ROUTLEDGE STUDIES IN AFRICAN POLITICS AND INTERNATIONAL RELATIONS

African Border Disorders

Addressing Transnational Extremist Organizations

Edited by
Olivier J. Walther and
William F.S. Miles

Based on original and cutting edge research and authored by leading scholars in the field, *African Border Disorders* significantly enriches our understanding of transnational extremist organizations in postcolonial Africa. What makes this volume stand apart in the burgeoning literature on political violence is that its authors clearly locate the spatial patterns of attacks within the social networks underlying rebel movements in the African continent.

Ousmane Kane, *Harvard University, USA*

While the rest of the world continues to recognize African states, many of which have limited empirical existence and do little for their populations, challenges to these states on the ground increasingly ignore and bypass existing sovereign territorial configurations. This original, insightful and methodologically sophisticated book directs a cast of outstanding scholars to break down the transnational social and spatial networks that have progressively turned many African states upside down. Reaching broadly across topics and regions, this work is of critical theoretical and policy importance.

Pierre Englebert, *Pomona College, USA*

This remarkable collection of chapters brings together scholars from across the world working on the difficult subjects of both transnational behaviour and armed group relationships. Research on relationships, networks and strategies are grounded in innovative and robust empirical evidence and methods. Insights from these rigorous works will serve as a guide to students, an excellent resource for researchers, and will set the agenda for future policy and practitioner work on the security of border regions in areas of intense violent competition. A timely and welcome contribution to the study of political violence patterns.

Clionadh Raleigh, *University of Sussex, UK*

African Border Disorders

Since the end of the Cold War, the monopoly of legitimate organized force of many African states has been eroded by a mix of rebel groups, violent extremist organizations and self-defense militias created in response to the rise in organized violence on the continent.

African Border Disorders explores the complex relationships that bind states, transnational rebels and extremist organizations, and borders on the African continent. Combining cutting-edge network science with geographical analysis, the first part of the book highlights how the fluid alliances and conflicts between rebels, violent extremist organizations and states shape in large measure regional patterns of violence in Africa. The second part of the book examines the spread of Islamist violence around Lake Chad through the lens of the violent Nigerian Islamist group Boko Haram, which has evolved from a nationally oriented militia group to an internationally networked organization. The third part of the book explores how violent extremist organizations conceptualize state boundaries and territory and, reciprocally, how the civil society and the state respond to the rise of transnational organizations.

The book will be essential reading for all students and specialists of African politics and security studies, particularly those specializing in fragile states, sovereignty, new wars and borders as well as governments and international organizations involved in conflict prevention and early intervention in the region.

Olivier J. Walther is Visiting Associate Professor in African Studies at the University of Florida, USA.

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Abbreviations

Some of the rebel and extremist groups are listed by their French name or acronym.

ABORNE	African Borderlands Research Network
ACLED	Armed Conflict Location and Event Dataset
ADF	Allied Democratic Forces
ADFL	Alliance of Democratic Forces for the Liberation of Congo
AIC	Akaike Information Criterion
ALR	Army for the Liberation of Rwanda
AMISOM	African Union Mission in Somalia
AQI	Al Qaeda in Iraq
AQIM	Al Qaeda in the Islamic Maghreb
AU	African Union
BIC	Bayesian Information Criterion
BRSC	Benghazi Revolutionaries Shura Council
CEMOC	Combined Operational General Staff Committee
CJTF–HOA	Combined Joint Task Force–Horn of Africa
CMA	Coordination des Mouvements de l'Azawad
CNDD–FDD	National Council for the Defense of Democracy–Forces for the Defense of Democracy
DASTI	Danish Agency for Science, Technology and Innovation
DRC	Democratic Republic of the Congo
ECOWAS	Economic Community of West African States
ERGM	Exponential Random Graph Model
FAR	Armed Forces of Rwanda
FAS	Forces of Anicet Saulet
FLEC	Front for the Liberation of the Enclave of Cabinda
FLEC-R	Front for the Liberation of the Enclave of Cabinda-Renewed
FNL	National Forces of Liberation
FROLINA	National Liberation Front
GIA	Armed Islamic Group
GIS	Geographical Information System
GSL	Free Salafist Group
GSPC	Salafist Group for Preaching and Combat

HCUA	Haut Conseil pour l'Unité de l'Azawad
ICRC	International Committee of the Red Cross
ICU	Islamic Courts Union
IDP	Internally Displaced Person
IED	Improvised Explosive Device
IS	Islamic State
ISI	Islamic State of Iraq
ISIL	Islamic State of Iraq and the Levant
JEM	Justice and Equality Movement
JEM–Bashar	Justice and Equality Movement–Bashar Faction
JEM–UFN	Justice and Equality Movement–Unity Faction Nur
JI	Jemaah Islamiyah
LCBC	Lake Chad Basin Commission
LRA	Lord's Resistance Army
LURD	Liberian United for Reconciliation and Democracy
MCMC	Markov Chain Monte Carlo
MINUSMA	United Nations Multidimensional Integrated Stabilization Mission in Mali
MLF	Macina Liberation Front
MNJTF	Multinational Joint Task Force
MNLA	National Movement for the Liberation of Azawad
MODEL	Movement for Democracy in Liberia
MR–QAP	Multiple Regression Quadratic Assignment Procedure
MUJAO	Movement for Oneness and Jihad in West Africa
NPFL	National Patriotic Front of Liberia
OAU	Organization of African Union
PREACT	Partnership for Regional East Africa Counterterrorism
RCD–Goma	Rally for Congolese Democracy–Goma
RPF	Rwandan Patriotic Front
RRA	Rahanweyn Resistance Army
RSC	Regional Security Complex
RUF	Revolutionary United Front
SAOM	Stochastic Actor-Oriented Model
SLM/A	Sudan Liberation Movement/Army
SLM/A–Minnawi	Sudan Liberation Movement/Army–Minnawi Faction
SLM/A–Nur	Sudan Liberation Movement Army–Abdul Wahid al-Nur Faction
SLM/A–Unity	Sudan Liberation Movement/Army–Unity Faction
SNA	Social Network Analysis
SPLA	Sudan People's Liberation Army
SPLA/M	Sudan People's Liberation Army/Movement
SPLA/M–In Opposition	Sudan People's Liberation Army/Movement–In Opposition
SSDF	South Sudan Defense Forces
SSN	Spatializing Social Networks

UFDR	Union of Democratic Forces for Unity
ULIMO	United Liberation Movement of Liberia for Democracy
UNITA	National Union for the Total Independence of Angola
UNRF	Uganda National Rescue Front
URFF	United Revolutionary Forces Front
WNBF	West Nile Bank Front

Introduction

States, borders and political violence in Africa

Olivier J. Walther and William F.S. Miles

Since the end of the Cold War, the monopoly of legitimate organized force of many African states has been eroded by a mix of rebel groups calling for more political autonomy or a greater share of the national resources, violent extremist organizations affiliated with Al Qaeda or the Islamic State, and self-defense groups created in response to the rise in organized violence on the continent.

The situation is particularly worrying in the Sahel and Sahara, a region better known climatically and geopolitically for episodes of drought and occasional acts of banditry, where violent extremist organizations and secessionists rebels have recently thrived on the porosity of state boundaries. Mali, for example, has faced a military coup, a rebellion, a Western military intervention and several major terrorist attacks – all in less than two years. In the Lake Chad region, the jihadist organization Jamā'at Ahl as-Sunnah lid-Da'wah wa'l-Jihād, better known as Boko Haram, is attempting to revive an Emirate over a large part of northeastern Nigeria, killing thousands and forcing more than half a million civilians to flee to neighboring countries. In Central Africa, rebel groups such as the Lord's Resistance Army (LRA) led by Joseph Kony have perfected the art of eluding counter-offensives headed by African states and their Western allies and caused massive human rights violations, murders and other crimes. In the Horn of Africa, Harakat al-Shabaab al-Mujahideen, known as Al Shabaab, which has pledged allegiance to Al Qaeda, has contributed to the destabilization of Somalia and its neighboring countries since the mid-2000s.

A common aspect of these conflicts is that they often develop across the boundaries drawn by the colonial powers (Clapham 1998; Salehyan 2009; Gow et al. 2013), blurring the distinction between domestic and international affairs. Modern African wars involve regular military forces, pro-government factions, ethnic and religious militias, rebels, violent Islamist groups and warlords that often mobilize global ideas, such as jihad, for local and national purposes. The rise of Boko Haram provides a clear illustration of how an extremist group can exploit local memories and historical narratives related to the Kanem–Bornu Empire to ground ideology in a local context, while at the same time claiming allegiance to the Islamic State and its Pan-Islamist vision of a unified Muslim world. Elsewhere in Africa, rebellions thrive on local predation of natural resources, while simultaneously depending heavily on the external support provided by international aid organizations and diasporas.

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Border disorders

There are many reasons why African borders have become synonymous with political disorders. In some cases, government forces have crossed into neighboring states to exercise their right of hot pursuit, eliminate rebel bases, cut communication lines and "restore order" without necessarily making territorial claims (Reno 2011). In 2010, for example, Mauritania and France conducted a series of military raids against Al Qaeda in the Islamic Maghreb (AQIM) in northern Mali in an attempt to reduce its ability to conduct attacks and take hostages in the region (Harmon 2014). On other occasions, conflicts have spread across borders when African government forces have come to the aid of neighboring allies threatened by rebellions. Guinean troops, for example, occupied the town of Yenga in 2011 to help Sierra Leone's army fight the Revolutionary United Front (RUF), a rebellion founded by Sierra Leoneans in Liberia. The Guinean regular troops left Sierra Leone almost ten years after the RUF had ceased to operate in the region.

Porous borders may also be used by government forces and proxy groups to destabilize neighboring regimes or intervene in refugee camps that might serve as recruitment bases for rebels. Nowhere has this been more evident than in the Darfur region between Chad and Sudan, and in the Great Lakes region during the Rwanda and Congo wars of the 1990s and early 2000s. The Rwandan Patriotic Front (RPF) invaded northern Rwanda from Uganda in 1990, after a series of military retreats, seized power in Kigali, and put an end to the genocide against Tutsis and moderate Hutus in 1994. The support provided by President Mobutu Sésé Séko to Hutu extremists in eastern Zaire later convinced Rwanda and its allies to invade Zaire, setting in motion the First Congo War. Border issues also explain the outbreak of the Second Congo War, which started in 1998 when rebels backed by Rwanda and Uganda invaded the newly renamed Democratic Republic of Congo (DRC), officially to create a buffer zone that would protect the Tutsis of Kivu and eliminate incursions across the western borders. The transnational nature of the conflict, which at its height involved nine states, led to its being dubbed "Africa's World War" (Prunier 2009). It was also often characterized as the deadliest conflict since the Second World War.

Although this is less common, African states have also operated across borders in order to coordinate their military activities and respond to conflicts that cannot be addressed nationally. Such joint initiatives have undeniable benefits for the often small and underequipped military forces of many African countries: in addition to pooling military personnel and material, they allow the sharing of intelligence on the spatial patterns of rebels and violent extremist organizations. Several recent examples of such initiatives may be found in West Africa. In 2011, Mauritania and Mali undertook a series of joint counter-terrorism operations aimed at AQIM military bases in the Wagadu forest in northwestern Mali. Since then, Nigeria, Niger, Chad and Cameroon have expanded the mandate of their Multinational Joint Task Force (MNJTF) to counter-terrorism operations in order to tackle the threat posed by Boko Haram

in the Lake Chad region. Numerous other partnerships have been developed to reinforce military cooperation and address the transnational problem that violent extremism has posed since the 2010s. Some of these initiatives rely mainly on security, such as the Combined Operational General Staff Committee (CEMOC), the African Union's Joint Fusion and Liaison Unit and the Nouakchott Process. Other initiatives, often called "Sahel" strategies due to their focus on Sahelo-Saharan states, combine governance, security and development, like the European Union's Strategy for Security and Development in the Sahel, the United Nations Integrated Strategy for the Sahel, the Strategy for the Sahel developed by the Economic Community of West African States (ECOWAS), the African Union's Strategy for the Sahel Region and the Sahel G5.

Conflicts also regionalize because armed groups relocate to other countries when defeated by counter-insurgency efforts. Offensives against rebellions and violent extremists often follow the principle of communicating vessels: pressure exerted by one country on one group results in its opportunistic relocation to a neighboring country where military capabilities or political will are weaker (Arsenault and Bacon 2015). The recent history of AQIM provides a case in point. Known until 2007 as the Salafist Group for Preaching and Combat (GSPC), itself a splinter group of the Armed Islamic Group (GIA), AQIM was forced by Algerian security forces to move from its stronghold in Kabylia toward the Sahel and Sahara in the mid-2000s. The organization found favorable conditions in northern Mali, where it was tolerated by President Touré, developed local alliances and carried out multiple operations from Mauritania to Chad (Walther and Christopoulos 2015). In recent years, Boko Haram has experienced a similar evolution. While the group had focused its attacks on northeastern Nigeria until 2014, increasing pressure from government forces led Boko Haram to conduct an increasing number of attacks in neighboring Chad, Cameroon and Niger. In Central Africa, the LRA followed the same trend. Historically based in northern Uganda, the group started to extend its attacks to the DRC and the Central African Republic in the mid-2000s following a series of often inconclusive joint military offensives undertaken by neighboring countries (Allen and Vlassenroot 2010).

The geographic spread and opportunistic relocation of such conflicts is amplified by the porosity of many African borders which facilitates the circulation of fighters, hostages and weapons. The offensive conducted by AQIM and the rebels of the National Movement for the Liberation of Azawad (MNLA) against the Malian army in the first weeks of 2012, for example, was fueled by Tuareg fighters who fled Libya with light arms, ammunitions and explosives from Gaddafi's extensive stockpile. Far from being ignored by rebellions and violent extremist organizations, African borderlands are often used as bases from which military operations may be conducted, new recruits found and temporary bases built. The modern history of the western part of the Gulf of Guinea dramatically illustrates how wars and borders are intertwined. Charles Taylor's National Patriotic Front of Liberia (NPFL), which entered Liberia on Christmas Eve 1989 to overthrow the Doe regime in Monrovia, was originally assembled in

neighboring Côte d'Ivoire. Two years later, the United Liberation Movement of Liberia for Democracy (ULIMO) opposed to Taylor took refuge in Guinea and Sierra Leone, from which it secured strategic minefields in Liberia (Ellis 1998). That same year, RUF rebels affiliated with Taylor's NPFL entered Sierra Leone from Liberia and progressively secured parts of Sierra Leone rich in alluvial diamonds. After their failed attempt to conquer Freetown in 1995 and the counter-offensive that followed, RUF fighters fled to Liberia. During the Second Liberian War that started in 1999, rebels from Liberian United for Reconciliation and Democracy (LURD) and the Movement for Democracy in Liberia (MODEL) invaded Liberia from Guinea and Côte d'Ivoire, contributing to the offensive against Monrovia that led to the exile of Charles Taylor in 2003.

Alliances and conflicts

Another key aspect of modern African conflicts is that the relationships between the belligerents are often characterized by bewildering alliances and conflicts (Williams 2016). Groups that were allied one day can fight each other the next day. During the first months of the 2012 Malian conflict, for example, the Islamist group Ansar Dine forged an alliance with the secessionist Tuareg rebels of the MNLA. This short-lived partnership soon transformed into a battle over control of strategic cities. A similar volatility characterizes individual combatants, whose allegiance to the government, rebel forces or violent extremist groups can change rapidly. Born into a vassal tribe of northern Mali, Brigadier General El Hadj Ag Gamou, for example, worked successively as a fighter in the Foreign Legion of the late Colonel Gaddafi in Libya, as a rebel in his home country and as a soldier in the Malian regular forces, before founding a pro-government self-defense group.

The causes and consequences of such alliances and conflicts for patterns of violence have received increasing attention over recent years (Cederman et al. 2009; Cunningham et al. 2009; Pearlman and Cunningham 2012; Metternich et al. 2013; Dowd 2015; Asal et al. 2016). Research focusing on intragroup dynamics suggests that the internal structure of warring groups is central to explaining patterns of violence of insurgent groups (Staniland 2014). Social ties forged between belligerents before and during war make violent organizations more cohesive and less prone to factionalization. They also facilitate recruitment and allegiance during conflicts. Internal divisions in self-determination movements are associated with a greater potential for civil wars because the multiplication of belligerents creates political uncertainties as to what concessions could be made and what commitments could resolve a conflict through non-violent means (Cunningham 2013). Internally divided self-determination movements are also more likely to receive concessions than unitary ones because states often "divide and concede" rather than "divide and conquer" (Cunningham 2011). While there seems to be a consensus recognizing that fragmented groups increase the intensity of violence, particularly against civilians (Bakke et al. 2012; Cunningham et al. 2012), the effect of the fragmentation of violent groups

on the duration of conflicts is still debated. Some studies suggest that fragmentation makes negotiating peace accords more difficult by multiplying the number of "veto players" that must approve a settlement (Cunningham 2006). Others argue that fragmentation makes wars shorter by weakening the belligerents and forcing them to cooperate (Findley and Rudloff 2012).

Studies focusing on intergroup dynamics suggest that violence between non-state actors may be understood as a means to access the resources and political leverage needed to fight central governments (Fjelde and Nilsson 2012). This explains why rebel groups often fight each other instead of forming coalitions (Nygård and Weintraub 2015), particularly when the government lacks repressive power (Bapat and Bond 2012). Research on armed conflicts between non-state actors shows that inter-rebel violence is more likely to occur in drug production areas, where rebel groups have established control over territory beyond government reach and are numerically strong, and where states are unable to exercise their authority (Fjelde and Nilsson 2012). The effect of intergroup alliances on civil war outcomes is less well documented. While intergroup alliances rarely lead to victory, interdependencies between rebel groups bring valuable resources such as intelligence and tactical support that may be used against a well-organized and capable government to avoid defeat (Akcinaroglu 2012). In conflict situations where an external party, such as a foreign military power, is capable of enforcing cooperation between warring parties that leads to a peace settlement, armed groups may have an interest in forming coalitions and aligning with the side they believe has the highest chance of winning the conflict (Christia 2012).

Social networks and spatial patterns

In addition to relying on often puzzling alliances and conflicts, violent extremist organizations in Africa also challenge some of our most fundamental assumptions about space. Unlike many other conflicts where territorial control often constitutes the ultimate objective of warfare, modern conflicts in Africa are not so much about seizing territory as they are about controlling people. "In Africa, it's never about seizing terrain," said Major General James Linder (cited in Griswold 2014), former commander of the U.S. Special Operations Command-Africa, to stress the impossibility of garrisoning heavily wooded or sparsely populated regions. This is particularly evident in North and West Africa, where rebels and extremist groups aim to establish political control in cities at the crossroads of trans-Saharan roads, such as Kidal in Mali (Bøås 2015).

Thus far, the *social* networks underlying political and religious movements in the region and the *spatial* patterns of attacks have often been considered separately. The recent evolution of groups such as Boko Haram, AQIM or the Islamic State has, however, challenged this view, by showing that rebels and violent extremist organizations have been operating along pre-existing social and financial networks across the region, particularly when they extend their activities across borders, due to the uncertainty of operating in a foreign environment.

