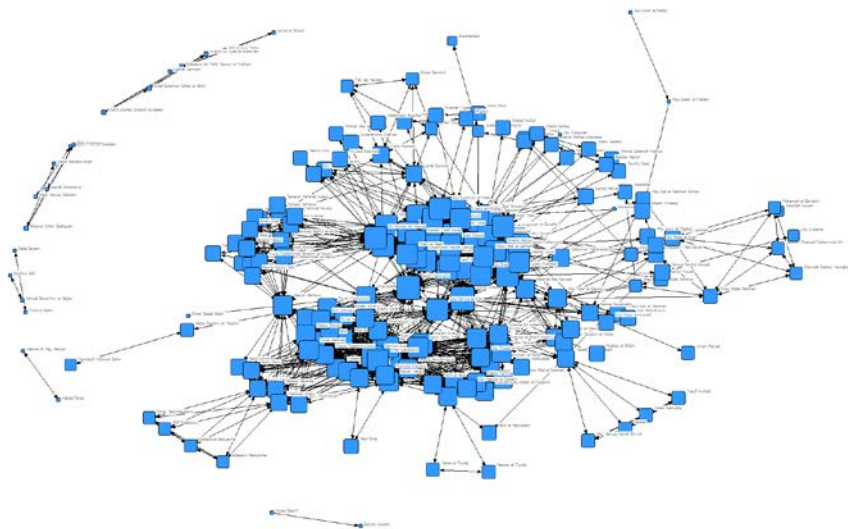


Figure 8. Closeness centrality in agent-by-agent network visualized in NetDraw.

Figure 9 shows visualized betweenness centrality in NetDraw, where actors with higher betweenness centrality scores appear larger.

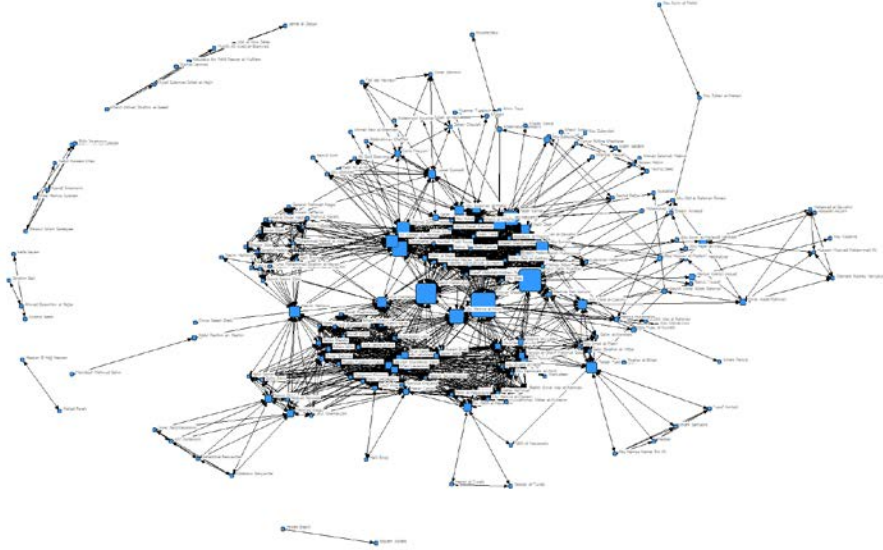


Figure 9. Betweenness centrality in agent-by-agent network visualized in NetDraw.

Figure 10 shows visualized eigenvector centrality in NetDraw, where actors with higher eigenvector centrality scores appear larger.

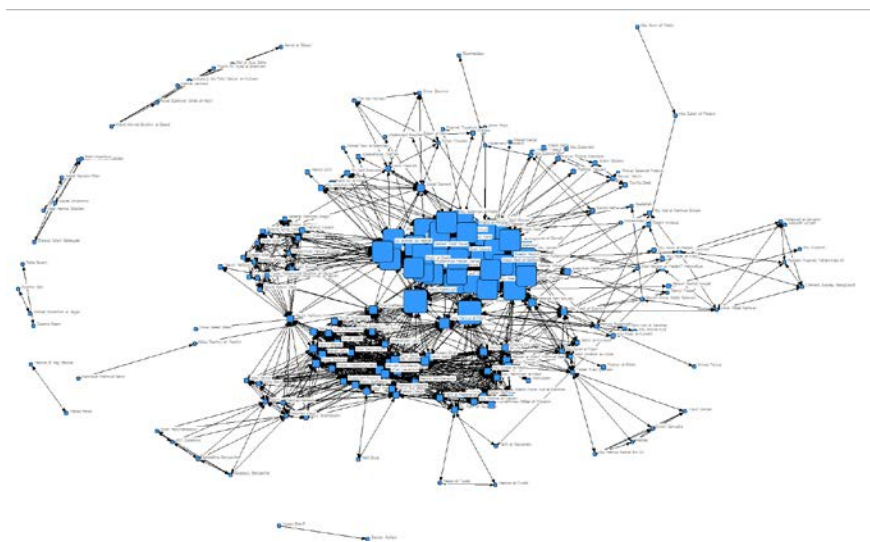


Figure 10. Eigenvector centrality in agent-by-agent network visualized in NetDraw.

Finally, summarizing all findings about centrality measures in the agent-by-agent network, a conclusion can be made that top-ranked actors in all scores are almost the same.

c. Subgroups

Social analysis of subgroups in a network is based on identification of dense clusters of actors as cohesive subgroups or sub-networks and generally assumes that “social interaction is the basis for solidarity, shared norms, identity and collective behavior, so people who interact intensively are likely to consider themselves as a social group.”¹⁹³ The analysis of subgroups begins with identifying the components in the network, which are “subnetworks in which members are connected to one another but are not connected with members of other sub-networks.”¹⁹⁴ In this network only weak components¹⁹⁵ can be identified, rather than strong components, because the network is not directed.¹⁹⁶ UCINET identified one main weak component consisting of 179 nodes (which is 68.8 percent of network). This component can be visualized by NetDraw’s tools using different colors (Figure 11).

¹⁹³. Everton, *Disrupting Dark Networks*, 170.

¹⁹⁴. Everton, *Disrupting Dark Networks*, 171.

¹⁹⁵. “Strong components take into consideration the direction of ties, whereas weak components do not.”

¹⁹⁶. Everton, *Disrupting Dark Networks*, 171.