This evolution has led an increasing number of geographers, political scientists and network scientists to study how social patterns were affected by spatial proximity. Space is now widely recognized as a fundamental dimension of politically violent organizations that often conduct operations from a territorial base, leverage geographic havens, compete with sovereign states and fight for control over aspirational homelands (Medina and Hepner 2013). Recent technical developments have accompanied these conceptual developments and helped integrate social network analysis and spatial analytical technique related to the spatiality of social networks, i.e., how location, spatial practices or representations and geographic arrangements of networks influence social ties (Carrasco et al. 2008; Adams et al. 2011; Schaefer 2011; Arentze et al. 2012; Gelernter and Carley 2015). One should note, however, that thus far most studies have been applied to conflicts and violent organizations located in the U.S.A., Middle East, Afghanistan, Pakistan and Southeast Asia (Berrebi and Lakdawalla 2007; Gao et al. 2013) or at the global level (Townsley et al. 2008; Medina and Hepner 2011). By contrast, Africa has received little attention from network science, a gap that this book contributes to address through several detailed case studies located in North, Central and West Africa and at the continental level.

While existing research has made a major contribution to understanding the way in which violence emerges and diffuses over time and space, most of the studies conducted thus far have also conceptualized the spatiality of social networks based on actors for whom the location or the territory was well known. In their study of urban violence in Los Angeles, Radil and colleagues (2010), for example, show that urban gangs demonstrate distinct spatial patterns depending on whether the groups are close geographically or topologically. Flint and colleagues (2009) adopt a similar perspective by showing how the geographical and topological position of nation-states during the First World War helps explain their power relations as a function of alliances and rivalries. In both cases, social networks that bound the attackers and their victims are assumed to be linked to a specific location or territory: gangs in Los Angeles delineate their turf through violence, while aggressions during the First World War were related to state territories. *African Border Disorders* builds on this research to develop a mixed-methods approach toward transnational organizations that can simultaneously take into account their social networks and spatial patterns. Focusing on politically violent organizations that challenge the territorial integrity of the state by subverting national boundaries, such as terrorist organizations, rebel groups and militias, the book highlights how the fluid alliances and conflicts among such organizations and states shape in large measure regional patterns of violence in Africa.

Structure of the book

Combining cutting-edge network science with geographical analysis, the first part of the book discusses how the social structure and spatial patterns of transnational organizations challenge the sovereignty of states. Using disaggregated

data from the Armed Conflict Location and Event Dataset (ACLED) that has catalogued violent incidents in Africa since 1997, the authors note that while overlapping geospatial areas and the pattern of ties among groups can facilitate, as well as constrain, group conflict, seldom have these studies simultaneously accounted for these interrelated but distinct mechanisms.

The first two chapters of the book contribute to developing methodological tools needed in order to capture the dynamics of both social networks and spatial patterns. The authors rely on a family of statistical models known as Exponential Random Graph Models (ERGMs) developed to cope with the fact that network data involve non-independent actors by nature. Interpreted in a manner similar to that of logistic regression, ERGMs can identify how the attributes of the actors of a network, such as their nationality or geographic location, predict the observed patterns of violence.

In Chapter 1, Steven Radil discusses why it is important to understand how some wars diffuse, or expand over space and time, a pressing issue given the persistence of wars in the international system that involve non-state armed groups and spill beyond the boundaries of a single state. His contribution considers the issues connected with investigating war diffusion in such a context by using the Spatializing Social Networks (SSN) framework, which uses the techniques of social network analysis (SNA) to integrate geographic and political data into a single relational analysis. Although much of the SSN approach to date has been descriptive in nature, the author draws on data from the First Congo War (1996–1997) to evaluate the geographical and political drivers of the war. Data about the participants along with their social and geographic relationships are used to illustrate the application of an ERGM. The results suggest that boundaries are the most salient feature in explaining the early spread of the war but that the processes of war diffusion also involved whole-network-level properties that cannot be captured by more traditional statistical methods but that can be modeled using an ERGM.

In Chapter 2, Sean Everton, Dan Cunningham and Kristen Tsolis draw upon an ERGM to explore both the spatial and social network causes of violence of rebel groups in Africa from 1997 to 2014. Their analysis suggests that ideology is a predictor of political violence only if two groups share an Islamist agenda. The probability of attacking each other is not statistically significant for other ideological variables such as new regime and ethnic nationalists, Christian militants and separatists. The chapter also shows that spatial contiguity itself does not explain why rebel groups attack each other. Groups whose areas of operation are adjacent are no more likely to engage in violence than groups that are randomly located, suggesting that not all violence is locally rooted. This exploratory analysis is a first step toward a more spatially based understanding of how and why violent organizations attack each other. From a policy perspective, the findings inform how SNA may be used to limit transnational violence in the future, using non-kinetic strategies that avoid targeting enemy combatants and their supporters with the goal of neutralizing, capturing or eliminating high value targets.

The social structure and spatial patterns of transnational organizations are further developed in Chapters 3 and 4, which both examine how violent extremist organizations are socially and spatially connected in North and West Africa, a region characterized by growing political instability over the past 20 years. The chapters rely on a combination of network analyses and spectral embedding techniques that can simultaneously account for the direction of ties between attackers and victims, and for their cooperative or conflicting nature.

In Chapter 3, Olivier Walther, Christian Leuprecht and David Skillicorn use network science to represent alliances and conflicts of 179 organizations that were involved in violent events in North and West Africa between 1997 and 2014. Their analysis combines two spectral embedding techniques that have previously been used separately: one for directed graphs (relationships are asymmetric), and one for signed graphs (relationships are positive or negative). The authors show that groups with similar allies and foes are likely to have similar aggression patterns. Groups that are net attackers are indistinguishable at the level of their individual behavior, but are clearly separated into pro- and anti-political violence based on the groups to which they are close. The second part of the chapter maps a series of 389 events related to nine trans-Saharan Islamist groups between 2004 and 2014. Spatial analysis suggests that cross-border movement has intensified following the establishment of military bases by AQIM in Mali but reveals no evidence of a border "sanctuary." Owing to the transnational nature of conflict, the chapter shows that national management strategies and foreign military interventions have profoundly affected the movement of Islamist groups.

Chapter 4 explores the spatial and temporal diffusion of political violence in North and West Africa by endeavoring to represent the mental landscape of a group leader as he contemplates strategic targeting. David Skillicorn, Olivier Walther, Quan Zheng and Christian Leuprecht assume that this representation is a combination of the physical and social geography of the target environment, and the mental and physical costs of following a seemingly random pattern of attacks. Focusing on the distance and time between attacks and taking into consideration the transaction costs that state boundaries impose, they wish to understand what induces a group leader to attack at a location other than the one that would seem to yield the greatest overt pay-off. Because the research problem defies the collection of a full set of structural data, the authors generate a network whose nodes are administrative regions. These nodes are connected by undirected edges representing geographic distance, undirected edges incorporating the costs of crossing borders, and directed edges representing consecutive attacks by the same group at the two endpoints. The chapter analyzes the resulting network using spectral embedding techniques that are able to account fully for the different types of edges. The result is a "map" of North and West Africa that reflects the impact of distance, borders and time upon a group's actions, a necessary step toward principles planning, prepositioning and response to transnational threats.

The second part of the book examines the spread of Islamist violence around Lake Chad through the lens of the violent Nigerian Islamist group commonly

referred to as Boko Haram, which has evolved from a nationally oriented militia group into an internationally networked organization with a growing presence in an increasing number of countries since its emergence in 2009.

In Chapter 5, Caitriona Dowd traces the development of Boko Haram's geographic profile through the analysis of conflict event data. Employing concepts from the geography of diffusion and contagion, the study distinguishes between violence escalation, relocation, containment and flashpoints, in order to understand the dynamics of this evolving organization. Analysis reveals that Boko Haram's recent increasing geographic reach internationally during the period 2015 to 2016 represents a process of relocation, rather than escalation and expansion. Boko Haram activity has failed to retain operational capacity in many of its former sites of activity within Nigeria, highlighting that this transnationalism is a response to military pressure and restrictions on movement. In this way, Boko Haram's territorial profile of violence parallels the evolution of other armed Islamist groups active in the region, which increased their territorial reach while reducing their presence in their original operation area. These characteristics point to the value of identifying not only whether a group is transnationally active but also specifying the precise nature of that transnationalism, and the implications for domestic violent activity, in order to understand trends and patterns in violence.

In Chapter 6, Nikolas Emmanuel argues that the best way to deal with a transitional threat such as Boko Haram is a coordinated transnational response that flows easily across borders, like the menace it faces. Given this reality, his contribution examines how extra-African states are encouraging and facilitating cross-border collaboration and the construction of a regional security complex in the Lake Chad region. He shows that, while there has been extensive discussion among scholars and policy-makers about how African states have tried to mitigate the many problems posed by the resilience of violent organizations such as Boko Haram, less has been written on how key extra-continental players are helping facilitate inter-African cooperation and a coordinated response in the fight against terrorism on the continent. His contribution explores the example of how Nigeria, Niger, Chad and Cameroon are working together to fight Boko Haram with the help of incentives such as aid, arms, intelligence sharing and training provided by key external actors. Focusing on recent initiatives developed by France and the U.S.A., the chapter examines more specifically how subregional states are reacting to the transnational threat posed by Boko Haram, and what impact the actions of external players are having on inter-state cooperation to fight terrorism in Africa.

The third part of the book explores how violent extremist organizations conceptualize state boundaries and territory and, reciprocally, how the civil society and the state respond to the rise of transnational organizations.

In Chapter 7, Jaume Castan Pinos thus focuses on the often neglected connection between terrorist organizations and territory. The chapter challenges the notion of post-territorial terrorism, claiming that territoriality plays a pivotal role even for those organizations considered as de-territorialized networks, such as

Al Qaeda. To shed light on the complex connections between terror and territory, the author first develops a model that differentiates between effective control and sovereignty over a territory. The chapter then analyzes some recent evolutions of the Islamic State in light of its territorial and statehood elements, focusing particularly on territory, population, governance and international legal recognition by states. The author argues that the Islamic State's strategy stems from a balanced approach that combines de-territorialized actions in the West with a territorial project that involves the creation and development of a territorial entity that resembles a state. Even if the Islamic State seems currently to be losing ground and is retreating from many areas in both Syria and Iraq, its determination to control territory and aim for statehood remains intact.

In Chapter 8, Bruce Whitehouse examines the 2012 takeover of northern Mali by a coalition of jihadi groups, including AQIM, Ansar Dine and the Movement for Oneness and Jihad (MUJAO) in West Africa, and secessionist rebels of the MNLA, which caught much of the world by surprise. The author shows that while armed jihadism has been present on Malian territory since the early 2000s, Malians have widely divergent views of these groups and the threat they pose to the Malian state. While members of Mali's political class consider separatists to be the main security threat, Western governments and specialists prioritize the fight against transnational Islamist organizations. To analyze this range of views and interpret what they suggest about the place of armed jihadism in Malian society, the author examines social surveys and media discourse since the onset of Mali's present crisis.

The concluding chapter by William Miles reviews the previous chapters by putting their conceptual foci into historical and spatial context. Specifically, he examines past waves of violent Islamism (jihad) in Africa in terms of their implications for space (qua borders) and networks (qua jihadists). Both prior to and coterminous with (early) colonialization, several movements in Muslim Africa that today we would characterize as "extremist" and "transnational" organized and acted to destroy established political systems and remodel them according to Islam. These jihads "by the sword" succeeded, at least to some extent and for some time, either by forming or tapping into (often trans-ethnic) networks of religious radicals. They also exploited the ungoverned frontiers and borderlands on the margins of the empires that they targeted. Two noteworthy such jihads were those of the millenarian Mahdi in East Africa and Usman Dan Fodio in the west. The former was quashed by colonial military forces; the caliphate of the latter was incorporated into colonially re-bordered polities. By the time the Organization of African Union (OAU) embedded in its founding charter the principle of inviolability of inherited colonial borders, memories of these earlier jihads had recessed from the memories of Africa's new ruling élites. OAU framers feared territorial expansiveness by potentially aggressive states and ethnic irredentists: the last thing they anticipated was threats to sovereignty by organized and transnational religious extremists. Miles argues that what we are now experiencing is a resurgence of earlier jihadism, explicitly invoked by contemporary jihadists but usually ignored by counter-terrorism analysts.

Analytical tools for forecasting jihadist attacks should be complemented by geo-historical contextualization of their origins. He concludes with a tough question: Are African border disorders temporary and repairable, or do they portend a return to "an earlier norm of undefined boundaries, contested frontiers, and fluid sovereign space"?

In sum, the book explores the complex relationships that bind states, trans-national rebels and extremist organizations, and borders on the all-too-troubled African continent. Both the new tools of network science and the more familiar ones of geopolitical analysis presented herein afford the reader a combination of methods to address the disorders afflicting so many African borderlands. It is in the hope that policy-makers will use these tools wisely that we offer the book to them and all others concerned with the future of this precariously partitioned portion of our shared world.

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Part I

Social networks and spatial patterns

1 Spatializing the social networks of the First Congo War

Steven M. Radil

Introduction

In late October 1996, the forces of the rebellious Alliance of Democratic Forces for the Liberation of Congo (ADFL) began the military campaign that would ultimately lead to the end of the Zairian state, now called the Democratic Republic of the Congo (DRC), in the following year. The emergence of the ADFL and the collapse of Zaire also marked the beginning of nearly two decades of internationalized civil war centered on the eastern DRC. The conflicts, which have been grouped together into the First Congo War (1996–1997) and the Second Congo War (1998–2003) respectively, have been described collectively as the deadliest and most destructive armed conflict in the international system since the Second World War (Coghlan et al. 2007). However, the processes by which the events escalated from a political crisis over control of the Zairian state in 1996 into what Prunier (2009) has called a "continental catastrophe" remain incompletely understood.

Prunier's use of the word "continental" highlights the vast geographical reach of the wars. For example, less than a month after the emergence of the ADFL, the governments of nine states in the region were at war either with each other, with some of the myriad armed non-state groups that were active at the time, or both. Nonetheless, the Congo wars have received relatively little attention from scholars of political violence and nearly no attention within geography (notable recent exceptions include Raeymaekers (2013), Radil and Flint (2013), Vlassenroot (2013) and Doevenspeck (2016)). While the relative lack of expertise in African politics among the Anglophone war studies community may partially explain this oversight (see Radil and Flint 2015), the case of the Congo wars offers a unique opportunity to better understand the processes associated with war diffusion, or the expansion of war within a particular geographic setting or regional context. Although diffusion is generally considered the spread of something over time, it is also an expressly geographic phenomenon, since something that spreads over time also involves the spatial expansion of the same (Gould 1969). Therefore, understanding the spread of war necessarily requires a geographic perspective.

The need to understand how and why some wars, such as the Congo wars, diffuse and expand geographically is a pressing one given the persistence of war

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in the international system. For instance, the involvement of dozens of non-state armed groups and of multiple states in the ongoing civil wars in Syria and Iraq are evocative of the circumstances of the Congo wars; a contest over control of a state that then spirals beyond the boundaries of that state into a regional quagmire that takes decades to resolve. Such wars with their morass of participants and large regional footprints have been labeled a "proto-world war" (Peçanha et al. 2015) or a war with the potential to grow in scope, to draw in new participants, and perhaps to encompass most of the major political actors of the time. As such, the idea of a proto-world war is an implicit reference to the notion of war diffusion.

Taken together, the Congo wars are an important set of cases for the investigation of war diffusion, as they clearly expanded from a "proto-regional war" to an actual regional war. This chapter then considers the issues connected with investigating war diffusion in such a context by drawing upon the author's previous work on war diffusion in general (Radil et al. 2013) and the Congo wars in particular (Radil and Flint 2013). This investigation is also grounded in the author's Spatializing Social Networks (SSN) framework (Radil et al. 2010) which uses the concepts and techniques of social network analysis (SNA) to integrate geographic and political data into a single relational analysis. Although much of the SSN approach has been descriptive in nature to date (see Flint et al. (2009) for a discussion of the general approach), this chapter uses data from the First Congo War to develop a network-based statistical model called an Exponential Random Graph Model (ERGM) to consider the geographical and political drivers of the war.

War diffusion and the SSN framework

Geographical approaches to the concept of diffusion have rested on two basic observations: that human activities take place in both time and space, and that social processes underlie the realization of any empirical diffusion patterns, whether temporal or spatial (Morrill et al. 1988). The first observation leads to a concern for change or dynamism by geographers; the second to a concern for understanding the processes that produce such change (O'Sullivan and Unwin 2010). These observations also serve to locate geographical diffusion studies within the spatial analysis tradition in human geography (O'Loughlin 2000), emphasizing the use of mapping and explicitly spatial statistical analyses to aid in the understanding of the diffusion of a great variety of topics. For example, the geographical diffusion studies have ranged from the spread of technology (Hägerstrand 1967), democracy (O'Loughlin et al. 1998), public policies (Lutz 1986) and crime (Cohen and Tita 1999).

The idea of diffusion is an old one within geography. However, Gould's (1969) treatise on spatial diffusion remains the definitive work within the field (see also Hägerstrand 1967). At the most basic, the key points made by Gould are that any diffusion process consists of interactions between "carriers" and "barriers," each of which has a geographical expression. The first idea, that of

carriers, refers to the means by which something moves over the physical landscape and throughout a social system; different means of movement will lead to different spatial typologies of diffusion. For example, a process by which a message is shared by people with their immediate geographic neighbors leads to what Gould (1969) called expansion diffusion – a diffusion process that cascades through geographic space from its origin. Other variations on this theme are possible, such as hierarchical diffusion, where something begins at one location in a hierarchy and then moves to subsequent levels rather than simply moving to the nearest location. Without regard to the full set of diffusion forms identified by Gould (1969), the emphasis on carriers is important, since it draws attention to the relative locations of a set of actors involved in the diffusion process.

The second term, barriers, refers to the set of social, political, economic, cultural or physical geographic features in a given area (or within a given system) that may facilitate, speed up, slow down, or perhaps stop altogether the diffusion process. These may be things such as a language difference between two ethnic groups, a political boundary that limits movement or a transportation corridor that enables movement. Taken together, the set of barriers will profoundly shape the direction and speed of a diffusion process which draws attention to the relative structures that impact a set of actors involved in the process. While the term "barrier" suggests features that limit movement, it also captures the notion that some geographic arrangements facilitate movement. This is most clearly seen using an example of a transportation or social network that connects certain locations in particular ways. A network of connected locations would then serve to shape the spread of the process throughout a study area (e.g., Cerina et al. 2014).