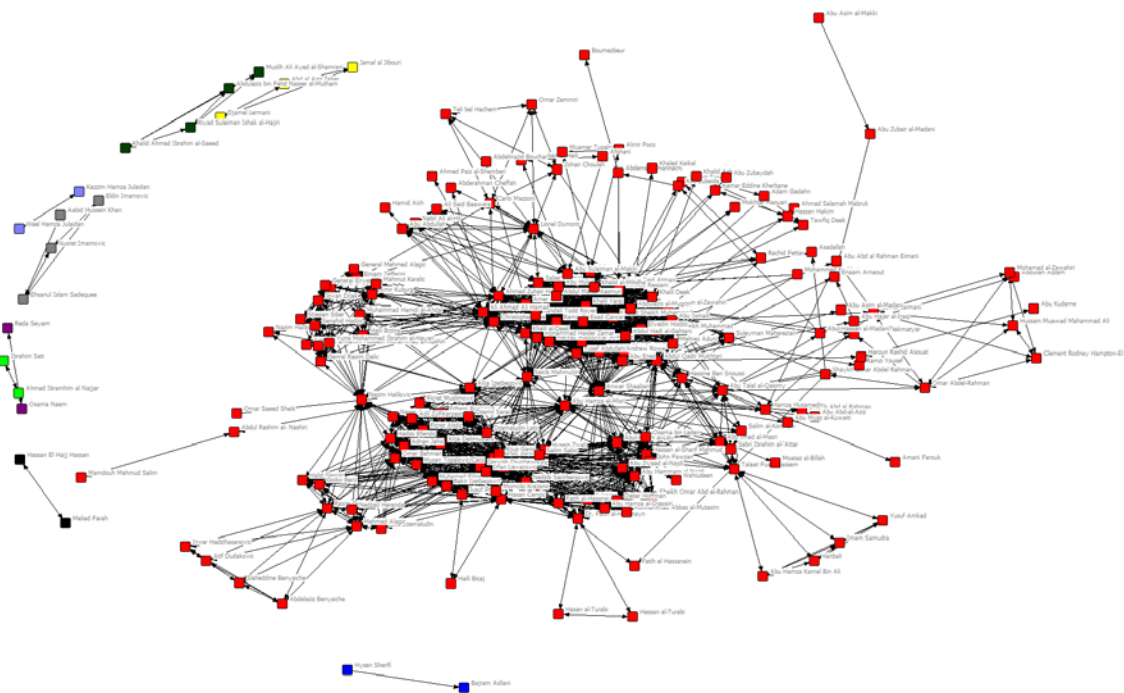


Figure 11. The main component shown in red as visualized in NetDraw.

d. Bridges and Brokers

Bridges and brokers analyses are based on the idea “that some actors are more likely to control the flow of resources than others.”¹⁹⁷ In SNA there are different approaches to finding these important actors in the process of disrupting the network in the Balkans.¹⁹⁸ In order to disrupt this particular network, actors called cutpoints¹⁹⁹ must be identified, because their “removal will disconnect the network or disconnect a component of it.”²⁰⁰ By using ORA’s Measure Charts, our analysis identified 24 actors. A list of their names can be seen in Table 5.²⁰¹

Anwar Shaaban	Abu Sulaiman al-Makki
Fateh Kamel	Abu Zubair al-Madani
Ahmed Zuhair Handala	Abu el-Maali
Karim Said Atmani	Abul-Hassan al-Madani
Abu Talal al-Qasimy	Adnan Pezo
Abdul Rashim al- Nashiri	Dr. Fatih al-Hasanayn
Amer Azizi	Alija Izetbegovic
Abderraouf Hannachi	Ehsanul Islam Sadequee
Cristophe Caze	Enaam Arnaout
Ayman al Zawahiri	Haroun Rashid Asouat
Khalil Deek	Talaat Fuad Qassem

Table 5. Boundary Spanners²⁰² in actor-by-actor network identified by ORA.

¹⁹⁷. Everton, *Disrupting Dark Networks*, 253.

¹⁹⁸. Ibid.

¹⁹⁹. UCINET and NetDraw call them cutpoints, but ORA-boundary spanners.

²⁰⁰. Everton, *Disrupting Dark Networks*, 264.

²⁰¹. Ibid., 269.

²⁰². ORA calls the cutpoints actors boundary spanners.

Also, the location of these nodes is visualized in ORA’s visualizer, in Figure 12, where they are depicted in blue.

Figure 12. Boundary Spanners of actor-by-actor network visualized in ORA.

203. Everton, *Disrupting Dark Networks*, 271.

Key Players-Resulting Fragmentation 0.722	Reached Criterion (No. of distinct persons reached by the key Players: 184 (70.8% of network))
Anwar Shaaban	Ahmed Ressam
Fateh Kamel	Abu Talal al-Qasimy
Ahmed Zuhair Handala	Rasim Delic
Christophe Caze	Abd al Aziz Zaher
Alija Izetbegovic	Abdul Qadir Mukhtari
Talaat Fuad Qassem	Osama bin Laden
Abdul Qadir Mukhtari	Riyad Suleiman Ishak al-Hajiri
Nezim Halilovic	Abu Hamza el-Misri
Khalil Deek	Aabid Hussein Khan
Ali Ahmed Ali Hamad	Omer Behmen

Table 6. Key players in actor-by-actor network.

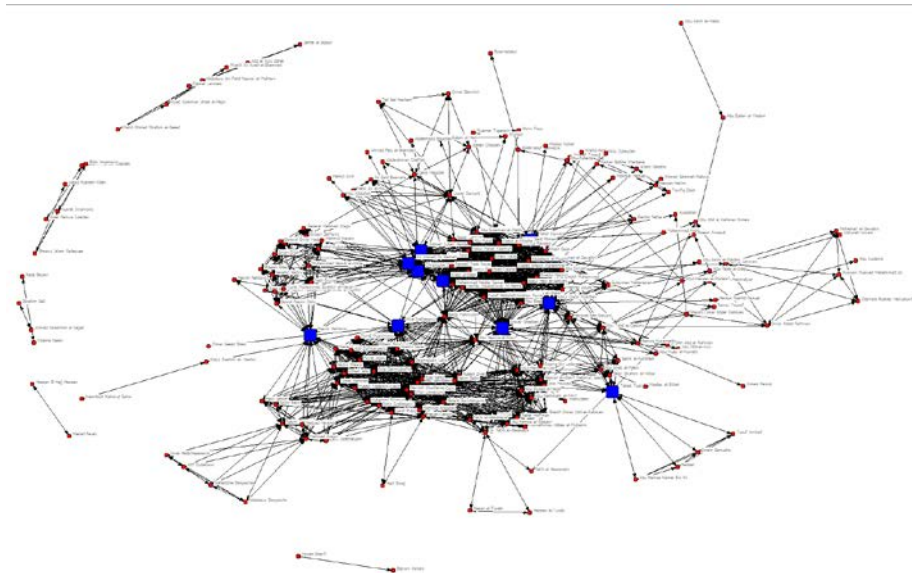


Figure 13. Key players' Fragmentation visualized in blue and larger size in NetDraw depiction of actor-by-actor network.

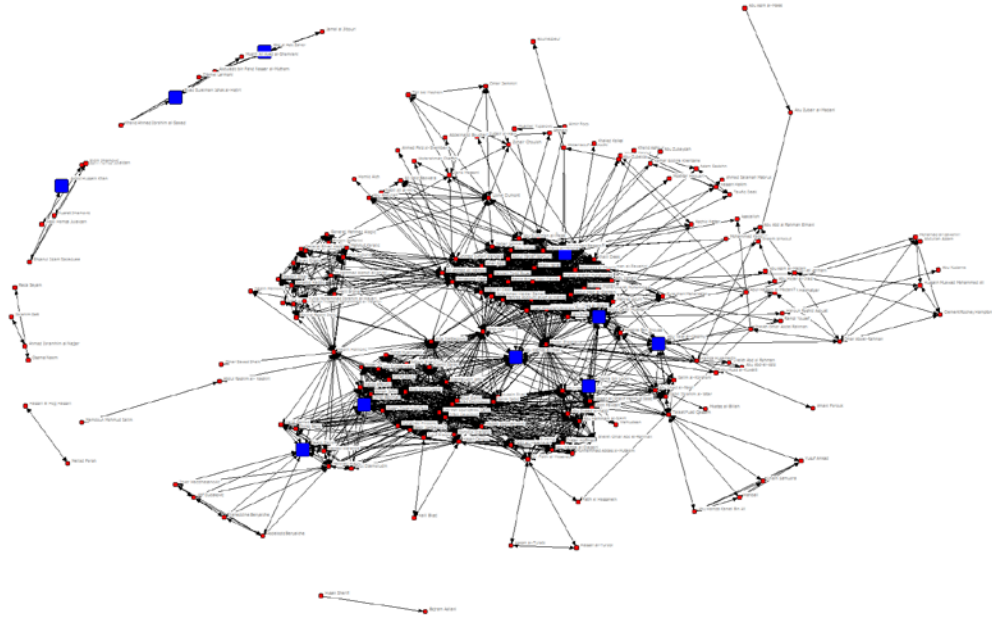


Figure 14. Key players' Reached Criterion visualized in blue and larger size in NetDraw depiction of actor-by-actor network.

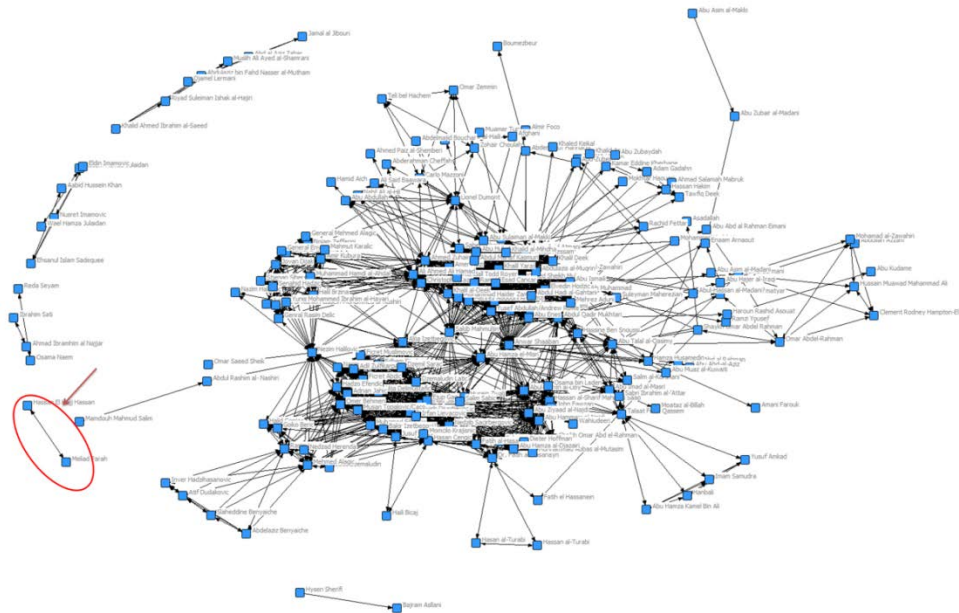


Figure 15. Actor-by-Actor network in NetDraw (without isolates) visualizing Burgas bombing suspects.

e. *Summary of Agent-by-Agent SNA*

Analyzing the agent-by-agent terror network in the Balkans, the following conclusions can be made:

- During the analysis, no direct connection was found between people in Bulgaria and terrorists, who have been present in Bosnia, Kosovo, Albania and Macedonia. Furthermore, Figure 15 shows that the Burgas bombing suspects (Meliad Farah and Hassan El Hajj Hassan) are also not connected to the main component of the network or to others in the network.
- Central figures in this network are mainly people who are not residents of the Balkans—mostly former fighters from Afghanistan, North Africa and the Middle East. Such people include: Abdul Qadir Mukhtari (Algerian), Talaat Fuad Qassem (leader of Egirtian Gama'a Islamiyya), Fateh Kamel (Algerian-Canadian), Christophe Caze (French), Osama bin Laden, etc. On the other hand, local people found as central actors are Alija Izetbegovic (who was President of Bosnia and Herzegovina after the war), Sakib Mahmuljin (a general and politician), Mustafa Cerić (a Bosnian Muslim cleric), etc.
- The network is characterized as decentralized. Its decentralized structure may be due to the fact that the region is used for training and as a spring board for the dissemination of radical Islamic ideas—not only in the Balkans, but also in Europe. Also, this structure is a result of the fact that many central figures found in the analysis are leaders and members of terrorist organizations outside the Balkans, such as the Roubaix Group (Christophe Caze and Lionel Dumont), Montreal Terror Cell (Karim Said Atmani and Ahmed Ressay), Milan Terror Cell (Rachid Fettar and Youcef Tanout).²⁰⁶ Also, they are related to carrying out terrorist attacks outside the Balkans, most significant of them are the “Millenium” Attacks (Ahmed Rasem), 9/11 attack (Muhamad Haider Zamar, Nawaf Al-Hamzi, and Khaled al Midhar),²⁰⁷ the USS Cole Bombing in Yemen (Abu Asim al-Makki) and the Kenia/Tanzania U.S. Embassy Bombings (Abu Hajer al-Iraqi).²⁰⁸

²⁰⁶. Evan F. Kohlmann, *Al Qaeda's Jihad in Europe: The Afghan – Bosnian Network* (New York: Berg Press, 2004), 207.

²⁰⁷. Shay, *Islamic Terror and the Balkans*, 123–177.

²⁰⁸. Kohlmann, *Al Qaeda's Jihad in Europe*, 207.

The main conclusion is that, although a large number of terrorists have been detained or killed, the Balkans serve as a potential area for the training of terrorists, the spreading of radical Islam and as a springboard for terrorism.²⁰⁹

2. SNA Organization Level of Analysis

Social network analysis was also conducted at the organizational level. A one-mode terror organization-by-organization network was derived from two-mode data about charities, terror organizations and other organizations, based on the links between people's affiliations and memberships in these organizations.²¹⁰ As a result, the one-mode network with 35 nodes can be seen in Figure 16.

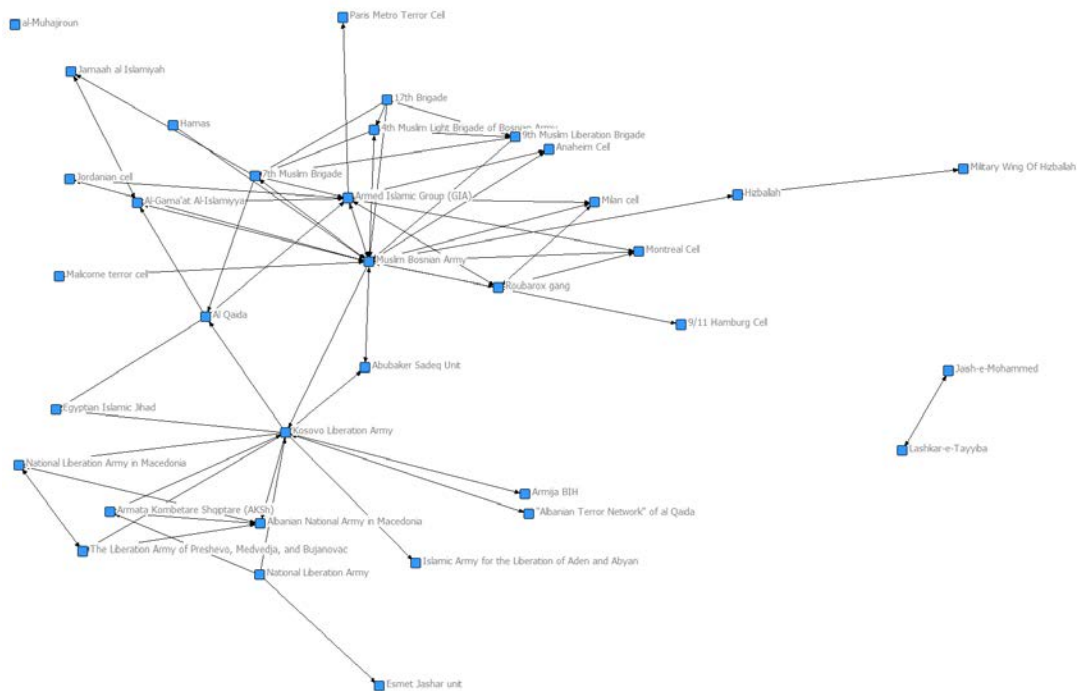


Figure 16. One-mode terrorist organization-by-organization network visualized in NetDraw.