The combination of carriers and barriers may be used to estimate the traditional S-shaped diffusion curve. As seen in Figure 1.1, a curve that represents the cumulative number of "adopters" of an innovation is also analogous to how a diffusion process may expect to play out over a geographical area. As time

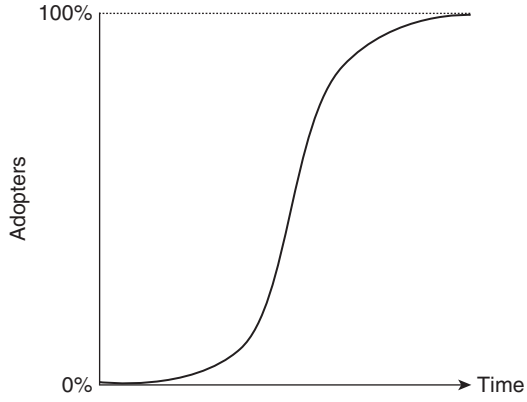

Figure 1.1 The classic "S-curve" of a diffusion process.
Source: adapted from Gould (1969).

progresses along the x axis of the curve, relatively few people or locations are affected by the process. However, at some inflection point the pace of the process increases and many more people or locations are impacted in a relatively short period of time which is followed by another inflection point as the number of unaffected potential people or places is exhausted. The geography of the "carriers" and of the "barriers" to the diffusion process will go a long way in determining the inflection points and the slope of the middle part of the curve. In this sense, the shape of the diffusion curve is contingent upon the setting and context of the case under investigation and no two cases should be expected to produce identical curves.

These ideas about the geography of diffusion have been used by scholars interested in how war spreads throughout a political system, such as a particular geographic region or the entire international system. Most and Starr (1980) initially drew on the idea of war as "contagious" for their early work on war diffusion. Although they adapted and relabeled Gould's (1969) twin notions of "carriers" and "barriers" into what they called "opportunity" and "willingness," the basic premise was the same: within a system of interconnected political actors, the political actors (carriers) spread war based on their willingness to participate in a conflict but had to navigate the social and geographic limitations (barriers) that shaped their opportunities to do so. In their work, barriers were operationalized as shared international political boundaries which provided an opportunity for war to occur within the geography of modern territorial states.

Although this approach to political boundaries as barriers has been critiqued by geographers (Flint 2012) as taking the existence of boundaries for granted and overlooking how boundary functions change over time, it has also remained a hallmark of subsequent investigations of war diffusion in the international system. For example, Salehyan and Gleditsch (2006) identified the movement of refugees (carriers) across international boundaries (barriers) as key to understanding the spread of civil war in Africa. The presence of boundaries in such studies is reflected in the salience of territorially sovereign states in their frameworks but boundary effects have yet to be fully incorporated into diffusion studies of "new wars" that involve diverse sets of actors beyond just the regular uniformed militaries of states, including gangs, private security contractors, paramilitaries, militias, etc. (Kaldor 1999, 2013), and particularly where conflicts extend beyond the boundaries of states (although see Salehyan (2009) for an effort toward such integration).

Where war diffusion effects have been studied apart from examples of interstate war, the territorial logics of the modern state have limited the interest in boundaries. For example, Schutte and Weidmann (2011) modeled the spread of civil war violence within the territory of a set of individual states but each state was treated as an independent unit and disconnected one from another. While the notion of barriers/opportunities was implemented in this study using a simple distance measure (a common technique to include "geography" in war studies: see Buhaug and Lujala 2005; Flint 2012), this approach imagines international boundaries as an impermeable barrier to the diffusion process and the

international system as a series of separate discontinuous political spaces. Applying such a concept of geography to the Congo wars would be an absolute disconnect from the reality of the wars where armed groups and state forces crossed boundaries frequently and with relative ease (see Prunier 2009; Reyntjens 2009).

More recently, geographers have advanced a new approach toward contextualizing the processes of war diffusion that has drawn upon the techniques of SNA. SNA is a helpful framework for the problem of war diffusion, as network concepts have a long history in geography (many spatial techniques are based on imagining space as a series of nodes that are connected to their geographic neighbors; see Radil et al. 2010). In addition, since networks comprise a defined series of nodes and the relationships that link them together, a network may be considered a type of system within which agency is situated. This perspective is helpful, as any network may be analyzed at the level of individual nodes (actors), actor pairs (dyads), actor trios (triads), larger actor groups (clusters), or the entire system (the whole network itself). This lends itself to the generation of measurements of the entire system itself or of the relationship of an actor/set of actors to the entire system.

Flint et al. (2009) used SNA to formalize the concept of geographic and political embeddedness of actors within sets of political relationships to generate more sophisticated measures of context to explore the spread of war. Building on these efforts, Radil et al. (2010) demonstrated that the territorial claims of competing groups may be understood and modeled as a network using shared boundaries to define links across geographic space. This move allowed the introduction of territorial geographic networks alongside other types of political, economic, cultural or social relationships for social network analysis. The authors called their approach toward integrating geography with other relational data Spatializing Social Networks (or SSN) and this has since been used to investigate not just war diffusion (Radil and Flint 2013; Chi et al. 2013), but is also applied to topics as diverse as urban crime (Tita and Radil 2011), public health issues (Perez-Heydrich et al. 2013), economic trade (Walther 2015), residential patterns (Verdery et al. 2012) and rural agriculture cooperatives (Abizaid et al. 2015).

Cases of war diffusion like the Congo wars are ideal for the SSN framework because of the territorial ambitions of states (controlling their territory) and of many non-state groups (controlling territory within states for bases of operation or seizing control of the state itself). By basing the creation of a geographical network in territorial units, such as states, SSN can incorporate political boundaries while also considering the forms of the political networks within which decision-making is situated for the study of war diffusion. For example, Chi et al. (2013) and Radil et al. (2013) demonstrated how different measures of network similarity across a set of a variety of geographic and political relationships correlated with moments of expansion during the First World War. Although these papers considered different measures, both demonstrated the salience of complex measures of setting or context to highlight the ability to move past simple notions of shared boundaries to operationalize the barriers/opportunity concepts. Radil and Flint (2013) also explored how network density

measures, which capture the observed amount of war relative to its maximum extent within a network of actors, changed during a wave of war diffusion following the collapse of the Zairian state.

Toward integrating boundaries into war diffusion studies

This chapter builds on these dual efforts – the incorporation of boundaries as an important geographic feature for understanding war diffusion and using spatialized social networks to incorporate nuanced measures of geographic context – to suggest a new framework for modeling the diffusion of contemporary war. This involves several important steps. First, the international system is assumed to be an interconnected network of state and non-state actors, each of which is embedded within the territorial logic of the modern state and within specific geographical and historical contexts. Second, the spread of war in such a territorial system involves the decisions of both state and non-state actors; any efforts to understand war that excludes one type of actor will be insufficient (see also Williams 2016). Third, the spread of war in such a system is shaped by the decisions of these actors within the territorial logic of modern states, particularly the landscape of boundaries that direct and shape political activities. Fourth, the contextual situation of any given actor is a function of the relationships between this actor and others in the system, which may be modeled and measured using the tools of SNA.

Following Kaldor (1999) and Flint (2012), the geopolitical system within which war occurs is made up of a system of territorial states which are also actors and a varying constellation of non-state actors that are always located within state spaces. From this understanding, the geography of a war system may be considered to be made up of a series of separate territorial spaces and could be analyzed within the space of a single state or across a series of states. This chapter is primarily interested in the latter but recognizes that the ideas and arguments used to develop the framework here may be different when considering the former. With this in mind, the diffusion of war may be considered as involving both the enlargement of the number of participants in a war and/or the expansion of the territorial state spaces directly impacted by the conflict.

With such assumptions in place, how might the spread of war in this type of system occur? In a network sense, the spread of war involves the creation of a negative political relationship between a pair of actors; relying on the language of SNA, this may be called a war "tie" that connects two actors. Returning to the war diffusion literature, the creation of any new war tie within the system is likely to be impacted by the geographic proximity between actors, the cross-boundary mobility of some actors, or the presence of an actor on both sides of a political boundary. These factors may be captured as networks that formalize the spatial connections between actors within the regional system; following previous work, this typically involves other direct political and economic relationships, such as treaties and trade, as well as the configuration of the boundaries that shape the creation and functioning of such relationships (Flint et al. 2009). In sum, these networks may be thought of as the basic elements of the barriers/opportunities for an actor to engage

in war with others. Of course, details about individual actors (or actor "attributes") will matter as well, such as variability in the material capability to prosecute a war (manpower, arms, etc.). These factors may be considered as actor-level versions of the notion of possible barriers/opportunities for war.

However, once one moves beyond the consideration of individual actors or even pairs of actors (or "dyads"), what are the properties of the entire system under investigation that may impact the development of a war tie? This question refers to the notion within the SNA literature that the formation of a relationship or tie (e.g., war) is not just a function of the attributes of the involved actors of other types of existing relationships; it is also a partial function of non-local properties that may only be observed and measured at the level of the entire network (Harris 2014). For example, the notion of transitivity refers to the potential for a pair of actors that share a tie with a third additional actor to form a tie among themselves and is connected to the observation that ties tend to cluster together in subparts of many social networks (see Everett and Borgatti 2014). Put another way, transitivity is an example of a non-local (or non-dyadic) influence on tie formation, since the development of a new tie between a pair of actors depends partly on the presence or absence of ties to actors elsewhere in the system (Figure 1.2). Transitivity and other system-level properties of social networks may be measured and should be accounted for in any statistical modeling framework to accommodate any non-local influences on tie formation.

The remainder of this chapter deals with the implementation of these ideas on information about the First Congo War by using data drawn from Radil and Flint (2013). In the following section a war network from one year of the wars (1997) is used along with other spatial and political relationships to develop a statistical model to assess the impacts of these factors on the development of war in a regional system of actors. The general details of the model are presented in the next section followed by an implementation using the First Congo War data.

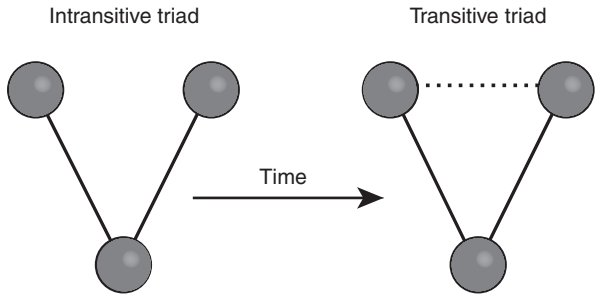

Figure 1.2 Transitivity in a social network.

Source: author.

Note
Transitivity refers to the potential for a new tie to form between a pair of actors if they are previously tied to the same other actor.

Exponential Random Graph Models (ERGMs)

ERGMs are a family of statistical models developed to accommodate the inherent non-independence of network data and reflect an approach that goes beyond the descriptive methods that are conventionally used in social network analysis (Morris et al. 2008). Helpfully, ERGM results may be interpreted in ways that are similar to logistic regression; the coefficients of an ERGM are the log of odds ratios that are meant to capture the probability of a tie forming between a pair of actors with a larger network. More precisely, an ERGM is a tool for identifying how the characteristics of the members of a network and "larger social forces can explain or predict the observed pattern of relationships" (Harris 2014: 5). ERGMs represent a shift away from an overreliance on network visualization and descriptive statistics and are a meaningful improvement on rather limited statistical network models that emphasize either actor characteristics or ties between actors, but not both (van Duijn and Huisman 2011).

ERGMs are similar to certain tie-focused network models, such as the Multiple Regression Quadratic Assignment Procedure (MR-QAP), since both can accommodate whole network data (some network statistical models are focused on a single actor's (or "ego" in network jargon) relationships with a group of other actors called alters; these models are typically referred to as egocentric models). However, ERGMs differ in that they can also accommodate actor attributes (which MR-QAP cannot) while they are also concerned with characteristics of the entire network (unlike egocentric models). ERGMs are a relatively new statistical technique and work well with binary networks where a link is either present or absent but efforts are underway to extend the current estimation procedure to valued networks (Krivitsky 2012). ERGMs have begun to be used to explore issues of contemporary political violence (Asal et al. 2016) which is a dramatic departure from conventional econometric approaches that assess relationships between variables rather than between actors themselves (see Cunningham et al. (2012) for such an example).

Estimating the likelihood of a tie between a pair of actors in a random network, where the probability of a tie between a given pair of actors is the same as for any other tie in the network, is relatively simple. The probability of a tie occurring under these conditions is the same as calculating the proportion of observed ties to all total possible ties; this ratio is the same as the descriptive measure of network density. However, actual social networks have structural features that differ from the assumptions of random networks (Harris 2014). First, not all network actors have the same propensity to form ties and some actors will have many more ties than others (this is a network property called non-uniform degree distribution). Second, actors with similar characteristics form ties more often than those that do not (this is the network property called homophily). Third, among a trio of actors, links tend to either form among all three or not at all (this is the network property called transitivity). In each case, the probability of tie formation is not independent of other ties, but is conditionally dependent on ties with others (whether directly connected to a focal actor or

not). ERGMs have the capability of accounting for such complex dependencies in the estimation process.

Although the estimation process is mathematically complex and may be computationally extensive, the general form of the model is quite simple. An observed network that consists of a set of actors on a single type of tie between them is the "variable" to be explained (the network itself is analogous to the dependent variable in a traditional regression format) and a number of explanatory variables may be included to predict the probability of an additional tie forming in the original network (the "dependent" variable). In network terms, node-level and dyad-level variables can both be accommodated and evaluated against the probability of a tie formation. Further, network models can accommodate the location information of actors in physical space when this information is organized in network form (as is common in spatial regression models). In this way the spatial structure recognized by traditional spatial analytic approaches requires little to no translation (see Radil et al. (2010) for a discussion of the common bonds between spatial analysis and network analysis).

The case of the First Congo War

The use of an ERGM model is demonstrated here with information about the First Congo War during 1997, the earliest stages of the larger protracted set of wars. This is a meaningful case to consider for several reasons. First, the war involved political conflicts at different scales, including below the scale of the state (e.g., Hutu extremist groups in eastern DRC or the ADFL) and between states within the region (e.g., Rwandan and Ugandan forces battling the Zairian military as part of the ADFL "rebellion"). Second, the war is a recent example of war diffusion, or the escalation of a conflict within the boundaries of a single state to a regional conflict that spilled beyond the territory of the first state involved. Third, it is an obvious case of Kaldor's "new war" owing to the importance of non-state actors to the initiation and expansion of the conflict. Fourth and finally, the basic facts of the war have already been established, such as the participants, their relationships, and their reasons for participating (e.g., Prunier 2009; Reyntjens 2009), without having already been extensively studied within the war studies literature.

I begin by fitting a basic ERGM following Harris (2014) using the statnet package in R (Handcock et al. 2008). This basic model only predicts the probability of an additional conflict tie occurring within a network based on the observed number of conflict ties (see Table 1.4). This base probability is also the same as the network density (or the ratio of the observed conflict ties to all possible conflict ties). In this case, a tie is the presence of war between two nodes in the network; each node represents either a country in the region (this includes ten states in all: the DRC and all its neighboring states) or a non-state group with the capacity to fight that is active within the territory of the set of countries. The set of states that comprised the geographic region of the study is presented in Figure 1.3.

Figure 1.3 African countries under consideration.

Source: author.

Note
The study comprises 10 states shown on the map and 19 armed non-state groups operating within the territory of these same states in 1997.

Following Radil and Flint (2013), wars in 1997 were coded simply as present (1) or absent (0) between two actors if a battle took place at any moment during that year. This yielded a network of 29 nodes (10 states, 19 non-state groups) and 33 cases of war. A visualization of the war network is presented in Figure 1.4 which highlights that while there are relatively few cases of war against all the possible cases, war is also clustered in the network, with just a few nodes possessing many links to others. Although all but two of the 29 actors fight sometime during this period, the war is essentially concentrated within two subparts of the network: a smaller set of overlapping conflicts in western Zaire involving issues with (1) Angola's fight against UNITA rebels, control over Cabinda and rebellion in the Republic of the Congo; and (2) a much larger set of conflicts within eastern Zaire involving several rebel

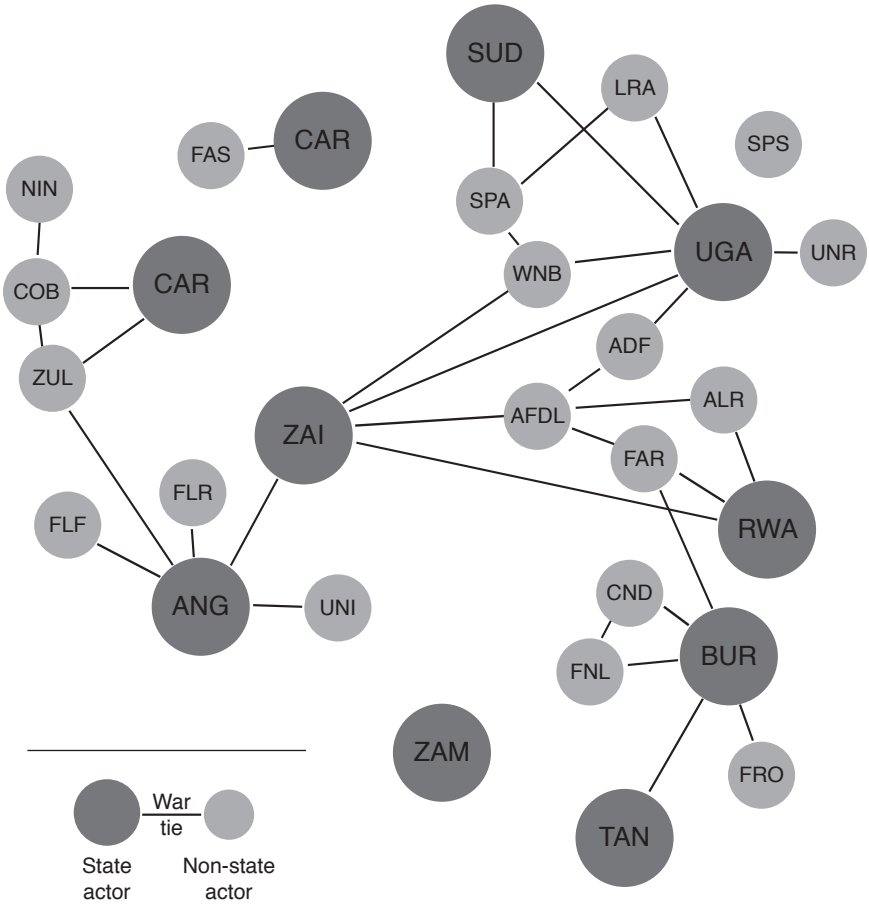

Figure 1.4 The war network in 1997.

Source: author.

Note
States in dark gray, non-state actors in light gray. The actors included in the study and the abbreviations used in the network diagram are: ADF: Allied Democratic Forces; AFDL: Alliance of Democratic Forces for the Liberation of Congo; ALR: Army for the Liberation of Rwanda; ANG: Angola; BUR: Burundi; CAR: Central African Republic; CND: National Council for the Defense of Democracy; COB: Cobra militia; CON: Congo (Brazzaville); FAR: Ex-armed forces of Rwanda/Interahamwe militias; FAS: Forces of Anicet Saulet; FLF: Front for the Liberation of the Enclave of Cabinda; FLR: Front for the Liberation of the Enclave of Cabinda-Renewal; FNL: National Forces of Liberation; FRO: National Liberation Front; LRA: Lord's Resistance Army; NIN: Ninja militia; RWA: Rwanda; SPA: Sudan People's Liberation Army; SPS: South Sudan Defense Forces; SUD: Sudan; TAN: Tanzania; UGA: Uganda; UNI: National Union for the Total Independence of Angola; UNR: Uganda National Rescue Front II; WNB: West Nile Bank Front; ZAI: Zaire; ZAM: Zambia; ZUL: Zulu militia. The data used for this chapter may be downloaded at http://bit.ly/2hlXO7g.

groups from neighboring states. Nonetheless, the overall network density is 0.081 which reflects that just over 8 percent of the possible total number of war ties are present.