²⁰⁹. Shay, *Islamic Terror and the Balkans*, 123–177.

²¹⁰. Everton, *Disrupting Dark Networks*, 76–135.

Similar to SNA on the individual level, the same data analyses were conducted for the terror organizations. After dichotomizing the data in UCINET the following network topography measures were calculated: density is 0.097, total number of ties in the network is 58 and the average degree is 3.314 (Table 7).²¹¹ The density of the network shows that 9.7 percent of the total possible ties in the network exist, which for a network with 35 nodes means that the network is not very dense.

Relation	Diameter	Average distance	Fragmentation	Distance-weighted fragmentation
Organizational Network	5.000	2.447	0.464	0.742

Table 7. Diameter, average distance, fragmentation and distance-weighted fragmentation.

Table 8 ranks the organizations which, if removed, will fragment the network, and it shows by percentage how much this network will be fragmented by removing each organization from the network.

²¹¹. Everton, *Disrupting Dark Networks*, 147.

Organizations	Network Changed Fragmentation	Percent Change in Fragmentation (%)
Muslim Bosnia Army	0.797	0.621
Kosovo Liberation Army	0.662	0.370
Al-Gama'at Al-Islamiyya	0.497	0.062
Armed Islamic Group (GIA)	0.496	0.059
Hezbollah	0.496	0.059

Table 8. Node-level fragmentation measures of terror organization-by-organization network.

Furthermore, based on the scores of the centralization measures, this network is characterized as relatively decentralized. Also, eigenvector centralization is relatively high, which can be interpreted as most important organizations are well connected to each other (Table 9). This makes sense, because most of their members participated in different organizations during both of the wars in Bosnia and Kosovo.

Relation	Degree centralization	Eigenvector Betweenness centralization	Betweenness Closeness centralization	Closeness Eigenvector centralization
Organizational Network	35.918%	69.21%	35.86%	61.75%

Table 9. Centralization scores of terror organization-by-organization network.

a. Centrality Measures

Regarding centrality measures (Table 10), the Muslim Bosnia Army appears as the most central organization, which may be due to the fact that its members participated in the Kosovo war as well. Also, the Armed Islamic Group and Al-Gamaát Al-Islamiyya have a high centrality measure, because many members of these organizations were most likely part of El Mujahideen units in Bosnia, and later in the Kosovo war. This means that they have had a significant influence amongst the people in the region. The Roubaix gang²¹² appears as a central organization as well. The terror activities in the Balkans are intended not only to spread radical Islam there, but also outside the Balkans.²¹³

²¹². Main members of this group were French, i.e., Christophe Caze and Lionel Dumont, who were convinced by Abual Maáli in Islam and fought for the Mujahidin in Bosnia. After the war in Bosnia they established this Islamic terror organization in France in order to support extremists in Algeria.

²¹³. Shay, *Islamic Terror and the Balkans*, 154.

Betweenness centrality	Closeness centrality	Degree centrality	Eigenvector centrality
Muslim Bosnia Army (37.188)	Muslim Bosnia Army (55.392)	Muslim Bosnia Army (50.000)	Muslim Bosnia Army (73.658)
Kosovo Liberation Army (21.034)	Armed Islamic Group (GIA) (45.098)	Kosovo Liberation Army (35.294)	Armed Islamic Group (GIA) (51.662)
Armed Islamic Group (GIA) (6.068)	Kosovo Liberation Army (40.196)	Armed Islamic Group (GIA) (29.412)	7th Muslim Brigade (42.954)
Abubaker Sadeq Unit (4.679)	Al-Gama'at Al- Islamiyya (37.745)	7th Muslim Brigade (20.588)	Kosovo Liberation Army (31.444)
Al-Gama'at Al- Islamiyya (4.130)	Roubaix Gang (35.784)	Al Qaida (14.706)	Roubaix Gang (30.041)

Table 10. Normalized centrality measures of terror organization-by-organization network.

All four centrality measures are visualized by NetDraw in Figures 17, 18, 19 and 20.

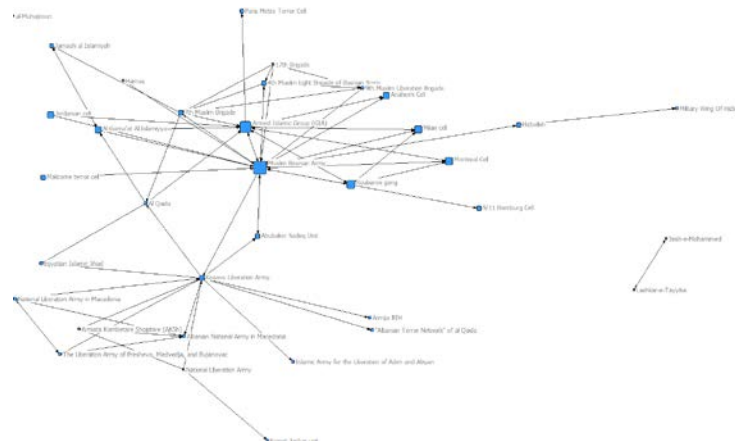


Figure 17. Eigenvector centrality in terror organization-by-organization network visualized in NetDraw.

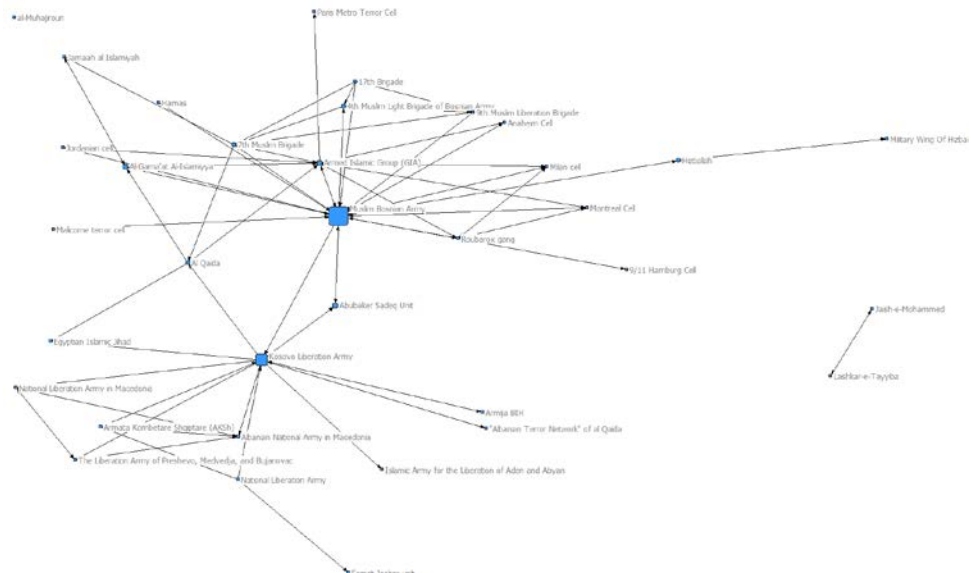


Figure 18. Betweenness centrality in terror organization-by-organization network visualized in NetDraw.