The propensity for a few nodes to have a high number of tie and many nodes to have few or no ties is a common observation in many types of social networks (Harris 2014). This propensity is also clearly observed in the war network. The concept of network degree is an actor-level measure of the number of links per node; the average degree in this network is 2.28 which means that any given actor is at war with an average of two other actors in 1997. Uneven tie formation may also be seen by comparing the degree distribution of the actual war network to the degree distribution of a simulated war network that has the same number of actors and the same density. The actual war network is to the left and the simulated network is to the right, as shown in Figure 1.5. Degree distribution reflects the underlying tie formation process which this comparison suggests is complex, and a reasonable ERGM model must account for this type of outcome. A geographic interpretation of this propensity to uneven degree distribution could be to consider how actors are situated within particular places and how place-specific attributes may then impact tie formation.

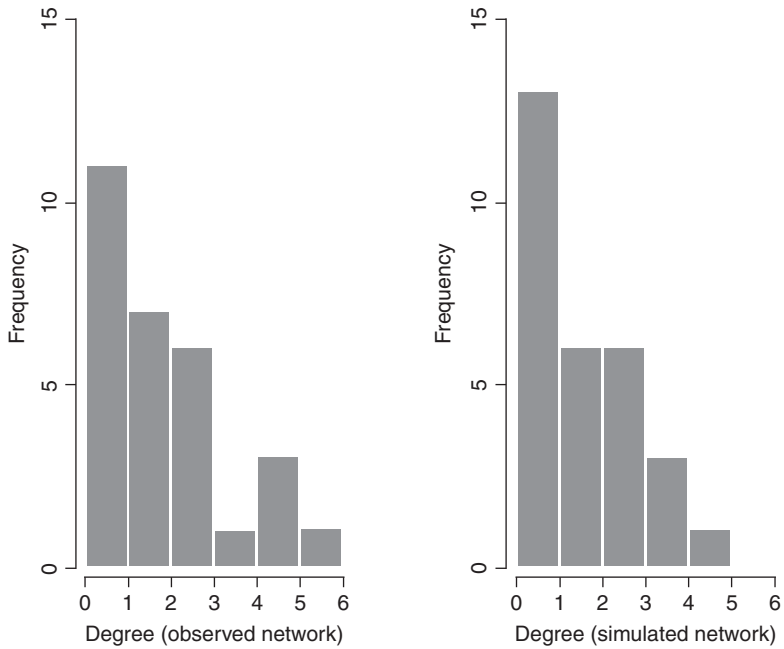

Figure 1.5 Degree distribution of the actual war network (left) and a simulated network (right).

Source: author.

Actor attributes

Explanation of the patterns of tie formation may also involve exploring actor-level attributes. For instance, actors were coded as either states (S) or non-state groups (N) and the patterns of tie distribution were then compared against these categories. As seen in Table 1.1, most war ties (20 out of 33, or 61 percent) were observed between states and non-state groups. The remaining war ties were observed as occurring between non-state groups (8 ties, 24 percent) and between states (5 ties, 15 percent). These results reflect the notion that most of these non-state groups operating in the region at the time of the First Congo War existed for the sole purpose of either challenging or seizing control of the state (Radil and Flint 2013). This observation also reflects both the zero-sum territorial logic of the modern state where governments are presumed to exercise absolute sovereignty within their boundaries (Agnew 2005) and the reality of certain postcolonial African states that have struggled to realize this condition following independence (Clapham et al. 2006). However, by considering the observed wars as a percentage of all possible wars between the two types of actors, the salience of the wars between states in the network becomes clearer. As shown in Table 1.1, the observed percentage of state–state war ties is over 11 percent, or nearly three times as large as the associated percentage of non-state–non-state ties or of non-state–state ties. Capturing the importance of the state to the propensity for war to occur is another important need for a meaningful ERGM.

With these ideas in mind, the base ERMG only estimates the probability of another war tie forming in the observed 1997 war network. The following equation describes this model:

$$logit\left(P(Y_{ij}=1 \mid \text{n actors}, Y_{ij}^{c})\right)=\theta_{edges}\delta_{edges} \tag{1.1}$$

where θ_{edges} is the coefficient of the "edges" term (equivalent to the war ties) and δ_{edges} is a change term that represents the addition of one additional tie between any pair of actors. Estimating this model in R using the statnet package returns the coefficient of the edges term and other information used in model assessment which includes various goodness-of-fit measures. Because the change term is based on the increase of a single link in the war network, the change term is set

Table 1.1 A matrix of war ties relative to actor types (non-state groups and states)

War pairs by actor types	*Number of war ties*	*Percentage out of total war ties*	*Percentage out of maximum possible*
Non-state vs. non-state	8	24	3.2
Non-state vs. state	20	61	3.8
State vs. state	5	15	11.1

Note
Most wars were observed as occurring between states and non-state groups.

at 1 when a link is added (this means that the edges coefficient is always multiplied by one). The coefficient then returns the log of the odds ratio that represents the probability of one additional war tie (edge) forming in the network. In the base model, the log odds for the edges term is –2.43. Applying the following logistic function $\frac{1}{1+e^{-(\theta_{edges})}}$ to this term calculates an actual probability of 0.081 (8.1 percent) of an additional war forming in this network. Using only the edges term, this model does not consider any tie formation propensities previously discussed (uneven degree distribution or wars clustering between states and non-state groups) but does provide a good representation of the observed density of the war network at the time. The main purpose of developing such a simple model is that it may be used as a baseline for assessing model performance and goodness-of-fit to the observed network as more complex terms are introduced (Harris 2014).

As mentioned above, actor- or node-level attributes may also be incorporated into the model to assess compositional effects on tie formation. Although these attributes can be either categorical or continuous variables, in this example attribute information is included in the ERGM using the state or non-state categorical variable described above. This variable is included in the model using the nodefactor term as follows:

$$logit\left(P(Y_{ij}=1 \mid \text{n actors}, Y_{ij}^{c})\right) = \theta_{edges}\delta_{edges} + \theta_{nodefactor}\delta_{nodefactor} \tag{1.2}$$

where the new change statistic ($\delta_{nodefactor}$) is multiplied by the coefficient ($\theta_{nodefactor}$) just as with the edges term. However, the way in which the calculation proceeds is slightly different from the edges term. If neither node in a dyad matches the selected categorical attribute (in this case it was set for S, meaning non-state groups), the multiplier is 0. If only one node in a given pair matches the attribute, the multiplier is 1. If both nodes match, it is 2.

Using the coefficients from the model illustrates the point. Although the baseline probability of war occurring between any two actors in the network is 8.1 percent, the attribute model results may be used to evaluate the potential for war forming between two specific actors. For example, the probability of a war forming between Rwanda and Zaire (both states, or S) would be calculated using the following formula:

$$P(Y_{ij}=1 \mid \text{n actors}, Y_{ij}^{c})) = logistic\left(\theta_{edges}\delta_{edges} + \theta_{nodefactor}\delta_{nodefactor}\right) \tag{1.3}$$

Substituting the coefficients from Table 1.4 with the correct change statistics gives:

$$P(Y_{RwandaZaire}=1) = logistic\left(-2.8389 + 2(0.5254)\right)$$
$$P(Y_{RwandaZaire}=1) = logistic\left(-1.7881\right)$$
$$P(Y_{RwandaZaire}=1) = 0.1433$$

This probability is higher than both the base model probability (8.1 percent) and the relative frequency of war between states (11.1 percent); in this regional network, actor attributes are clearly important to tie formation and contribute to the increased likelihood of war.

Dyadic relationships

Because an ERGM estimates the probability of tie formation, it is necessarily a dyadic model at its core. This means that explanatory variables are always considered at the level of dyads rather than at individual actor levels. As already discussed, actor-level attributes may be included but the change statistic multiplier is calculated based on dyad pair configurations for categorical variables (and on summed values for a continuous variables). ERGMs can also accommodate edge covariates in addition to actor attributes. As a practical matter, this means that one type of relationship may be used to assess the probability of another forming. This is a critical capability of the model, as it allows the inclusion of dyadic relational covariates, and not just actor attribute covariates. Helpfully, it also accommodates the type of spatial connectivity information used by spatial regression models (such as a spatial neighbor list or adjacency matrix) without simply being limited to this type of application. To demonstrate this, two binary networks have been added to the ERGM in the form of matrices: a network of cooperation and alliances among the actors during 1996 (the year before the war network) and a network of territorial contiguity (also in 1996). These variables, called "nally" and "ncontig" respectively, are added to the model alongside the edge and nodefactor variables using the edgecov term.

The nally cooperation and alliance variable is a combination of two different types of information: formal state-to-state treaties as recorded by Leeds et al. (2002) and instances of material cooperation between states and non-state groups as recorded by the quarterly country reports produced by the *Economist Intelligence Unit* for 1996. Instances of either active treaties (between two states) or of reported cooperation (between states and non-state groups, or, less commonly, between pairs of non-state groups) resulted in a code of 1 for that year; absent that, dyads were coded as 0. The ncontig territorial contiguity variable is also a combination of different types of information. First, states were coded as either contiguous (1) or not (0) based on shared land boundaries. Non-state groups were coded as contiguous with the state in which they were based and with the state to which they were in opposition (as they were nearly always based near the boundaries of those states). Non-state groups that were active in the same area of a given state were also coded as contiguous with each other to capture the notion of geographic propinquity influencing the potential for interaction between such groups.

In the updated model, only the edges and contiguity variables are highly significant, which speaks to the strong role played by geography in the region in shaping the war network. All else held constant and in the presence of node-level attributes and dyad-level measures of cooperation, the likelihood of war

between two geographically contiguous actors is estimated to be nearly four times greater than actors not contiguous with each other (odds ratio of 3.89). This effect is much more important than actor type or cooperation. However, when all these variables are included and controlled for, the base probability of war between any two actors decreases by an order of magnitude from 8.1 percent in the base model to 0.09 percent in this model.

Model fit for ERGMs with node- and dyad-level covariates may be assessed through Log-Likelihood (LL), Akaike Information Criterion (AIC) or Bayesian Information Criterion (BIC) measures and each may be used to compare models such as those demonstrated above. AIC and BIC measures are reported in Table 1.4 (smaller values indicate better overall model fit; for details, see Harris 2014). A more meaningful way to assess fit is to examine how well the model captures important properties in the observed network. This may be done through model simulation which allows for the comparison of characteristics between the simulated and observed networks. Using the last ERGM as an example, the mean number of wars of 100 different simulated networks was 32.6 while the observed 1997 war network has 33 ties (Table 1.2). From this perspective, the ERGM is a good representation of the reality of the wars at the time.

However, pushing the comparison a little further reveals some important differences. Table 1.2 presents a comparison of how the war ties are distributed in the networks by identifying the number of actors with no ties, one tie, two ties, and so on. Doing this makes it easy to see an important difference between the simulated and observed networks. For example, the number of actors that do not fight (0 war ties) in the simulated networks is 6, or three times as many as in the observed network. This highlights that while the ERGM does a good job of representing the overall amount of war in the network, the way in which wars are distributed among the set of actors is different than in the observed network.

Complex dependencies

To account for the complexities of tie formation present in the observed network but missing from the ERGM-based simulation, other terms may be added to the

Table 1.2 Comparison of how the war ties are distributed in the networks

	War ties									
	Total	*Mean wars/actor*	*0*	*1*	*2*	*3*	*4*	*5*	*6*	*7*	*8*
Observed network	33	2.3	2	9	7	3	4	5	6	0	0
Simulated networks (n = 100)	32.6 (mean)	2.1	6	4	10	5	2	0	0	1	1

Note
The simulated war network does a good job of estimating the total amount of wars in the network but overestimates the number of actors that do not fight; it also overestimates the number of wars and spread of war throughout the network.

model. These terms, which are referred to as "dependence terms," attempt to account for properties like the uneven tie distribution described above. They require the use of a Markov Chain Monte Carlo (MCMC) parameter estimation algorithm to calculate an approximate log-likelihood. The basic process of the MCMC estimation is to begin by selecting one network from a set of all possible networks, changing a link, then comparing it to the original network to determine if it is a better fit (see Harris (2014) for more details on this procedure). Although the details of this process are beyond the scope of this chapter, it is important to note that the estimation process can exhibit problems with degeneracy, or the tendency of the MCMC simulated networks to be either nearly devoid or nearly full of ties. Harris (2014) describes several MCMC parameters and settings that may be adjusted if degeneracy is observed.

Several terms have been proposed and developed that are meant to allow for the assumption of partial conditional dependence, or the assumption that dependence between links that do not share a node in common may be due the presence of other links in the network (see Hunter and Handcock 2006). In other words, tie formation is not just a property of attributes or even of dyads. The presence or absence of a tie may be partially due to ties in other, perhaps distant parts of the network. This is analogous to the idea of large-scale structures that may be present within a place or region and it is an important advance in the ability to model context at various scales. Importantly, the effects of these structures can still be estimated as probabilities as the level of a dyad, as with the previous examples.

To demonstrate, an additional term was included in a final ERGM that was suggested by Hunter and Handcock (2006) to account for the decreasing degree distribution in observed networks ("gwdegree"). The term multiplies the frequency of each observed degree value by a weighting parameter and sums the values. The statistic is influenced by a user-selected weighting parameter called α which may be specified in advance or estimated through the modeling process. The best specification or estimation of α is currently a source of debate in the ERGM literature but, in the model below, the best values for α are estimated as a part of the MCMC simulation. Because this is a simulation-based estimation, it would be important to specify the starting point to allow comparisons of competing models with such dependency terms. Problems with degeneracy may require adjustments to the default MCMC process, such as making the MCMC simulation longer than the default.

Table 1.4 summarizes the results of the various ERGMs, including one that used the gwdegree term with $\alpha = 1$. This particular model provided a better estimate of degree distribution than did the previous models. Simulating a war network using the probabilities estimated by the final ERGM provides some insight. This final simulated war network had 31 wars in the system (compared to 33 in the observed network) and degree counts that were far more similar to those in the observed network (see Table 1.3). In addition, this simulation had nearly the same number of isolates (where degree = 0) and a similar overall degree distribution to the observed war network. This is a sign that some of the

Table 1.3 Observed and simulated network

	War ties							
	Total	*0*	*1*	*2*	*3*	*4*	*5*	*6*
Observed network	33	2	9	7	3	4	5	6
Final simulated network (n = 100)	29	3	7	4	4	6	4	1

Note
A final simulated war network with dependency terms slightly underestimates the amount of wars in the network but does a better job than the previous simulation (Table 1.2) in matching the overall degree distribution to the observed network. The addition of the dependency terms to the final ERGM model accounts for this improvement.

Table 1.4 Comparisons between the four models

	Long odds estimate (standard error)			
	Base model	*Actor attribute model*	*Relational model*	*Dependency model*
Edges (constant)	–2.43 (0.18)*	–2.84 (0.30)*	–4.72 (0.61)*	–4.54 (0.31)*
Actor attributes				
States (S)		0.54 (0.27)*	0.15 (0.29)	0.25 (0.35)
Dyadic relations				
Ally/cooperation			–0.66 (0.70)	–0.72 (0.72)
Territorial contiguity			3.90 (0.63)*	3.95 (0.64)*
Dependency term				
GWD (degree)				0.65 (0.80)
AIC	230.9	229.0	159.2	160.4
BIC	234.9	237.1	175.2	180.4

Note
Model fit slightly decreased for the final model as indicated by the AIC and BIC value but this model was a better fit for the observed degree distribution in the observed war network. * = p-value < 0.01.

higher order dependencies present in such complex systems can be captured by these models. Although not demonstrated here, other dependency terms may be added to capture more localized effects of tie formation, such as triadic structures/transitivity. However, more dependency terms can dramatically increase the computational power and time needed to complete the MCMC simulation.

Conclusion

ERMGs represent an interesting opportunity for demonstrating how war can spread within a system of actors and throughout a geographic region, particularly through the ability to incorporate complex dependencies within such a regional system. The key assumption for such models is that certain properties of the system impact the exercise of agency, even if the properties cannot be

observed or identified on single actors alone or even between pairs of actors. In a particular sense, these then are emergent properties that may only be observed at the level of an entire system (Borgatti et al. 2009), such as the uneven degree distribution among a network of actors engaged in a "new war" in the Congo.

This approach has meaningful parallels with discussions in political geography about the theoretical importance of context for political agency. To the extent that context has been operationalized for quantitative studies, it has been highly territorialized, fixing contextual effects only at a particular scale (one that is often preselected by the analyst). While this is an improvement over efforts to either ignore context altogether or at least constrain it to micro-scale effects, context is formed through acts of agency at numerous spatial and social scales. Because ERGMs can accept information about actors, their relationships (spatial and social), and the larger structural features that are not observable at any specific actor or dyad, they represent a hopeful modeling pathway for those interested in more engagement with social theory and in engagements with a wider spectrum of the theories of how and why context matters.

However, not all wars are the same, which should raise questions about which structural properties are salient for certain types of war. In the case of a regional civil war like the Congo wars, the territorial dimensions of the conflict made boundaries an important spatial feature. The cross-boundary nature of the conflict in turn made some actors more important than others (such as the Zairian state or the Hutu militias in the east). Both features were incorporated into the model but these were empirical observations rather than conditions that were theorized ahead of time. The need for greater theory development about the types of features and properties that will be important for other cases of cross-boundary war is a pressing one and should be a frontier for this type of research endeavor.

The models presented in this chapter are both initial efforts along this path and necessarily limited in ambition and scope. Much more work will be needed to theorize, replicate and extend them to other cases of war in Africa or elsewhere in the international system. Nonetheless, it is my hope that this first step illustrates that ERGMs can be very helpful tools in evaluating the effects of such complex dependencies on war formation and expansion, and further our collective ability to not only demonstrate contextual effects but to theorize what such effects may produce in terms of limiting or enabling the spread of war. In short, these types of questions, concerns and techniques can take us a step closer to incorporating the complexities of context and help make the case for how war diffusion works.

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2 Exploring the spatial and social networks of transnational rebellions in Africa

Daniel Cunningham, Sean F. Everton and Kristen Tsolis

Introduction

Dark networks may be defined as covert and illegal networks. The term is typically used to refer to nefarious groups such as terrorists (Cunningham et al. 2015), gangs (Bouchard and Konarski 2014), criminal organizations (Famis 2014), white-collar conspiracies (Faulkner and Cheney 2014), and so on. However, it can also refer to groups that most would consider "good," such as Żegota, the predominantly Roman Catholic resistance group that operated in German-occupied Poland from 1942 to 1945 (Tomaszewski and Webowski 1999); it was both covert and, at least from the perspective of the Nazis, illegal.

Although social network analysis (SNA) has been around since the early twentieth century, it is only in recent years that it has been used extensively to analyze dark networks (Milward and Raab 2006; Raab and Milward 2003). This is not to say that social scientists have not been interested in the nature of dark networks. For example, Georg Simmel (1950) explored their structure in his essay on secret societies, a study later expanded and modified by Bonnie Erickson (1981). These were followed by essays on the usefulness of using SNA to track criminal networks by Malcolm Sparrow (1991) and Peter Klerks (2001), and Wayne Baker and Richard Faulkner (1993) used it to examine three price-fixing conspiracy networks in the heavy electrical equipment industry. It has been since 9/11, however, that analysts have become increasingly drawn to the use of SNA as a tool for understanding dark networks, in large part due to Valdis Krebs's (2002) analysis of the 9/11 hijacker network (see, among others, Asal and Rethemeyer 2008; Bakker et al. 2011; Carley et al. 2002; Cunningham et al. 2015, 2016; Everton 2012; Everton and Cunningham 2015; Gerdes 2015; Magouirk et al. 2008; McCulloh and Carley 2011). For instance, Marc Sageman (2004) analyzed the network of 172 Islamic terrorist operatives affiliated with the global Salafi jihad; Ami Pedahzur and Arie Perliger (2006) examined the nature of suicide attack networks; Stuart Koschade (2006) explored those involved in the first Bali bombing, and Ron Breiger and his colleagues (Breiger et al. 2011, 2013) have developed unique SNA-related methods for examining terrorist groups.

As valuable as these studies have been, there is room for growth. In particular, we can broaden our understanding of dark networks by taking into

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account their geospatial dimensions. Analysts are increasingly recognizing that geographic space plays a fundamental role in the dynamics of dark networks (Bahgat and Medina 2013; Cutter et al. 2003; Flint 2003; Flint et al. 2009). Group conflict can often be traced to both spatial and social processes. Research has demonstrated that both overlapping geospatial areas (i.e., turf) and the pattern of ties between groups (i.e., social networks) can facilitate, as well as constrain, group conflict (Papachristos et al. 2013). Thus, we ignore the geospatial aspects of dark networks at our peril. As Kathleen Carley (2006: 3) has noted,

> If we look only at the social network then the focus of attention is on hierarchies, communication and other social relations. The addition of events and locations facilitates course of action analysis and enables linkage to various strategic planning tools.

Accordingly, analysts have begun to explore these interrelated but distinct mechanisms (Medina and Hepner 2008, 2011; Moon and Carley 2007; Moon et al. 2013; Walther and Leuprecht 2015), but only on a rare occasion have they simultaneously accounted for them. This gap reflects, in part, the fact that, until recently, social scientists have lacked the methodological tools needed in order to capture the dynamics of both mechanisms. This has changed, however, with the advent of Exponential Random Graph Models (ERGMs), also known as p* models (Harris 2014).

In this chapter, using data from the Armed Conflict Location and Event Dataset (ACLED), we draw upon these models, as well as other standard SNA metrics, in order to explore both the spatial and social network causes of violence between African rebel groups. In particular, our working hypothesis is that spatially proximate rebel groups – that is, those who share the same turf – are more likely to engage in dyadic violence than are those that are spatially distant, primarily because the former have more opportunities for contact. Apart from this basic hypothesis, our analysis is largely exploratory in nature with an eye toward teasing out patterns of rebel interaction that can inform strategies for their disruption. More precisely, we embed our analysis in a larger strategic framework, arguing that analysts can draw upon the methods used here in order to inform the crafting of strategies for reducing violence. It is important to stress that although the results of our analysis may only apply to the groups we examine here, our approach may be applied to most arenas in which dark networks operate.

The chapter begins with an overview of the strategic alternatives available to analysts. Unfortunately, the default strategy is often a coercive one aimed at eliminating highly central nodes; while this approach may prove valuable in some instances, often it does not. Here we offer several non-kinetic strategies that may prove to be just as useful. Following this overview, we describe the data and methods we utilize for our analysis. The ACLED database is our primary source of data; however, we had to draw upon other sources in order to

capture "turf" and other possibly important factors. This section is followed by our analysis, along with a discussion of the results in light of the strategic alternatives discussed earlier. We conclude with a few thoughts on the interplay of geospatial and social dimensions of dark networks and how these can affect the crafting of strategies to disrupt them.

Strategies for disrupting dark networks

Strategies for disrupting dark networks may be broken down into two analytically distinct but not necessarily mutually distinct approaches: kinetic and non-kinetic (Roberts and Everton 2011). Kinetic approaches involve aggressive measures that are designed to remove members from a network, while the latter involves the use of subtle, non-coercive means that are designed to undermine the network's effectiveness. Of the two, the former tends to attract headlines and generate popular support, but its results are often mixed (Flynn et al. 2010; Jordan 2009, 2014; Pape 2003). Long-term consequences often negate short-term gains (Cronin 2009). Of greater concern is that kinetic measures run the risk of harming innocent bystanders (Walzer 2004), which can often make matters worse (Byman 2006). As General Flynn and his co-authors (2010: 8) remarked in the much-publicized report, *Fixing Intel: A Blueprint for Making Intelligence Relevant in Afghanistan*, "lethal targeting alone will not help U.S. and Allied forces win in Afghanistan." In fact, "merely killing insurgents usually serves to multiply enemies rather than subtract them."

Non-kinetic approaches are more likely to avoid the loss of innocent life, but they tend to attract far less attention, partially because of their lack of newsworthiness, and partially because they often require subterfuge that media attention would compromise. Nevertheless, the former U.S. Special Operations Commander, Admiral Eric T. Olson, has attempted to shift the emphasis away from kinetic, high-profile raids and toward the use of more non-kinetic approaches. Acknowledging that in the short run kinetic action may be "urgent and necessary," he argues that it is merely "a holding action that buys time for non-kinetic approaches to have their effects" (quoted in Roberts and Everton 2011: 4).

Kinetic strategies

Kinetic operations target enemy combatants and their supporters with the goal of neutralizing, capturing or eliminating high-value targets. They generally involve the removal of key actors or the severing of ties between such actors. They are typically referred to as targeting strategies and may be pursued at various levels (e.g., individual, group, organizational). When the targets are individuals, such as the capture or elimination of Saddam Hussein, Abu Musab al-Zarqawi or Osama bin Laden, such operations are referred to as man-hunting (Marks et al. 2005). They are referred to as group or organizational targeting when the targets are groups or organizations, such as the round-up of specific groups fashioning Improvised Explosive Devices (IEDs) in Iraq (Peter 2008), the disruption of the

Syrian recruitment network bringing jihadists into Iraq (Felter and Fishman 2007), the shut-down of the financial network supporting the Indonesia-based Jemaah Islamiyah (JI) (Abuza 2003), and Malaysia's successful effort to close down Luqmanul Hakiem, a jihadist religious boarding-school (Rabasa 2005).

Non-kinetic strategies

At least five broad strategies are associated with the non-kinetic approach to disrupting dark networks: *tracking and monitoring, psychological operations, community building, information operations*, and *rehabilitating and reintegrating*. These may be used in conjunction with one another or with kinetic approaches.

Tracking and monitoring strategies build on John Arquilla's (2009) insight that sometimes the best strategy is to simply observe. Our information on a dark network is often incomplete, especially during the early stages of an investigation. Thus, rather than taking immediate action, it is often better initially to track and monitor key members (or at least those whom we believe are key members given our limited information) with the hope of improving what we know, which will improve the crafting of strategies later.

Psychological operations involve the strategic dissemination of information (and misinformation) for the purpose of influencing the emotions, perceptions, attitudes, objective reasoning, and ultimately the behavior of dark networks. Tactics such as these are also employed to counter adversary propaganda and to sow disaffection and mistrust among network members. *Community building* (aka *institution building*) typically involves the building of healthy host-government institutions involving governance, rule of law and economic development (Fridovich and Krawchuck 2007; Kilcullen 2009). They may also involve the construction or rehabilitation of institutions that address, either directly or indirectly, the (legitimate) grievances of the community or communities out of which a particular clandestine group has emerged. In the language of social network analysis, this approach seeks to isolate dark networks by severing (or at least weakening) the ties between them and the communities in which they are embedded (McCormick 2005; Wendt 2005).

Information operations are strategies used to attack, deceive, degrade and disrupt lines of a dark network's operational infrastructure. Examples include the disruption of fund transfers, compromising lines of communication, targeting key supply routes, and the detection of money laundering, black market activity and the drug trade. Social network analysis is well suited for crafting information operation strategies. By definition, it seeks to map the ties between actors through which material and nonmaterial goods pass.

Finally, *rehabilitation strategies* seek to reintegrate individuals back into civil society. In the fight against terrorism this often involves programs designed to deradicalize individuals, such as Singapore's counter-ideological program, founded by Muslim scholars who seek to "correct" the thinking of its detainees (Ramakrishna 2005, 2009). The program uses an unpaid, all-volunteer group of Islamic scholars who supplement their formal religious training with a year-long

course in counseling. It also extends its influence into the wider Muslim community by giving talks, disseminating publications and hosting a website. Similar rehabilitation programs have also been introduced in Indonesia, Saudi Arabia and Yemen.

In summary, there are two general approaches to countering terrorist networks: kinetic and non-kinetic. The former pursues aggressive measures designed to eliminate or capture network members and their supporters, while the latter uses non-coercive means to counter networks. It includes activities such as the rehabilitation and reintegration of dark network members back into civil society, misinformation campaigns designed to disrupt dark networks from within or tarnish their image from without, the disruption of a dark networks' operational infrastructure, community building, and efforts at and the tracking of certain members in order to improve knowledge and understanding of a network. All may be targeted at the level of individuals, groups and/or organizations. Table 2.1 provides a summary of these strategies. Of course, a single approach is seldom sufficient to disrupt a major network. It is not uncommon for multiple strategies to be adopted, some focused on the short term, some on the long term.

Data

The analysis relies primarily on data from the Armed Conflict Location and Event Dataset (ACLED), which provides a comprehensive list of political events in Africa by country from 1997 to 2014 (ACLED 2015; Raleigh and Dowd 2015). The dataset contains several types of violent events among rebel groups, political militias, protestors and civilians, among others. ACLED contains temporal data, including the dates on which events occurred, along with spatial data at various levels of analysis, such as at country, provincial and municipality levels. Each event entry also contains geo-coordinates, which facilitated the descriptive analysis of this chapter.

This chapter's purpose is to examine theories about the formation of negative or violent relationships among organizations, which are best represented by what ACLED refers to as "rebel groups," i.e.,

> [P]olitical organizations whose goal is to counter an established national governing regime by violent acts. Rebel groups have a stated political

Table 2.1 Strategic options for disrupting dark networks

	Kinetic	*Non-kinetic*				
Strategies	Targeting (kill, capture)	Track, monitor	Psychological operations	Community building	Information operations	Rehabilitation/ reintegration
Levels of analysis	Individual, group, organizational					

Source: adapted from Cunningham et al. (2016).

> agenda for national power (either through regime replacement or separatism), are acknowledged beyond the ranks of immediate members, and use violence as their primary means to pursue political goals.
>
> (Raleigh and Dowd 2015: 5)

Consequently, only violent events among rebel groups are included in this analysis. The authors recognize that this may exclude events in which rebel groups interact with other organizations, such as rioters. Those types of interactions should be examined in future research, but including them here would likely provide misleading results about the formation of negative ties among rebel groups. In terms of network data, two organizations are assumed to share a *violent* relationship if they fought on opposite sides of at least one event (i.e., they are not coded as allies). On the other hand, two organizations are considered to be involved in an *ally* relationship if they are coded in ACLED as participating in the same event as allies. These data are not used in this analysis, however.

In most cases researchers need to be careful about assuming relationships based on two-mode data, including participation in the same event. However, in this case it is safe to assume that two organizations have a negative relationship when they are in direct battle with one another or targeting one another with other forms of violence, such as employing IEDs to injure or kill members of the other group. This approach resulted in 483 events among 86 organizations. The Islamic State (IS) is not included in this subset because they are not primarily an African group, and they do not associate with an African ethnic group or language family, which are variables tested in our models. Figure 2.1 depicts the *enemy* network where the nodes indicate rebel groups and the ties between them are based on violence between two groups.

We supplemented the ACLED dataset with open-source information about six important attributes or characteristics of the 86 rebel organizations. The first is each organization's *primary ideology*, which captures systems of beliefs that serve as its primary motivation for conflict, such as whether they are driven by separatist or by religious goals. We then converted these to five sets of dummy variables, which indicate whether the group is a new regime nationalist, ethnic nationalist, Christian, Islamist or separatist group. The second attribute is each group's *home base*, which is the primary country from which the group operates or functions. We also treat each group's *size* (i.e., the most recent estimate of its number of combatants) and *founding date* (i.e., the year in which the group was created) as attributes. Some of the group size estimates are based on conflicting or limited information, which is a well-known challenge when analyzing violent groups. We split the difference between min and max estimates in cases where the best estimates for a group's size are ranges. For example, a group estimated to comprise 10,000 to 15,000 members would have been coded to comprise 12,500 members. To collect and structure these data, we relied mainly on the Big Allied and Dangerous Dataset Version 2 (Asal and Rethemeyer 2016), and the Terrorism Research and Analysis Consortium (TRAC 2016).

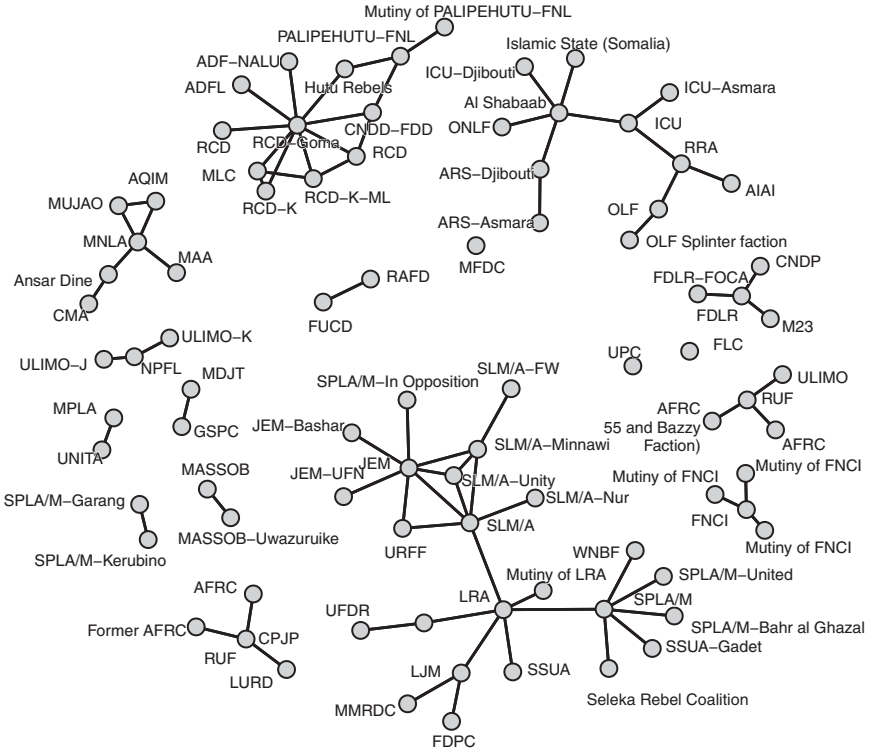

Figure 2.1 Rebel enemy network.

Source: authors, based on ACLED data.

To identify each rebel group's "turf" we could not draw upon the ACLED event data because then the same data would be used to construct both our dependent variable and our key independent variable, which is statistically impermissible. Thus, we used the location of each group's ethnic group or primary language in order to identify their turf. In particular, we defined each group's turf with the geospatial polygon(s) associated with their ethnic group or language family. We did this using *Ethnicity Felix 2001*, a spatial data file consisting of 1927 polygons, which are based on the "People's Atlas of Africa" by Marc Felix and Charles Meur (2001) and depict the dominant ethnicities and languages for Africa.[1] Two rebel groups were considered to share the same turf if their ethnic group or language families was located in the same polygon. In other words, in order for them to share the same turf they do not have to belong to the same ethnic group or language families. All that matters is whether their respective ethnic groups or language families share the same location. In a similar manner, two rebel groups were considered to share adjacent turfs if their respective ethnic groups or language families were located in adjacent polygons.

Methods

Our analysis will draw upon both exploratory and confirmatory SNA methodologies. We begin by estimating standard SNA centrality measures to identify key network actors and ties before turning to ERGMs. ERGMs offer analysts a way to examine the internal (endogenous) and external (exogenous) social processes that give rise to a network's observed patterns at the macro level (Harris 2014; Robins et al. 2007; Robins 2011). They assume that observed social networks are built on local patterns of ties, often called micro-configurations, that are a function of local social processes, such that "actors in the network form connections in response to other ties in their social environment" (Lusher et al. 2013: 1). ERGMs are similar to logistic regression models except that they include important modifications in order to account for the dependencies between observations.

The basic approach for estimating an ERGM is to hypothesize as to which endogenous social processes gave rise to a particular network's global properties, and then to build a model that takes these and other factors into account. Local processes are operationalized in terms of the various micro-configurations found within a network such as edges, stars, open and closed triads, while exogenous factors, such as race, gender, religious affiliation and age, are modeled in order to capture various social selection processes, such as homophily or status. For example, analysts may hypothesize that actors who share a particular attribute are more likely to form ties with one another than those who do not; or, they may test whether actors who score high in terms of a particular attribute (e.g., age, tenure) are more (or less) likely to form ties than those who do not. The key is to build a model that accounts for both endogenous and exogenous processes because what lies behind tie formation is not always clear. Take, for example, Goodreau et al.'s (2009: 104–105) examination of a friendship network containing a large number of triangles (close triads). Such a pattern could be the result of processes at the individual (e.g., sociality of actors), the dyadic (e.g., assortive mixing), or the triadic levels (e.g., direct propensity for closure), all of which may be tested in an ERGM.

Estimating an ERGM is essentially a two-step process. The first step is to build a model that includes a mix of micro-configurations and attributes that yield fitted parameter values and allow the model to converge. A t-ratio for each parameter value is calculated by taking the difference between the actual count of a micro-configuration (e.g., triads) and the average count of the micro-configuration from a large sample of networks that are simulated using the parameter estimates and then dividing this difference by the simulation standard error (Lusher et al. 2013). When the absolute value of all of the t-ratios in the model is less than 0.10, the model is considered to have converged, and when a parameter's absolute value is greater than twice the size of the estimated standard error, it is considered statistically significant (Wang et al. 2014: 22). The goal "is to find a small set of configurations which capture the properties we are interested in and which yield reasonable parameter values that converge" (Borgatti et al. 2013: 142). The next step is to see if the fitted parameters

adequately account for the remaining micro-configurations that were not included in the model. If not, then the ERGM needs to be re-estimated with a different set of parameters and the process starts anew.