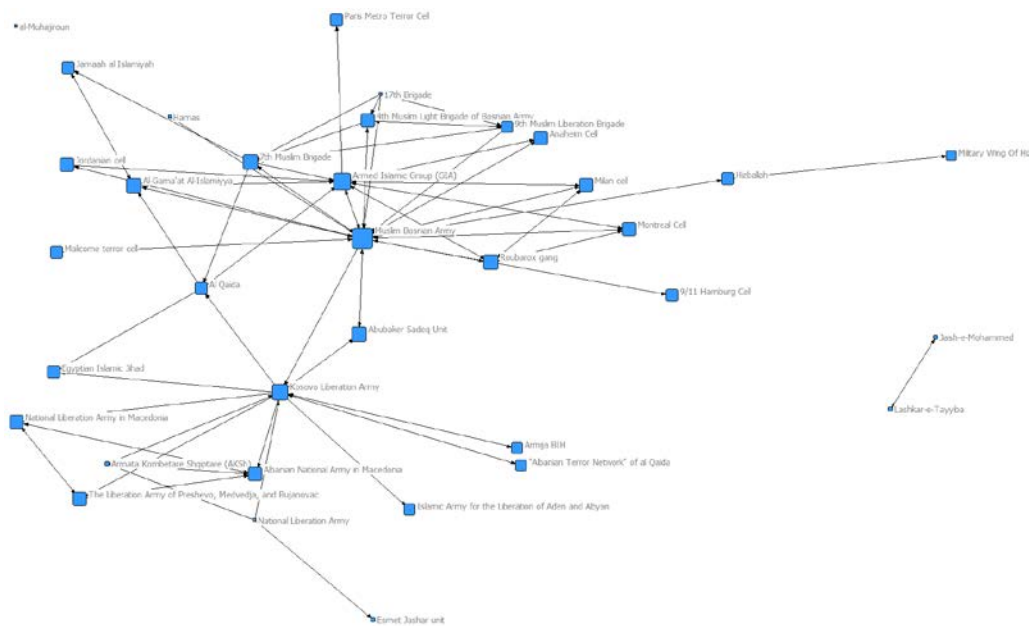


Figure 19. Closeness centrality in terror organization-by-organization network visualized in NetDraw.

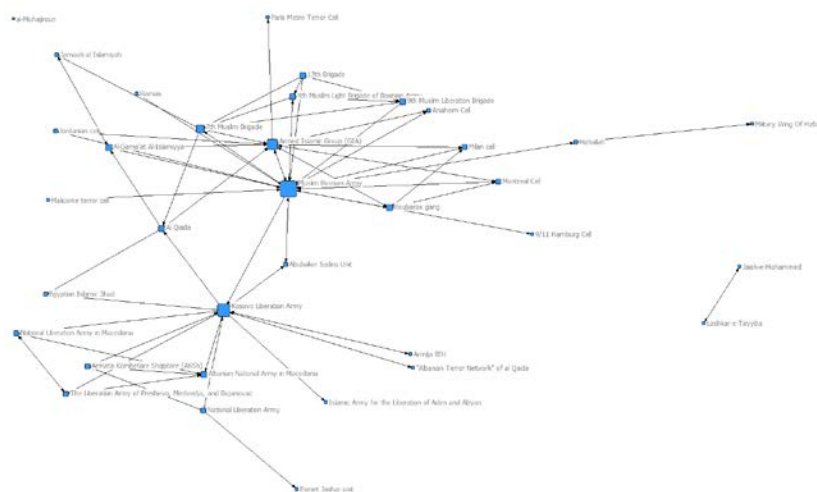


Figure 20. Degree centrality in terror organization-by-organization network visualized in NetDraw.

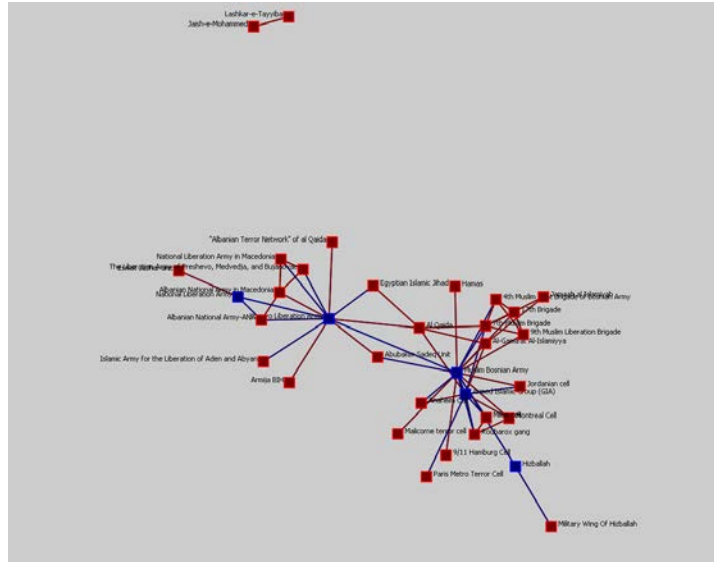


Figure 22. Boundary Spanners of organization-by-organization network, visualized in ORA.

c. Key Players

By using the UCINET Key Player algorithm, as shown in Table 11, terror organizations were found as key players and as reached criterion key players. Both are visualized in Figures 23 and 24.

Key Players-Resulting Fragmentation 0.951	Reached Criterion (No. of distinct organizations reached by the key players: 34 (97.1% of network))
Muslim Bosnian Army	Kosovo Liberation Army
Armed Islamic Group (GIA)	Lashkar-e-Tayyiba
Kosovo Liberation Army	Muslim Bosnian Army
7th Muslim Brigade	Al Qaida

Table 11. Key players of organization-by-organization network.

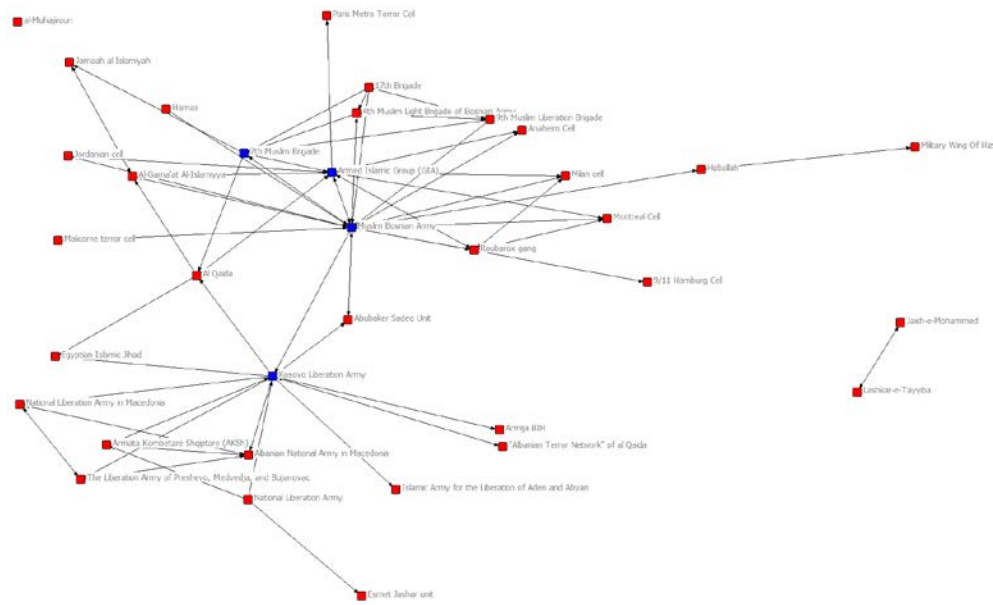


Figure 23. Key players' Fragmentation visualized in blue in NetDraw of organization-by-organization network.