Analysis and discussion

Central players in the enemy network

The results of our descriptive analysis are presented in Table 2.2, which lists the top-ranked rebel groups in terms of (normalized) degree, closeness, eigenvector and betweenness centrality. Degree centrality is simply a count of the number of

Table 2.2 Highest ranked groups by normalized centrality scores

Degree	*Closeness*	*Eigenvector*	*Betweenness*
RCD – Goma (0.106)	**Lord's Resistance Army** (0.163)	**JEM** (0.711)	**Lord's Resistance Army** (0.053)
JEM (0.082)	**SLM/A** (0.155)	**SLM/A** (0.696)	**SLM/A** (0.038)
SPLA (0.071)	**JEM** (0.143)	**SLM/A-Minnawi** (0.546)	SPLA/M (0.028)
Lord's Resistance Army (0.071)	SPLA/M (0.143)	SLM/A-Unity (0.516)	**JEM** (0.018)
SLM/A (0.071)	**SLM/A-Minnawi** (0.125)	URFF (0.372)	Seleka Rebel Coalition (0.012)
Al Shabaab (0.059)	Seleka Rebel Coalition (0.120)	**Lord's Resistance Army** (0.308)	RCD – Goma (0.012)
SLM/A-Minnawi (0.047)	SLM/A-Unity (0.120)	JEM-UFN (0.188)	Al Shabaab (0.011)
MNLA (0.047)	RCD – Goma (0.116)	JEM-Bashar (0.188)	ICU (0.010)
Several ranked 9th (0.035)	UFDR (0.112)	SPLA/M-In Opposition (0.188) Opposition (0.188)	RRA (0.007)
	URFF (0.112)	SLM/A-Nur (0.184)	**SLM/A-Minnawi** (0.006)

Source: authors.

Note

Groups that rank in the top ten in all four centrality measures are in **bold**. The acronyms for the groups are the following: Islamic Courts Union (ICU); Justice and Equality Movement (JEM); Justice and Equality Movement-Bashar Faction (JEM-Bashar); Justice and Equality Movement-Unity Faction Nur (JEM-UFN); National Movement for the Liberation of Azawad (MNLA); Rally for Congolese Democracy-Goma (RCD-Goma); Rahanweyn Resistance Army (RRA); Sudan Liberation Movement/Army (SLM/A); Sudan Liberation Movement/Army-Minnawi Faction (SLM/A-Minnawi); Sudan Liberation Movement Army-Abdul Wahid al-Nur Faction (SLM/A-Nur); Sudan Liberation Movement/Army-Unity Faction (SLM/A-Unity); Sudan People's Liberation Army/Movement (SPLA/M); Sudan People's Liberation Army/Movement-In Opposition (SPLA/M-In Opposition); Union of Democratic Forces for Unity (UFDR); United Revolutionary Forces Front (URFF).

ties of each actor.[2] Thus, groups that score high in terms of degree centrality may not necessarily lie at the center of the network but they do have numerous enemies. Closeness centrality captures how close (in terms of path distance) an actor is, on average, to all other actors.[3] In the context of the enemy network, groups that score high in terms of closeness centrality are more likely to lie near the center of the network because their average path distance to other actors is relatively short. Eigenvector centrality (Bonacich 1987) is similar to degree centrality in that it takes into account the number of each actor's ties but it weights them by whether the ties are to central or peripheral actors. This measure, then, could help identify which groups not only have numerous ties but are also centrally located in the network. Finally, betweenness centrality (Freeman 1979) captures the extent to which actors lie on the shortest path between two other actors. Betweenness is often seen as a measure of brokerage, but here it is probably better to see it as identifying those groups whose patterns of violence serve as bridges between clusters of violent groups.

Rebel groups that rank in the top ten in terms of all of the centrality measures appear in bold in Table 2.2. There are only four: the Justice and Equality Movement (JEM), the Lord's Resistance Army (LRA), the Sudan Liberation Movement/Army (SLM/A) and the Sudan Liberation Movement/Army-Minnawi Faction (SLM/A-Minnawi). In light of the strategies outlined earlier, targeting these groups for removal is probably not a viable option. Removing an entire group from a network is far more difficult than removing a single individual. Governments could devote resources for undermining these groups. One approach would be to target key members of these groups for removal, but, as we noted earlier, this approach has met with limited success.

Alternatively, strategists could target highly central members as key nodes in a deception campaign. Such an approach was implemented with success in northern Iraq in 2009. Intelligence officers targeted individuals in an insurgent network who scored high in terms of betweenness centrality for inserting misinformation in order to sow seeds of distrust. The approach successfully caused the network to implode and, by the end of this group's tour in Iraq, this method of using SNA for deception operations had become standard procedure (Anonymous 2009: 9).

Endogenous and exogenous causes of violence

Table 2.3 presents the parameter values for the ERGMs that we estimated. We begin by fitting a model that includes only endogenous effects; that is, microconfigurations or local processes that help produce the network's global properties. Lusher and colleagues (2013: 174):

> suggest that a good starting point for models for undirected networks is to include an edge, alternating star, alternating triangle, and alternating 2-path parameters. […] In short, models should include at least a density parameter (edge), as well as control for degree distribution (star parameters) and closure (triangle parameters).

This is essentially the approach we adopted for Model 1, except that we included a parameter for isolated edges. In addition, rather than including an edge configuration in the model itself we fixed the density of the network, which can help models converge (the edge statistic in ERGMs is analogous to the intercept in standard regression models and not typically interpreted). As Table 2.3 indicates, four of the five micro-configurations are statistically significant. The isolated edges parameter estimate is not, but its inclusion did help the model converge. Moreover, the estimated parameter values of the micro-configurations remain relatively consistent across all of the estimated models, which lend confidence to the direction and size of the effects.

Just as importantly, the goodness-of-fit (GOF) statistics presented in Table 2.4 indicate that the fitted parameters adequately account for all of the configurations present in the network. For example, there are 210 3-stars in the enemy network,[4] and the average number in the simulated networks is approximately 206, which yields a t-ratio of 0.066.[5] As a rule of thumb GOF t-ratios should be less than 1.96, which indicates that the actual and simulated parameters are not statistically significantly different from one another (Wang et al. 2014: 24). In other words, in terms of goodness of fit we want the difference between the actual and estimated number of configurations to be statistically insignificant from one another. However, the t-ratios of fitted parameters should ideally be closer to 0.10 or less, and as we can see, that is the case here. The GOF statistics for the non-fitted parameters also indicate a good fit. Table 2.4 also includes several global measures of model fit: the standard deviation and skewness of the degree distributions, the global clustering coefficient (which measures the extent

Table 2.3 Exponential Random Graph Model estimates of enemy network

	Model 1	*Turf defined by ethnicity*		*Turf defined by language*	
		Model 2	*Model 3*	*Model 2*	*Model 3*
Structural (endogenous) effects					
3-star	0.6279*	0.5950*	0.6113*	0.6098*	0.6128*
4-star	–0.2802*	–0.2651*	–0.2740*	–0.2725*	–0.2733*
Isolated edges	–0.6268	–0.6055	–0.6303	–0.5838	–0.6079
Alternating star	–2.2858*	–2.2753*	–2.2645*	–2.3045*	–2.2778*
Alternating triangle	0.9859*	0.9291*	0.9335*	0.9395*	0.9476*
Actor covariates (exogenous)					
Islamist interaction		0.6053*	0.6935*	0.6320*	0.7822*
Year founded		–0.0003		0.0042	
Strength (size)		0.0000		0.0000	
Dyadic covariates (exogenous)					
Adjacent turf		0.4353	0.4011	–0.1170	–0.0813
Shared turf		0.7799*	0.7846*	0.7936*	0.7493*

Note
* = p-value < 0.01.

Table 2.4 Goodness-of-fit statistics for Exponential Random Graph Model estimates of enemy network

	Count	*Turf defined by ethnicity*						*Turf defined by language*			
		Model 1		*Model 2*		*Model 3*		*Model 2*		*Model 3*	
		Mean	*T-ratio*	*Mean*	*T-ratio*	*Mean*	*T-ratio*	*Mean*	*T-ratio*	*Mean*	*T-ratio*
Fitted effects											
Edge	79.0	79.00	NA	79.00	NA	79.00	NA	79.00	NA	79.00	NA
3-star	210.0	206.49	0.066	190.82	0.339	216.52	–0.113	197.52	0.230	189.46	0.382
4-star	213.0	207.46	0.074	189.19	0.303	220.83	0.096	197.14	0.209	186.90	0.350
Isolated edges	5.0	5.00	0.000	4.78	0.105	5.07	–0.035	4.85	0.073	4.70	0.149
Alternating star	105.4	105.12	0.041	103.22	0.367	106.06	–0.117	103.98	0.241	103.14	0.389
Alternating triangle	24.8	24.60	0.023	22.94	0.259	25.67	–0.129	23.19	0.231	2.19	0.390
Islamist interaction	9.0			9.40	0.406	9.75	–0.154	7.07	0.489	6.80	0.551
Year founded	315,983.0			315,916	0.466			315,907	0.543		
Strength (size)	1,200,149.0			1,503,424	–1.150			1,474,489	–1.129		
Adjacent turf (defined by ethnicity)	12.0			11.83	0.044	12.67	–0.162				
Shared turf (defined by ethnicity)	17.0			16.62	0.095	17.58	–0.136				
Adjacent turf (defined by language)	56.0							54.89	0.248	55.07	0.205
Shared turf (defined by language)	21.0							20.67	0.077	21.03	–0.007

Non-fitted effects											
2-star	173.0	170.97	0.103	164.50	0.412	174.65	–0.078	167.19	0.292	164.08	0.449
5-star	166.0	144.68	0.312	131.46	0.488	155.89	0.136	137.42	0.414	129.28	0.547
Triangle	10.0	9.72	0.087	9.18	0.215	10.79	–0.188	9.22	0.222	8.66	0.411
4-cycle	9.0	9.41	–0.052	9.40	–0.040	13.36	–0.373	9.28	–0.033	7.86	0.154
Isolates	3.0	5.64	–1.168	5.14	–0.970	5.86	–1.222	5.32	–1.043	5.11	–0.961
Alternating 2-path	164.3	162.42	0.112	156.14	0.497	163.03	0.075	158.82	0.337	156.91	0.443
Alternating edge triangle	39.2	42.81	–0.193	40.56	–0.062	50.47	–0.450	40.88	–0.084	37.47	0.093
Degree standard deviation	1.6	1.56	0.149	1.51	0.454	1.59	–0.028	1.53	0.336	1.51	0.487
Degree skew	2.2	2.19	0.033	2.19	0.041	2.19	0.018	2.20	0.006	2.19	0.038
Global clustering	0.2	0.17	0.106	0.16	0.172	0.18	–0.151	0.16	0.050	0.16	0.364
Mahalanobis distance		513		483		473		493		513	

to which a network has high and low areas of density), and the Mahalanobis distance. The goodness of fit for the first three is measured similarly to the other configurations present in the network, and as the t-ratios in Table 2.4 indicate, the fitted model does adequately account for these network patterns. The Mahalanobis distance is an overall measure of model goodness of fit used by the PNet suite of programs (Wang et al. 2009), which is what we used to estimate our models. It takes into account the covariance of the included statistics where smaller distances indicate a better fit of the data (Wang et al. 2014: 24).

What are we to make of these results? Figure 2.2 provides a brief overview of the various fitted and unfitted configurations (and their possible interpretation) included in our models. Let us begin by considering the 3-star, 4-star, and alternating star parameter estimates. The 3-star is positive, which indicates that it occurs more than one would expect in a random network of the same size and density. It suggests that it is not uncommon for three rebel groups to attack a fourth. In some cases this is likely due to groups splintering into factions due to tension between leaders, perceived ethnic bias, etc. Because we have undirected data we cannot know for sure, but these seem more likely scenarios than a single group simultaneously attacking three others. This pattern appears to stop at three

Configuration (parameter)	Graphic	Interpretation
Isolate		Isolated actor
Edge		Propensity of 2 groups to attack one another
2-star		Propensity of 2 groups to attack a third one
3-star		Propensity of 3 groups to attack a fourth one; 2-stars are nested in 3-stars
4-star		Propensity of 4 groups to attack a fifth one; 2- and 3-stars are nested in 4-stars
5-star		Propensity of 5 groups to attack a fifth one; 2-, 3- and 4-stars are nested in 5-stars
Alternating star		Propensity of multiple groups to attack a single group

Configuration (parameter)	Graphic	Interpretation
Isolated edge		Isolated groups attacking one another
Alternating two-path		Propensity of multiple groups to attack the same 2 groups
Triangle		Propensity of 3 groups to attack one another
Alternating triangle		Propensity of multiple groups to attack 2 groups fighting one another
Four-cycle		Four groups attacking common groups
Alternating edge triangle		A single group attacking groups located in different clusters

Figure 2.2 Fitted and unfitted effects included in models.

Source: authors.

groups however, as the parameter values for the 4-star and alternating-star configurations indicate. Both are negative and statistically significant. The positive alternating triangle pattern is somewhat harder to interpret. It could indicate that two rebel groups fighting one another are also fighting with several other (and the same) groups. However, a more likely possibility is that multiple groups are attacking the two rebel groups, probably because the latter are perceived by the former as weak and vulnerable.

It seems, then, that it is not unusual for multiple rebel groups to gang up, so to speak, on other groups, whether it is because some are perceived as vulnerable because they are fighting another group or because they are under attack from multiple groups. If these patterns do reflect reality, then they could offer authorities hints as to which rebel groups are most likely to be attacked next. To be sure, most authorities are almost certainly loath to offer "protection" to rebel groups, but if their goal is to reduce violence, then they may be able to head off attacks before they occur in order to protect the wider population. Such an approach does not fit neatly into the strategies outlined above, but it could be seen as a form of "community building" in that the authorities are putting the welfare of the wider society ahead of any distaste they may have for individual rebel groups. This could provide long-term benefits in terms of increased population support for local and national governments, which can help sever or weaken the ties between the rebel groups and the communities in which they are embedded.

Both versions of the second model include variables that take into account primary ideology, year founded, strength and spatial proximity,[6] while both versions of the third model drop founding year and strength because they were statistically insignificant and were not needed for the models to converge. The only difference between the two sets of models is that one uses the location of a rebel group's ethnic group to define its turf, while the other uses the location of a group's language family. As one can see, the parameter estimates remain relatively consistent within both sets of models. In terms of the first set where turf is defined by the location of a group's ethnic group, we can see that the third model provides a slightly better GOF than the second model (Table 2.4). The Mahalanobis distance is somewhat lower, but more importantly t-ratios for the fitted effects are close to or lower than 0.10, and the t-ratios for the non-fitted effects are less than 1.96. In fact, the t-ratios for the fitted effects in Model 2 are probably higher than we would like. Interestingly, the t-ratios of the fitted effects for Model 3 are somewhat higher than those for Model 1, which suggests that Model 1 may actually provide a better fit of the data. However, it lacks our variables of interest, so we will focus our comments on Model 3. Turning to the two models that define turf in terms of language family, neither model provides a great fit of the data, as the t-ratios for the fitted effects are higher than one would prefer. Nevertheless, the statistically significant effects (Table 2.3) for both sets of models are in the same direction and similar in size. Thus, we will focus on these for the remainder of our discussion.

All of the ideological variables (new regime nationalist, ethnic nationalist, Christian, Islamist and separatist) were initially included in the model, both in

terms of direct and interaction effects, but in the end only the Islamist interaction variable proved to be statistically significant. In other words, being a new regime nationalist, ethnic nationalist, Christian, Islamist or separatist rebel group did not increase the likelihood that a rebel group would attack another group. However, if two groups were both Islamist, then there was greater than random probability that they would attack one another. These findings present something of a conundrum for strategists. They suggest that at least in the context of violence between rebel groups, ideology plays a very minor role. In fact, it only seems to matter when two groups are Islamists, and even in these cases it may reflect more of a competition between similar groups than an ideological struggle. Thus, strategies that seek to reconcile groups with one another may want to focus on the competitive pressures that drive them to do so rather than trying to find common ground among their respective ideologies.

The parameter estimates for the spatial proximity variables indicate that rebel groups whose turfs are adjacent to one another are no more likely to attack one another than two randomly located (geospatially) groups. Both are statistically insignificant and pointing in different directions. Thus, although one might expect that groups with adjacent turfs would be more likely to fight with one another, the evidence is not there. However, the available evidence does suggest that rebel groups whose turfs overlap are more likely to attack one another. Both sets of estimated parameters are positive and statistically significant. It is the former Speaker of the House, Thomas P. "Tip" O'Neill, Jr., who is often credited with the saying, "All politics is local." Here, it would be incorrect to suggest that all rebel group violence is local. However, it does appear that a lot of it is. Why? As we noted earlier, some of this is almost certainly due to their proximity to one another. However, we cannot help but wonder whether something else may also be going on. Analysts would want to explore the roots of this localized violence (e.g., ethnic tension, competition) before crafting specific strategies to counter it.

Conclusion

In this chapter, we have drawn upon social network analysis methods in order to explore the pattern of violence among African rebel groups. Our analysis suggests that authorities should consider the development of thoughtful, non-kinetic strategies to reduce violence among rebel groups. The development of such strategies, and their implementation, should not oversimplify the complex nature of violence among these groups that all too often has direct consequences for civilian populations. This analysis suggests that both spatial and network-related factors contribute to violence among these groups, including overlapping "turfs," ganging up on specific groups and/or factionalism and splintering within rebel groups, and to a lesser extent, ideology. The notion that rebel violence in Africa, and solutions to such violence, is a complex topic is well documented; however, the approach taken here to test relational and spatial variables that lead to violence is unique, as most studies focus on one or the other.

As we noted at the outset, it is important to stress that although the results of our analysis may only apply to the rebel groups examined here, our approach may be applied to most arenas in which dark networks operate. The analysis of dark networks is often oversimplified by focusing too much on descriptive analyses of network structures, and without the development of models that allow researchers to test important spatial variables, such as proximity, and exogenous factors, such as ideology and ethnic divisions, all of which often play key roles in violence. Moreover, existing research has paid little attention to the formation of negative ties among dark networks, such as the *enemy* network examined here that involves direct violence between groups. The focus here is to consider non-kinetic strategies to halt violence among rebel groups in Africa; however, a focus on other forms of negative ties, such as non-violent posturing among groups in other contexts, could highlight strategies to sow distrust among nefarious groups.

Despite the contributions made here, future research about transnational rebel and extremist organizations can build on this research in several ways. First, researchers should consider applying similar models to directed data, which will almost certainly provide greater detail into tie formation among these groups. Second, future research into this topic would also benefit by examining negative tie formation across time, which will help researchers distinguish between processes of social selection and social influence. Researchers should consult models similar to ERGMs that allow the use of longitudinal data, namely the Stochastic Actor-Oriented Models (SAOMs) developed by Tom Snijders and his colleagues (Snijders 1996, 2005; Snijders et al. 2010; Steglich et al. 2010). In other words, drawing upon social network analysis methods in order to help craft strategies for the disruption of dark networks should involve both exploratory and confirmatory methods.