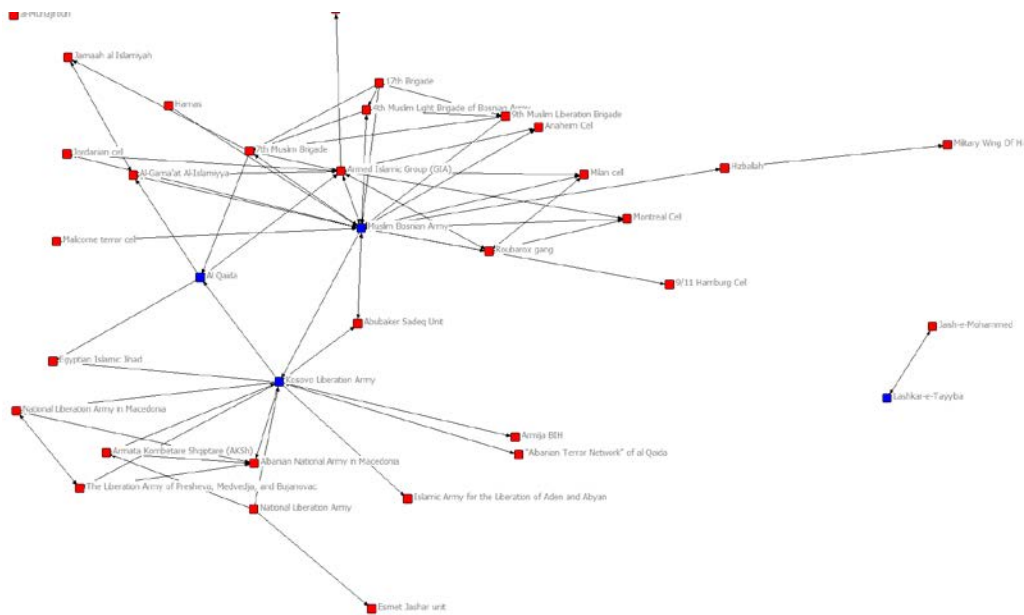


Figure 24. Key players Reached Criterion visualized in blue in NetDraw of organization-by-organization network.

The scores associated with key players indicate that the network fragmentation after their removal will be 0.951. This explains the decrease in terror events at the end of the first decade of this century, after the 7th Muslim Brigade and KLA were disbanded.

3. Conclusions from SNA Analyses

The main conclusions that can be made on the basis of SNA analyses of terror organizations operating in the Balkans over the last 20 years include the following:

- A strong influence by terrorist organizations operating outside the Balkans existed in this area. These organizations included GIA, al-Qaeda, Al-Gama'at Al-Islamiyya and Hezbollah. This is explained by the fact that a large part of the warriors during the wars in Bosnia and Kosovo have been members of Balkans terror organizations.
- Another important characteristic of the mode of operation of the organizations is that the Balkans were used as a zone for training and for disseminating radical Islam. This led to the formation of many terrorist organizations operating outside the Balkans. Among these groups, which were part of this analysis, are the Milan Terror Cell, Roubaix Terror Cell, Montreal Terror Cell and the Paris Metro Terror Cell.²¹⁶

E. DATA FUSION

Terror activities in the Balkans have decreased at the end of the analyzed period of time. During that period most of the terror events have been outside of Bulgaria's borders. Social network analyses on the individual level showed that many of the key and most central individuals were not local but members of other terrorist organizations, indicating that there has been strong external influence among the population of Bosnia, Kosovo, Albania and Macedonia. On the other hand, the existence of foreign terror organizations in these four countries shows that their idea is to use this area for promoting radical Islam, for training and then for spreading their activity in the world. In other words, although Everton has cautioned that "social network analysis should not be seen as a silver bullet or substitute for other critical elements in the decision process,"²¹⁷ the SNA conducted on both the individual and organizational level provide strong

²¹⁶. Kohlmann, *Al Qaeda's Jihad in Europe*, 207.

²¹⁷. Everton, *Disrupting Dark Networks*, 45.

evidence that the Balkans have been used as an area for military training and recruitment of radical Islamists, as well as a “springboard” for terrorism outside the Balkans.²¹⁸ Although the analyzed extremists and terror organizations have not been actively operating in the territory of Bulgaria, it can be deduced that the potential risk for spreading Islamic radicalism and extremism in the country exists. Its dissemination could happen both coming from the aforementioned four countries and from terror organizations outside the Balkans, i.e., Al Qaeda, GIA, Al-Gama’a Al-Islammiyya and Hezbollah.

²¹⁸. Shay, *Islamic Terror and the Balkans*, 123–177.

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V. STRATEGIC OPTIONS

The purpose of this chapter is to develop a counterterrorism strategy that Bulgaria could pursue in order to prevent future terror activities in its territory. The developed strategies derive from the analyses completed in the previous chapter. Three basic strategies are recommended and discussed in the following sections.

A. STRATEGY 1: LAW ENFORCEMENT NON-MILITARY STRATEGY TO COUNTER THE SPREAD OF EXTREMISM AND RADICALIZATION IN BULGARIA

As seen from the analyses, terrorist networks, operated mainly in Kosovo, Bosnia, Macedonia and Albania during the analyzed period, are characterized by the strong influence and participation of extremists and terrorist organizations outside the Balkans. In addition, central individuals in individual networks are mainly extremists, who are veterans of the war in Afghanistan, and members of terrorist organizations in North Africa and the Middle East, such as al-Qaeda, Hezbollah, GIA and Al-Gama'a al-Islamiyya. There are significant trends in their mode of operation for dissemination of radical Islam among the population in Kosovo, Bosnia, Albania and Macedonia. They have been using these countries as bases in which they train extremists in order to spread radical Islam in Europe and outside of the continent. Based on these findings, one Bulgarian strategy is to increase border control and prevent the penetration of radical Islamists into Bulgaria. This strategy requires police and intelligence services to be active in data collection and the monitoring of potential places for recruitment of radical Islamists, such as mosques and schools, as well as in tracking the links between criminal organizations and radical extremists. Also, the government needs to demonstrate its power in processing court cases against suspected radicals and extremists in order to deter others from joining the terrorists.

B. STRATEGY 2: FINANCIAL NON-MILITARY STRATEGY TO PREVENT FINANCIAL SUPPORT COMING FROM TERROR AND CHARITY ORGANIZATIONS INTO BULGARIA

Analyses showed that this terror network can be characterized as a network operating with significant support coming from outside of the Balkans. This support is not only based on warriors and weapons but also on financial resources. According to Shay, there have been numerous Islamic charity organizations supporting terror organizations by “humanitarian aid, mainly through Islamic charities” in the Balkans (mainly in Kosovo and Bosnia). In particular, the organization which appeared most central in the analysis is the Muslim Bosnian Army.²¹⁹ “Although the funds were designated solely for humanitarian needs,” Shay said, “in actual fact much of the funding, which came from the Muslim world, found its way to guerilla and terror movements and strengthened the Balkan terror organizations during the war and in its aftermath.”²²⁰ “A CIA report written in 1996 pointed out about fifty Islamic charities in the Balkans, a third of which were connected to Islamic terror organizations such as Al Qaeda, the Egyptian Jamaah al Islamiyah, Algerian terror organizations, the Hamas and Hezbollah.”²²¹ Thus, this strategy calls for an approach to monitor asset flows in the country, charitable support and bank accounts. In order to achieve this, Bulgaria should also increase its international cooperation in tracking the funds of international terror organizations.