Notes

1 Since proximity is so important to this analysis, we used the ArcGIS Repair Geometry tool to ensure that there were no gaps between polygons or other geometry-based errors in the creation of these polygons (see http://desktop.arcgis.com/en/arcmap/10.3/tools/data-management-toolbox/repair-geometry.htm). Once the polygons where checked, they were projected using the Africa Lambert Conformal Conic map projection. Next, we used the ArcGIS Polygon Neighbors tool to test adjacency between polygons. For each polygon, this tool lists which of the rest of the polygons in the file are adjacent to it (http://pro.arcgis.com/en/pro-app/tool-reference/analysis/polygon-neighbors.htm). Taking these results, we then created a python script to generate an adjacency matrix for Ethnicity Felix 2001 where for each polygon a "1" indicates that the polygon is a neighbor and a "0" indicates no adjacency. Of the two files generated, one adjacency matrix indicates adjacent edges and/or vertices, and the other matrix solely indicates adjacent edges where the edge length is greater than 0.

2 We recognize that some of these groups are inactive and that the results may be different if we consider only active groups. However, there is significant overlap among the groups (both active and inactive) in terms of their year of activity.

3 Because the network includes isolated nodes, we used averaged reciprocal distance closeness centrality which is better suited for handling infinite distances, which is always the case with disconnected network graphs (Borgatti 2006; Cunningham et al. 2016).

4 See Figure 2.2 for an explanation and (possible) interpretation of the 3-star and other micro-configurations included in the estimated models presented in Table 2.3.
5 The goodness-of-fit t-ratio equals the actual and the mean estimated count divided by the associated standard deviation (see Lusher et al. 2013: 165–166, 179–185).
6 Home base was originally included in the models but, since they did not converge, they were removed.

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3 Networks and spatial patterns of extremist organizations in North and West Africa

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Introduction

In a recent letter addressed to the President of the Islamic Council of Mali on September 27, 2016, Iyad ag Ghaly, the leader of the jihadist group Ansar Dine, announced that he would unilaterally cease its armed attacks throughout Mali "and especially in the North of the country." Signed on behalf of "Ansar Dine and its allies," the letter further explained that the group would not renounce its goal of imposing Islamic law (*sharia*) but would work toward a ceasefire that would "ensure the security of persons and their property and promote social cohesion, a guarantee of peace and stability" (MaliActu 2016).

The much-debated letter, which arrived one month *before* Ansar Dine attacked a UN convoy in the north of the country (RFI 2016), is the latest development in a tortuous military career for ag Ghaly, who, since the 1990s, has been a foreign fighter for the late Colonel Gaddafi, a rebel, a negotiator for the Malian government, a consular officer in Saudi Arabia, the leader of a Foreign Terrorist Organization, and a fugitive since the French-led military offensive of 2013 that led to the reconquering of northern Mali. The fact that a militant like ag Ghaly has successively worked for and against the state, within Mali and abroad, and as a civilian and a military leader, is illustrative of the fluidity of many modern African conflicts, in which commanders and rank-and-file fighters frequently shift allegiances among regular forces, rebel movements and violent extremist organizations, depending on personal interests, tribal and ethnic ambitions, and security conditions. A similar volatility characterizes political allegiances between governments and myriad often ephemeral armed groups, who split and coalesce as new opportunities arise. Groups that may appear enemies one day may be allies the next. Splinter groups formed following major disagreements between leaders might still collaborate against a third party.

The complex motivations and outcomes of such alliances and conflicts have received growing attention over the past decade. On the one hand, a number of detailed qualitative studies have contributed to documenting how the relationships between rebels, religious extremists and traffickers that developed in the Sahel-Sahara were mainly based on corruption around illegal flows of drugs, weapons and migrants (Lacher 2012; Bøås 2015) and had fundamentally

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changed the political landscape of the region (Lecocq et al. 2013; Harmon 2014). Particular attention has been paid to the case of Mali, where several short-lived alliances between secessionist and Islamist groups with conflicting agendas have been observed (Bencherif and Campana 2016). On the other hand, a growing body of quantitative studies conducted across the world have shown that internal fragmentation, conflicts and alliances between armed groups played a crucial role in explaining the onset and diffusion of internecine violence (Bakke et al. 2012; Cunningham et al. 2012) and the often elusive quest for peace settlements (Cunningham 2006; Findley and Rudloff 2012).

Building on network science and spatial analysis, the overall objective of this chapter is to bridge these strands of literature and lay the foundations for a more formal approach to social and spatial networks of belligerents in the region. Examining the relationships between alliances and conflicts as a putative explanation for the patterns of violence in the Sahel-Sahara, the chapter posits a relational approach to the study of the structure of relationships among state and non-state actors. In doing so, it builds on a growing body of literature that takes advantage of the recent availability of disaggregated data to map and model ties between and within violent organizations (Walther and Christopoulos 2015; Zheng et al. 2015).

Drawing upon a public collection of data on political violence, the chapter uses network science to represent alliances and conflicts among 179 organizations involved in violent events in North and West Africa between 1997 and 2014. Owing to the fundamentally relational nature of internecine violence, we are particularly interested in the way the structural positions of conflicting parties affect their ability to resort to political violence. To this end, we combine two spectral embedding techniques that have previously been considered separately: one for directed graphs that takes into account the direction of relationships between belligerents, and one for signed graphs that takes into consideration whether relationships between groups are positive or negative. Our assumption is that groups with similar allies and foes are likely to have similar aggression patterns.

Our second objective is to analyze the spatial patterns of violence across the region by localizing violent events and studying the geographic scales of regional dynamics. By doing so we contribute to a burgeoning literature on conflict contagion that seeks to understand how relational factors may affect the diffusion of wars (see Radil and Flint 2013; Metternich et al. 2015). Because African conflicts are well known for their propensity to cross national boundaries (Salehyan 2009), we are particularly interested in the effects of borders on the mobility of violent Islamist groups. Focusing on 389 violent events in which nine Al Qaeda-affiliated groups have been involved, we highlight specific spatial patterns that emerge from a longitudinal analysis of events over a ten-year period starting in 2004. Due to the transnational nature of conflict, we ascertain the countervailing transaction costs that borders represent, notably by testing whether national borders limit the displacement of Islamist groups or serve as sanctuaries from which attacks are launched. We assume that the willingness and

military capabilities of African states to prevent violent extremist organizations from crossing borders will have an impact on their mobility. Groups will more easily spread across borders that are poorly guarded than where states are willing and capable of ensuring border integrity through border patrols and law enforcement.

The chapter proceeds as follows. The second section reviews the literature on the social and spatial organization of state and non-state organizations, paying particular attention to the role of networks and national borders. The third section presents the data and explains how, using network analysis and geographical information systems, we structured them into networks and chronological events. The fourth section models the structural position of actors in conflict. The fifth section addresses the spatial patterns of Islamist groups and implications of the findings for theory, method and practice.

Previous research

Conflicts and signed networks

Greater access to geo-referenced data and the use of spatial statistical analysis has advanced the study of patterns of armed groups over the past decade. While past analyses of (civil) wars were limited by a lack of reliable data, the proliferation of satellite and disaggregated data has spawned innovative approaches to investigating the onset and diffusion of political violence across time and space (Hegre et al. 2009; Cederman and Gleditsch 2009; Zammit-Mangion et al. 2013; Dowd 2015; Metternich et al. 2015). The concomitant proliferation of political and economic predictors, on which the spatial-analytical approach in geography and conflict studies can draw, now includes factors as diverse as the nature of government, ethnic divisions, poverty, income, inequality, number and morale of troops, frequency of droughts, and endowment of natural resources (see O'Loughlin and Raleigh (2008) for a review). Some factors that may explain why groups resort to violence are also related to the structure of relationships that connect actors in conflict (Cederman and Gleditsch 2009; Cederman et al. 2013; Metternich et al. 2013; Phillips 2015).

A common point of many recent studies on fragmentation and alliances among state and non-state actors is to consider violence as a relational process in which the structure underpinning political violence provides both opportunities for and constraints upon individual and group action (Pearlman and Cunningham 2009; Utas 2012). This coincides with the views expressed by many network scientists, who argue that social actors who wish to reduce their structural constraints can develop network tactics that aim to try to alter the structure (rather than the behavior of alters) to their advantage (Burt 1992; Brass and Krackhardt 2012). The increasing availability of disaggregated data, combined with recent conceptual and computational advances in network science, has allowed a growing number of studies to empirically test such assumptions, using Social Network Analysis (SNA). SNA is the study of individual actors, groups,

organizations or countries, represented by the nodes of the network, and the relationships between these actors, represented by their links. As both a paradigm of social interactions based on graph theory and a method, SNA seeks to understand networks by mapping out the ties between the various nodes as they are rather than how they ought to be or are expected to be (Newman 2010).

SNA is particularly adept at capturing the complexity of conflict situations due to its ability to describe, represent and model signed networks, i.e., networks that contain both positive and negative relations. Positive ties develop to overcome collective action problems, enforce trust and ideology, coordinate activities at a distance, distribute resources, or disseminate ideas and decisions. Alliances between states are typical of positive-tie networks. By contrast, negative ties develop among actors that dislike, avoid or fight one another. For positive and negative ties, SNA may be used to study the structure and function of the network as a whole, and the role of each node in the group in relation to others. Maoz and colleagues (2006), for example, have used a network approach to verify whether states sharing common enemies did fight each other. Using the case of the First World War, Flint et al. (2009) and Radil et al. (2013) have shown how alliances or rivalries between states could explain the diffusion of war on a global scale. Radil and Flint (2013) have applied the same approach to illustrate the increasing number of alliances between African states since the end of the Cold War.

Recent studies have noted that networks with positive ties tend to be structured differently from those with negative ties (Everett and Borgatti 2014). Networks based on friendship, alliance and collaboration are known for being denser and more clustered around actors that share similar values than networks containing negative ties, because individuals and organizations tend to have more friends than enemies (Huitsing et al. 2012). Positive-tie networks also convey more resources, ideas and knowledge than negative-tie networks based on hatred, avoidance or conflict. As a result, many centrality measures based on the assumption that social networks serve as conduits for flows of information, advice or influence, such as betweenness or closeness centrality, are unrealistic in the case of actors in conflict (Everett and Borgatti 2014). Networks containing negative ties are also well known for having a low level of transitivity, a principle which assumes that two actors that share a connection to a third actor are likely to be connected themselves.

A growing literature suggests that, despite their differences, positive- and negative-tie networks should be analyzed simultaneously (Labianca and Brass 2006; Grosser et al. 2010; Rambaran et al. 2015). One way to incorporate both allies and adversaries is to use structural balance theory, which argues that social relations are stable if they contain an even number of negative ties. Stable groups of three actors (known as triads) are theoretically stable if everyone likes everyone else, or if two actors are in conflict with a third party (Doreian and Mrvar 2015). Over time, unstable triads theoretically evolve toward stable triads, because instability creates tensions that can only be resolved by altering views, behaviors and alliances. Another approach to signed networks is to model the structural autonomy

and constraints of actors. Smith et al. (2014) argue that an actor's political independence is constrained both by its potential to reach other actors' resources and by the structural position of allies and enemies. Being connected to a single ally that is free of threat considerably reduces the autonomy of actors in signed networks, while a diversified network of allies enhances autonomy.

This chapter adopts a complementary approach. Instead of assuming that political violence is explained by attributes of the belligerents or by exogenous factors, we posit network structure to enable or constrain political violence. To do so, the first section of our analysis aims at representing how violent extremist organizations are connected to their allies and enemies. Using several centrality measures, we identify subclusters of actors within which conflict or cooperation is particularly developed, and highlight the main structural differences between positive- and negative-tie networks. Since enemies and allies are inextricably linked in real-life networks, the second analytical section of the chapter considers positive and negative ties simultaneously. Using spectral embedding techniques that place the nodes representing organizations at the position that best balances the "pull" of allies against the "push" of enemies, we model the balance between the relative effects of having allies and foes simultaneously. We take into account the fundamental asymmetric nature of conflicts and consider whether groups attack more or less than they are attacked. Combining signed and directed networks, we expect groups with similar allies and foes and similar aggression patterns to form clusters that concur with their structural position in the social network.

Conflicts, borders and safe havens

How violent extremist organizations use borders in the Sahel-Sahara is a matter of scholarly debate. Some claim that terrorist groups such as AQIM have divided Africa into "zones," each led by an emir (Tawil 2009; Global Terror Watch 2013), and that the movements of the most prominent emirs are primarily centered on certain regions (GCTAT 2013). This approach explicitly deems sovereign state borders safe havens for traffickers, rebels and terrorists. Others contend that the territorial notion of safe haven is probably an inappropriate concept to grasp the spatiality of trans-Saharan politically violent organizations (Walther and Retaillé 2015). While certain violent groups have repeatedly mounted attacks in the same area, this approach argues that attacks mostly seek to control strategic cities and lines of communication, and not to capture and hold territory. This principle explains why the aims of many Salafist groups are more socio-political than territorial: "All we want is the implementation of Sharia," reportedly said a member of the Ansar Dine group in Mali, "We are against independence" (The Punch 2012).

This chapter engages this controversy in light of the spatiality of violent extremist organizations and the effect of sovereign state borders on their movements. Do borders represent sanctuaries behind which violent extremist organizations wage turf battles over aspirational homelands? Or, as T.E. Lawrence (1920) posited a century ago, is desert warfare more like naval war in the sense that insurgents are

mobile and relatively indifferent to the constraints imposed by their environment? We propose that the degree to which groups can move and challenge the territorial integrity of sovereign states is a function of the porosity of borders. From the beginning of the millennium until the French-led Operation Serval regained control of the main cities of Mali in 2013, intraregional cooperation remained weak and each state had its own border-management strategy (Lacher 2012). This uncoordinated response to the rise of violent extremist organizations should have an observable effect on their mobility patterns across the region.

Building on Arsenault and Bacon's (2015) conceptual distinction between government will and capability to fight transnational groups, we study how spatial patterns are influenced by border management strategies. Our hypothesis is that, in the absence of a strong regional security framework, border management remains a national prerogative. States will tend to adopt different approaches toward managing transnational groups depending on whether it is in their best interest and on whether they have the military forces to actually monitor, control their borders and ultimately prevent the incursion of foreign groups. We hypothesize that more cross-border movement might be anticipated where borders are not heavily guarded and/or easy to cross due to informal arrangements with state authorities than where there is greater capacity to ensure border integrity through effective border patrols and law enforcement. Both the will and capability of the countries may have changed over the period considered, as countries take counter-terrorism measures, reinforce border security or re-evaluate their involvement in regional conflicts.

Research design

Social network analysis

Our analysis relies on data from the Armed Conflict Location and Event Dataset (ACLED), which provides a comprehensive list of political events by country between 1997 and 2014 (Raleigh and Dowd 2015). The fifth version of the data was used to select 37 violent extremist organizations in North and West Africa, their allies and their enemies, excluding non-identified Islamist and Libyan militias (see Appendix 1). The scope was limited to events with the following seven referents: Battle – no change of territory; Battle – non-state actor overtakes territory; Battle – government regains territory; Riots and protests; Violence against civilians; and Remote violence. This produced a list of 3231 events involving 179 organizations and 27,791 fatalities.

The ACLED dataset describes (up to) four groups in each incident: an attacker (A), a collaborator in the attack (B), a target (C), and a potentially assisting group that may also be a secondary target (D). These data are used to build a social network in which the nodes are groups, with positively weighted directed ties between groups that interacted (B to A, D to C) and negatively weighted directed ties between attacker and target (B to C). For example, on January 12, 2014, clashes between French troops (A) and Malian troops (B) on the one hand, and

Ansar Dine (C) and MUJAO (D) on the other hand, claimed 11 lives, including Islamist leader Abdel Krim, and 60 injured (ACLED incident 486MLI). Incidents are aggregated so that the ties between any pair of groups reflect all of their interactions. There can be both positive and negative ties, and in both directions, between the same two groups. Directions are important because they are surrogates for intentionality: a group on the offensive makes a conscious decision to attack while the defender has no choice, and other groups must decide whether to join in or not. These decisions reflect a calculus of advantage or ideological alignment.

The resulting graph is analyzed in two steps. First, we map the networks containing negative and positive ties separately and analyze the most prominent actors using several centrality measures. Because negative-tie networks do not serve as conduits for flows of information, advice or influence, we use degree centrality, which simply refers to the standardized number of ties each node has, and eigenvector centrality, which refers to the number of nodes adjacent to a given node, weighted by centrality, and indicate whether nodes are connected to other well-connected nodes. For our positive-tie network, we use eigenvector centrality and betweenness centrality, which measures the number of shortest paths from all nodes to all others which pass through that node (Freeman 1979).

Second, we combine both positive and negative ties into a single network, and embed this network in a geometric space in such a way that the distance between each pair of points accurately reflects the balance between the "pull" from collaborating groups and the "push" from aggression between them. These distances are globally integrated by considering not only immediate neighbors (i.e., actors who cooperate to fight each other), but neighbors of neighbors and, in fact, the structure of the entire graph. It is this integration that makes the process challenging: positive relationships are naturally transitive ("the ally of my ally could plausibly become my ally") but negative relationships are not ("the enemy of my enemy is my friend, not my enemy"). Technically, the adjacency matrices that describe positive and negative ties are combined into a matrix, called a Laplacian, that combines both kinds of ties and normalizes the representation so that well-connected nodes are central and poorly connected nodes peripheral (see Zheng and Skillicorn 2015; Zheng et al. 2015). This Laplacian matrix is transformed to discover the directions in which the graph varies the most and these are used as axes for creating an embedded graph. In this representation, position and distance are meaningful. Sets of "bad actors" such as violent extremist organizations and (supposedly) "good actors" such as governmental forces and civil society tend to form polar opposites in some dimension(s) of the representation. Since proximity represents similarity – an alliance – distance tends to represent opposition.

Spatial patterns

To understand the spatial strategies of violent extremist organizations, this chapter focuses on nine trans-Saharan Islamist groups that have been particularly violent from 1997 to 2014: Al Qaeda, Ansar Dine, AQIM, the Armed Islamic Group

(GIA), Al Mourabitoune, the Free Salafist Group (GSL), the Salafist Group for Preaching and Combat (GSPC), MUJAO, and Those Who Signed in Blood. Such a choice was motivated by the fact that these organizations are affiliated with Al Qaeda, share a common historical and ideological background, and form several components of a single, flexible network, rather than independent entities. As Hagen points out (2014: 2), "AQIM overlaps with a number of nominally independent and 'locally-focused' groups, such as Ansar al Dine and MUJAO. These groups are part of the larger AQ family and cannot be separated from AQ and AQIM." Mergers, name changes and splits are common. For example, GSPC – a splinter group of GIA of Algeria – rebranded itself as AQIM in 2007. Some of its members broke off in 2011 to form MUJAO while others formed Al Moulathamoun and Al Mouakaoune Biddam. In 2013, MUJAO merged with Al Moulathamoun to form Al Mourabitoune, which, in 2015, was renamed Al Qaeda in West Africa. Those groups frequently exchange information, funding, hostages and conduct joint operations, since several of their leaders have historically been members of AQIM's leadership network and have developed multiple allegiances across organizations. Our sample does not include Boko Haram because its activities are almost exclusively located in the Sahelian part of West Africa and its use of political violence differs from other Islamist organizations in the region (Menner 2014). While AQIM has urged local emirs to refrain from violence against civilians and has encouraged them to gain the hearts of the people, Boko Haram has, since its leader was killed in 2009, used indiscriminate violence as its principal political instrument (Zenn 2012).