C. STRATEGY 3. KINETIC MILITARY STRATEGY

This strategy is directed at central terrorists and central terror organizations found in the analyses. These central actors have to be removed from the networks by capturing, killing or by disrupting the links between them.²²² The people found to be most central (with rankings based on centrality measures scores in the analyses) and the most influential among the others are Sakib Mahmujilin, Anwaar Shaaban, Abdul Qadir Mukhtari and Christophe Caze. The most central organizations are the Bosnian Muslim

²¹⁹. Shay, *Islamic Terror and the Balkans*, 50–64.

²²⁰. Ibid., 46.

²²¹. Ibid., 49.

²²². Roberts and Everton, “Strategies for Combating Dark Networks,” 4.

Army and Kosovo Liberation Army. Also, this strategy can be directed at the highly ranked actors (individuals and organizations) in terms of their fragmentation measures, key player scores and cut points scores. Since these organizations operate outside of Bulgaria, this strategy can be pursued by Bulgaria only under the control and aegis of the United Nations or Organization for Security and Co-operation in Europe (OSCE) in accordance with UN regulations and rules of international law.²²³

D. DECISION-MAKING PROCESS FOR SELECTING THE MOST EFFECTIVE STRATEGY

The recommended strategies are assessed by the Analytical Hierarchy Process, which is “a process for developing a numerical score to rank each decision alternative based on how well each alternative meets the decision maker’s criteria.”²²⁴ In order to compare these strategies, the following five criteria are used:

1. Limitation of Civil Liberties. Will this strategy pose some threat for civil liberties in Bulgaria and create conditions for ethnic tensions in the country?
2. Available Resources for Implementation. Does Bulgaria have the potential to conduct the strategy?
3. Potential threats to people and critical infrastructure. Will this strategy create risks for the population of the country?
4. Limitations of Implementation of a Strategy. For example, will this strategy have a legal basis for implementation in terms of national and international legislation?
5. Potential Effectiveness of a Strategy. If successful, to what extent can the strategy prevent future terror activities and radicalization of the population?

²²³. Ministry of Defense of Republic of Bulgaria, “Concept for Bulgaria’s participation in operations for peacekeeping,”
http://www.md.government.bg/bg/doc/tema/missions_operations/docs/Concept_Peacekeeping.pdf

²²⁴. William Fox, “Models of Conflict” (lecture, Naval Postgraduate School, Monterey, CA, Winter 2013)

Preferences for the use of each criterion evaluate how important each strategy is. Standard preferences and the levels of their importance are shown in Table 12.

Preference Level	Numerical Value
Equally preferred	1
Moderately preferred	3
Strongly preferred	5
Very strongly preferred	7
Extremely preferred	9
2, 4, 6, 8	For compromises between above

Table 12. Standard preference table.

Table 13 shows the comparison between different strategies to different criteria.

Limitation of Civil Liberties	S1	S2	S3	Available Resources	S1	S2	S3
S1	1	1/5	5	S1	1	1/3	7
S2	5	1	7	S2	3	1	7
S3	1/5	1/7	1	S3	1/7	1/7	1

Potential Threats	S1	S2	S3	Limitations of Implementation	S1	S2	S3
S1	1	1/3	1/3	S1	1	3	7
S2	3	1	7	S2	1/3	1	7
S3	3	1/7	1	S3	1/7	1/7	1

Potential Effectiveness	S1	S2	S3
S1	1	5	3
S2	1/7	1	1/5
S3	1/3	5	1

Table 13. Pairwise comparisons between strategies (S1, S2, and S3) and criteria.

Table 14 shows the matrix of the averages of all criteria to each strategy.

<i>Strategy/Criteria</i>	Limitation of Civil Liberties	Available Resources	Potential Threats	Limitations of Implementation	Potential Effectiveness
Strategy 1	0.231614	0.311284	0.136221	0.622741	0.615417
Strategy 2	0.696531	0.622741	0.648664	0.311284	0.078434
Strategy 3	0.071855	0.065975	0.215115	0.065975	0.306149

Table 14. Matrix of averages for all criterions.

Table 15 shows the matrix of the ranking of all criteria with a calculated preference vector (row average) for each criterion.

Criteria	Limitation of Civil Liberties	Available Resources	Potential Threats	Limitations of Implementation	Potential Effectiveness	Preference Vector for the criteria
Limitation of Civil Liberties	1	1/5	1/3	1/2	1/7	0.0491
Available Resources	5	1	3	4	1/3	0.2531
Potential Threats	3	1/3	1	1/2	1/5	0.0949
Limitations of Implementation	2	1/4	2	1	1/6	0.1027
Potential Effectiveness	7	3	5	6	1	0.4999

Table 15. Ranked criteria in order of importance.

As seen in Table 15 potential effectiveness (almost 50 percent) is the most important criterion followed by available resources, limitations of implementation, potential threats and limitations of civil liberties.

After multiplication of the criteria matrix by the preference vector matrix the scores for different strategies are obtained and shown in Table 16.

Strategies	Scores
Strategy 1	0.474795
Strategy 2	0.324698
Strategy 3	0.200507

Table 16. Ranked strategies.

Table 16 shows how each strategy ranks. These rankings are as follows: Strategy 1 – 48 percent, Strategy 2 – 32 percent and Strategy 3 – 20 percent. Based on these scores Bulgaria could pursue the law enforcement approach in order to prevent potential radicalization and extremism on its territory.

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VI. CONCLUSION

International terrorism appears to be one of the most critical challenges facing the world. After the events of September 11, the London bombing, Madrid bombing and so on, terrorism has become a strategic threat to world peace. Bulgaria has not been spared from terror attacks, as the terror bombing that targeted Israeli tourists at the Burgas airport in 2012 showed. Although this attack was directed at Israelis, it clearly was a breach in Bulgaria's national security.²²⁵

A. THESIS PURPOSE REVIEW

The purpose of this thesis was to illustrate how a data collection and data analysis process could assist Bulgaria in developing a counterterrorism strategy to increase its national security. The “recommended strategy” is only illustrative since it relies on limited open-source data and dated historical documents. Thus, the real contribution of the thesis is its demonstration of how to develop strategy using new methodological tools—link analysis, geospatial analysis, temporal analysis and social network analysis. For example,

- Geospatial analysis of the Balkans is used to visualize ethnic distribution in the Balkans, and the latter to visualize geospatially terrorist events over the period 1991 to 2013;
- Temporal analysis is used to visualize different types of terror events throughout various time periods and countries conducted by using the Palantir software;
- Link analysis is employed to describe various connections between people, terrorist events, and terrorist organizations;
- Social network analysis using ORA and UCINET programs visualize the terror networks and their connections. Based on this analysis, the modes and trends of operation of the terror groups in Kosovo, Bosnia, Albania and Macedonia can be highlighted.

²²⁵Nikolay Slatinski, “Report: Counterterrorism—Problems, lessons and conclusions,” Rakovski Defense and Staff College, Sofia, Bulgaria, <http://nslatinski.org/?q=bg/node/431>

- Data fusion of all the analyses can provide a common operational picture to inform the development of counterterrorism strategies.
- And finally, the analytical hierarchical process can be used as a decision-making tool to evaluate strategic options and, based on the desired criteria, identify a preferred strategy.

B. RECOMMENDATIONS

The analytical process outlined in this thesis is recommended to develop Bulgaria's counterterrorist strategies. To support this analytical process, the following resources and capabilities are required. Intelligence data need to be collected and structured. Personnel need to be trained in data collection, data structuring and data analysis. Most importantly, data analysis needs to include the use of new methodological tools (e.g., link analysis, geospatial and temporal analyses and social network analysis). With these resources and capabilities, Bulgaria would be well positioned to develop data-driven strategies to prevent attacks that threaten its future security.

LIST OF REFERENCES

- Alexiev, Alex. "Radical Islam Has Occurred throughout Bulgaria." OFFNews.bg December 2012. Accessed May 15, 2013. <http://offnews.bg/index.php/132029/aleks-aleksiev-radikalen-islyam-sheta-v-balgariya>.
- Armitage, David T. "The Europe Union: Measuring Counterterrorism Cooperation." *Journal of Strategic Forum* 229 (2007): 1–7. Accessed May 10, 2013. www.dtic.mil/cgi-bin/GetTRDoc?AD=ADA474083.
- Banks, William C., Renee de Nevers, and Mitchel B. Wallerstein. *Combating Terrorism, Strategies and Approaches*. Washington, DC: CQ Press, 2008.
- Bodansky, Yossef. *Bin Laden, the Man Who Declared War on America*. Rocklin, CA: Prima Publishing, 1999.
- Brachman, Jarret M. and William F. McCants. *Stealing Al Qaeda's Playbook, Studies in Conflict & Terrorism*. West Point, NY: Combating Terrorism Center, 2006.
- Bulgarian government. "Bulgarian National Counterterrorism Plan (2008)." Accessed May 15, 2013. <http://www.strategy.bg/StrategicDocuments/View.aspx?lang=bg-BG&Id=497>.
- Campbell, Kurt, and Richard Weitz. *Non-Military Strategies for Countering Islamist Terrorism: Lessons Learned from Past Counterinsurgencies in The Princeton Project Papers*. Princeton, NJ: Princeton University Press, 2006.
- Cline, Lawrence. "Intelligence and Combating Terrorism." In *Fighting Back: What Governments Can Do about Terrorism*, edited by Paul Shemella, 193. Stanford, CA: Stanford Security Studies, 2011.
- Council of the European Union. "The European Union Counter-Terrorism Strategy, 2005." Accessed May 30, 2013. <http://register.consilium.eu.int/pdf/en/05/st14/st14469-re04.en05.pdf>.
- Cronin, Audrey K. "Conclusion: Toward an Effective Grand Strategy." In *Attacking Terrorism*, edited by Audrey K. Cronin and James M. Ludes, 285–299. Washington, DC: Georgetown University Press, 2004.
- Davis, Lynn E., and Melanie W. Sisson. *A Strategic Planning Approach: Defining Alternative Counterterrorism Strategies as an Illustration*. Santa Monica, CA: RAND Corporation, 2009.
- Everton, Sean F. *Disrupting Dark Networks*. New York: Cambridge University Press, 2012.

Fox, William. "Models of Conflict." Class notes, Naval Postgraduate School, Monterey, CA, Winter 2013.

Global Terrorism Database. Accessed June 20, 2013. <http://www.start.umd.edu/gtd/>.

Keim, Daniel, Gennady Andrienko, Jean-Daniel Fekete, Carsten Gorg, Jorn Kohlhammer, and Guy Melancon. "Visual Analytics: Definitions, Process, and Challenges." In *Information Visualization*, edited by G. Andrienko et al., 154–175. Berlin and Heidelberg: Springer-Verlag, 2008.

Kohlmann, Evan F. *Al Qaeda's Jihad in Europe: The Afghan-Bosnian Network*. New York: Berg Press, 2004.

Koschade, Stuart "A Social Network Analysis of Jemaah Islamiyah: The Applications to Counterterrorism and Intelligence." *Studies in Conflict and Terrorism* 29 (2006): 589–605.

Le Beau, John J. "Intelligence and Counterterrorism: Examining the Crucial Tools of Secrecy and Cooperation." In *Toward a Grand Strategy against Terrorism*, edited by Christopher C. Harmon, 193–209. New York: McGraw Hill Companies, 2011.

Ministry of Defense of the Republic of Bulgaria website. "Concept for Bulgaria's Participation in Operations for Peacekeeping." Accessed December 13, 2013. http://www.mod.bg/bg/doc/tema/missions_operations/docs/Concept_Peacekeeping.pdf.

Ministry of Defense of the Republic of Bulgaria. "Missions and Operations." Accessed May 25, 2013. http://www.mod.bg/bg/tema_MissionsOperations.html.

News.bg. "The Trial Against the Imams Continues." Accessed June 10, 2013. http://news.ibox.bg/news/id_281519771.

Palantir. "What we do." Accessed May 20, 2013. <http://www.palantir.com/what-we-do/>.

Parker, Tom. "United Kingdom: Once More into the Breach." In *Safety, Liberty, and Islamist Terrorism: American and European Approaches to Domestic Counterterrorism*, edited by Gary J. Schmitt, 8–31. Washington, DC: The AEI Press, 2010.

Pedahzur, Ami. *The Israeli Secret Services & the Struggle against Terrorism*. New York: Columbia University Press, 2010.

Prodanov, Vasil and Bogdana Tomova. *Risks for Bulgaria of Islamic Fundamentalism and Terrorism*. Sofia: Bulgarian Scientific Academy, 2005.

- Roberts, Nancy, and Sean Everton. "Strategies for Combating Dark Networks." *Journal of Social Structure* 12, no. 2 (2011). Accessed May 20, 2013. www.cmu.edu/joss/content/articles/volume12/RobertsEverton.pdf.
- Rom, Sheila. "Instability and Desperation: The Balkan Link to Terrorism." *Global Security Studies* 1, no. 3 (Fall 2010): 101–110.
- Rykhtik, Mikhail. "Asymmetric Threats and Counter-Terrorism Strategies in Russia." In *National Counter-Terrorism Strategies: Legal, Institutional, and Public Policies Dimensions in the U.S., UK, France, Turkey, and Russia*, edited by Robert Ortung and Andrey Makarychev, 165–175. Washington, DC: The NATO Program for Security through Science: IOS Press, 2006.
- Schmitt, Gary J. "France: In a League of Its Own." In *Safety, Liberty, and Islamist Terrorism: American and European Approaches to Domestic Counterterrorism*, edited by Gary J. Schmitt, 8–31. Washington, DC: The AEI Press, 2010.
- Shay, Shaul. *Islamic Terror and the Balkans*. New Brunswick, NJ: The International Policy Institute for Counter-Terrorism, 2007.
- Sheehan, Michael A. "Diplomacy." In *Attacking Terrorism: Elements of a Grand Strategy*, edited by Audrey K. Cronin and James M. Ludes, 98. Washington, DC: Georgetown University Press, 2004.
- Shelley, Louise. "Countering Terrorism in the U.S.: The Fallacy of Ignoring the Crime – Terror Nexus." In *National Counter-Terrorism Strategies: Legal, Institutional, and Public Policies Dimensions in the U.S., UK, France, Turkey, and Russia*, edited by Robert Ortung and Andrey Makarychev, 203–212. Washington, DC: The NATO Programme for Security through Science: IOS Press, 2006.
- Slatinski, Nikolay. "Report: Counterterrorism—Problems, Lessons, and Conclusions." Rakovski Defense and Staff College, Sofia, Bulgaria. Accessed December 13, 2013. <http://nslatinski.org/?q=bg/node/431>.
- White House. "National Strategy for Counterterrorism of U.S. (June 2011)." Accessed May 24, 2013. http://www.whitehouse.gov/sites/default/files/counterterrorism_strategy.pdf.
- Wikipedia. s.v. "Burgas Bus Bombing (2012)." Accessed May 10, 2013. http://en.wikipedia.org/wiki/2012_Burgas_bus_bombing.
- Woehrel, Steven. *Islamic Terrorism and the Balkans*. CRS Report RL33012. Washington, DC: Library of Congress, Congressional Research Service, July 26, 2005.

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