Using a Geographical Information System (GIS), our first step is to map all violent events in which these Islamist groups were involved over the past ten years. The year 2004 is the starting point of the development of violent extremist organizations that had hitherto been almost exclusively located in Algeria. These groups, their allies and their enemies are responsible for 389 violent events causing 1434 fatalities through 2014. Our next step is to develop two hypothetical scenarios to distinguish distinct spatial patterns. The "mobility" scenario assumes that violence follows a linear chain of events: groups move from one location to the next, possibly across borders, without returning to their original location. This would reflect the strategy of a group under intense pressure from security forces, or, alternatively, of a group that has mastered movement in an arid environment. By contrast, the "sanctuary" scenario supposes a territorial turf whence groups operate across borders and a clear origin of flows. Once the location of each event is known, our third step is to connect violent events chronologically by hypothetical lines and verify if the general spatial pattern of the attacks corresponds to one of the two scenarios described above: the "mobility" scenario where groups move freely across borders, or the "sanctuary" scenario where groups use a particular region as a rear base. Since the ACLED database does not contains information about the movements of groups, we use dotted lines to indicate that spatial patterns based on the location of violent events do not necessarily correspond to actual physical movement between places, but rather to a longitudinal series of events.

A social network analysis of political violence

Negative- and positive-tie networks

We start with a graph which represents each organization as a node that is connected to those actors with which it is in conflict. The size of the nodes in Figure 3.1 is proportional to the number of ties (or degree).

Three main clusters emerge: the Nigerian cluster polarized by Boko Haram; the trans-Saharan cluster composed of groups affiliated with Al Qaeda such as GSPC and AQIM and their enemies; and the Libyan cluster composed of myriad Islamist brigades and pro-government forces. With a density of only 0.023 (2.3 percent), the network is very sparse, which is typical of networks that are made up exclusively of negative ties: the number of enemies a group can have is often more limited than the number of potential allies (Huitsing et al. 2012). The network also has a low level of transitivity: in only 1.2 percent of the triads enemies of enemies are in fact enemies, while in most cases (98.8 percent), enemies of enemies are friends. Finally, organizations with adverse

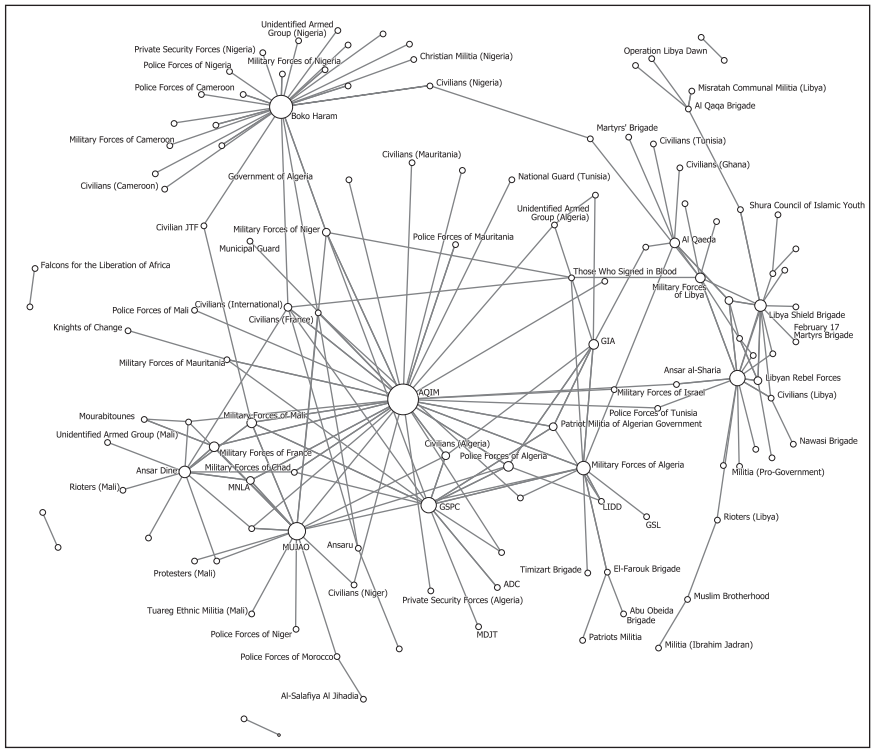

Figure 3.1 Negative ties between organizations involved in violent events, 1997–2014.

Note
Isolates are not shown.

attributes tend to be in conflict with one other, a tendency known as heterophily. This may be tested using the E/I index, which calculates the difference between external and internal ties for each group of actors (government, rebels, militias, civilians, Islamists, external forces), divided by the total number of ties. The E/I index for the network is positive (0.899) and statistically significant (chances of getting the result right by guessing are less than 1 percent), which confirms that violent organizations clash with organizations that do not belong in the same category.

At the level of the organization, the network is composed of a few highly central organizations (Table 3.1). That makes sense, since being in conflict with many adversaries simultaneously is widely regarded as a liability rather than an asset (Labianca and Brass 2006). Among violent organizations, AQIM has the highest score in degree and eigenvector centrality, which indicates that it has the greatest number of enemies and is connected to other actors that also have many enemies, such as the military and police forces of Algeria. This is an interesting result because if having numerous enemies can be seen as a pure liability, having enemies that are themselves involved in many conflicts offers more autonomy to AQIM. As Smith et al. (2014) have recently shown, the ideal structural situation for an actor embedded in a signed network is to have enemies that are constrained by numerous threats that affect the outcomes of military operations, reduce their ability to coordinate activities across the region, and limit their ability to cooperate to achieve their political or religious goals. MUJAO, GSPC and GIA also occupy a prominent structural position due to their conflicts with civilians, and armed forces in several countries. Other prominent actors include Boko Haram, which stands out for being connected to many other actors who themselves have few connections to one other, and some Libyan groups such as Ansar al-Sharia and the Libya Shield Brigade.

The structure of the network of enemies contrasts strongly with the one showing how organizations involved in violent events have collaborated across the region. As depicted in Figure 3.2, the positive-tie network is divided into three main unconnected groups of allies, one triad connecting an unidentified armed group to Boko Haram and Ansaru, and three dyads.

Table 3.1 Top-scoring nodes for selected centrality measures: negative ties

Rank	*Degree centrality*	*Eigenvector centrality*
1	AQIM (0.264)	AQIM (0.743)
2	Boko Haram (0.200)	MUJAO (0.421)
3	MUJAO (0.136)	Military Forces of Algeria (0.289)
4	Ansar al-Sharia (0.120)	GSPC (0.257)
5	Ansar Dine (0.096)	Ansar Dine (0.229)
Mean	0.024	0.071
Std. Dev.	0.035	0.095

Note
Scores are indicated between brackets.

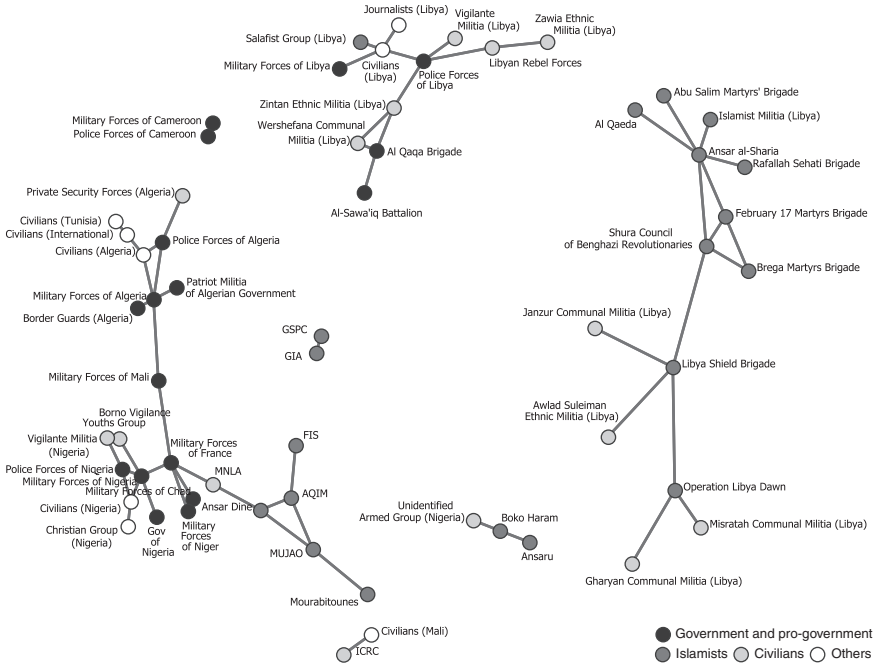

Figure 3.2 Positive ties between organizations involved in violent events, 1997–2014.

Note
Dark gray nodes refer to Islamist groups, black nodes to government forces, light gray nodes to civilians, and white nodes to other actors.

The main cluster on the left is structured around North and West African military and police forces and their civilian allies, which are represented in black and light gray respectively. This cluster is indirectly connected to some of the main Islamist groups in the region, which are represented in dark gray, through the secessionist movement MNLA. MNLA resulted from the fusion of a pacific organization defending the rights of the local Tuareg population, an armed group involved in several rebellions, an organization inspired by the Salafist ideology, not to mention some Tuareg mercenaries formerly employed in Libya. MNLA was allied with Ansar Dine in the first weeks of the Malian conflict before switching sides and fighting alongside the French-led military forces in 2013. The two other clusters are related to the Libyan conflict. One is structured around the armed forces of Libya and their pro-government brigades and battalions, the other around Islamist groups and ethnic and communal militias. Each cluster has a chain-like structure in which organizations are relatively distant from one another. The Algerian Private Security Forces, for example, are eight steps away from Al Mourabitoune. The long path-length distance, low density (0.034) and low clustering coefficient (0.104) of the network are typical of a structure that is

not organized around groups of tightly connected actors. This suggests that most governmental forces and violent organizations tend to build bilateral or trilateral alliances rather than broad coalitions across the region. The graph also highlights the lack of regional cooperation between government forces that face similar threats: there is no reported tie between the military forces of Libya and Algeria, or between the military forces of Cameroon and Nigeria.

Military and police forces have the highest eigenvector and betweenness centrality, followed by Ansar al-Sharia and the Benghazi Revolutionaries Shura Council (BRSC), both of which hail from Libya (Table 3.2). Generally speaking, betweenness centrality scores – indicating the propensity to bridge clusters – are very low, even for top-scoring nodes, which suggests that the networks contain few exceptional brokers. Only the French military forces play a role in bridging several African armed forces that would otherwise not be connected, hence their high betweenness centrality. Once again, the isolation of Boko Haram in Nigeria contrasts sharply with the network of alliances among other Sahelo-Saharan and Libyan groups.

Spectral embedding

Now we will compute the spectral embedding of the social networks derived from the ACLED data. Initially, for the sake of simplicity, we will disregard the direction of the ties. The embeddings are shown in Figure 3.3. Negative ties resulting from recorded attacks are shown with a solid black line and positive ties resulting from alliances, or at least common purpose, are shown with a dotted line. The general structure is of a group of opposing poles representing groups whose primary relationship is that they attack or are attacked by groups at the other pole. The graph clearly shows how "bad" actors such as Islamist and Jihadist groups are grouped opposite "good" actors, both violent and non-violent. The contrast is particularly evident for Boko Haram, and its opposition to governmental forces and civilians from Nigeria and Cameroon, as well as for GIA-GSPC-AQIM, and its opposition to Algerian armed forces and civilians. The

Table 3.2 Top-scoring nodes for selected centrality measures: positive ties

Rank	*Eigenvector centrality*	*Betweenness centrality*
1	Military Forces of Nigeria (0.400)	Military Forces of France (0.111)
2	Police Forces of Nigeria (0.379)	Military Forces of Algeria (0.071)
3	Ansar al-Sharia (0.223)	Military Forces of Mali (0.070)
4	Shura Council of Benghazi Revolutionaries (0.260)	Military Forces of Nigeria (0.062)
5	Military Forces of Libya (0.193)	MNLA (0.052)
Mean	0.039	0.012
St. Dev.	0.082	0.022

Note
Scores are indicated between brackets.

graph also shows that the attack patterns of GIA, GSPC and AQMI differ significantly from those of Ansar Dine, MUJAO and Al Mourabitoune, which are located much more closely to the center of Figure 3.3.

Any measure that considers a group in isolation is unable to distinguish violent extremist organizations from military or police organizations because both have similar patterns of interaction. We therefore compute measures of outward and inward aggression based not on the number of such incidents but on the length of the relevant ties in the embeddings. A group's position in the embedding reflects its relationships with all of the groups with which it interacts, and, therefore, the length of the embedded ties is more revealing than simply the number of attacks. For example, the distance of a group from the center of the embedding reflects not only how many other groups attack it (or are attacked by it) but also the extent to which its enemies are similar to one another (close in the embedding). Thus a long tie reflects not only the existence and frequency of

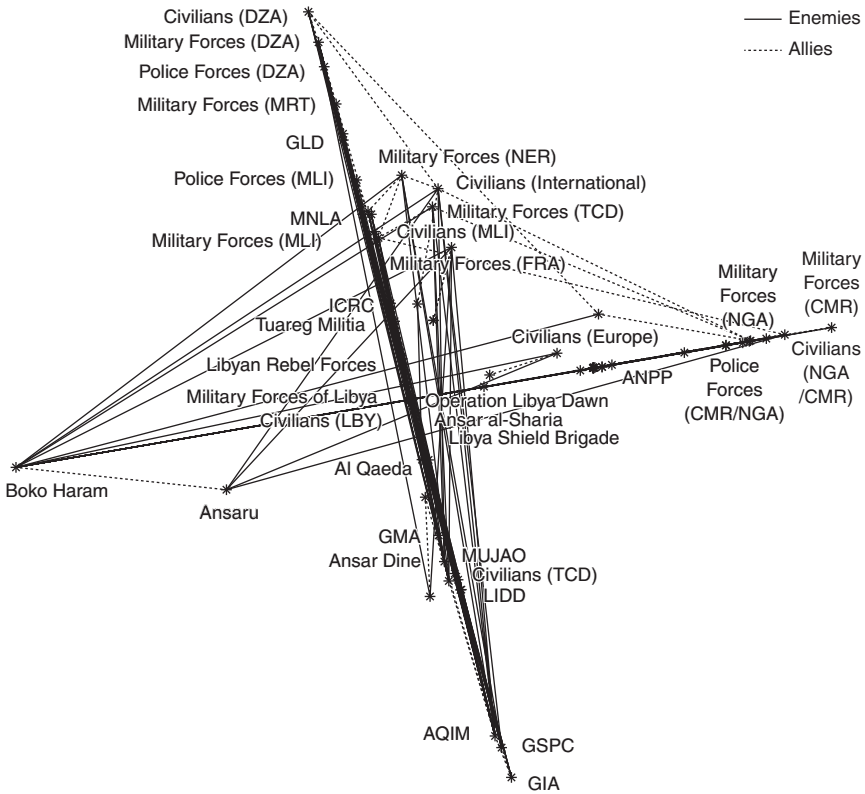

Figure 3.3 Spectral embedding showing positive and negative ties, 1997–2014.

Note
CMR: Cameroon; DZA: Algeria; FRA: France; LBY: Libya; NER: Niger; NGA: Nigeria; MLI: Mali; MRT: Mauritania; TCD: Chad.

attacks, but also their strategic intensity. In Figure 3.4, groups are plotted at the same positions as in the spectral embedding presented in Figure 3.3 but are labeled to distinguish their "levels of aggression," the difference between the outgoing aggression each group causes and the incoming aggression to which it is subjected. The points are color-coded: black means that a group generates more aggression than it receives; gray means that the group generates some outgoing aggression; and white means that there is no outgoing aggression.

The neighborhoods of groups presented in Figure 3.4 allow us to distinguish violent organizations (black, with almost all black neighbors as well) from national defense forces (black, but with many gray or white neighbors). In other words, most of the polar opposites are structurally distinct. "Bad" aggressive actors such as AQIM or Boko Haram tend to be in clusters of net aggressors, or isolated; "good" aggressive actors such as militaries tend to be in clusters with gray and white groups. Neutral actors such as the International Committee of the Red Cross (ICRC) tend to fall in the middle and are colored white. Victims are also white but tend to be located near their champions.

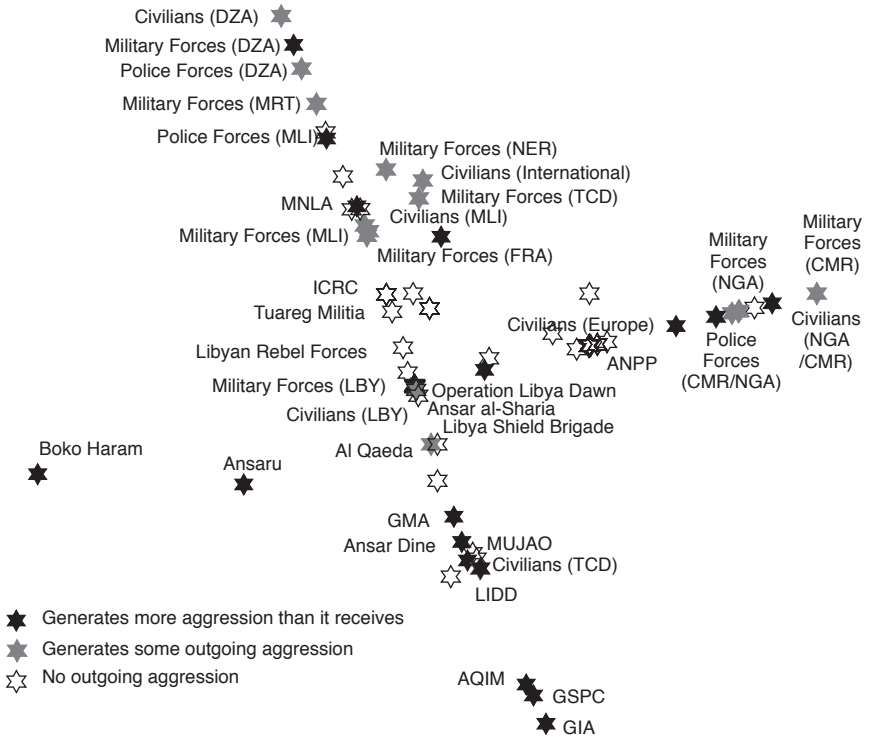

Figure 3.4 Spectral embedding showing levels of aggression, 1997–2014.

Note
CMR: Cameroon; DZA: Algeria; FRA: France; LBY: Libya; NER: Niger; NGA: Nigeria; MLI: Mali; MRT: Mauritania; TCD: Chad.

Northern Nigeria and Libya are particularly interesting, as they involve many violent organizations with strong structural constraints. From the literature we would expect northern Nigeria, where Boko Haram is particularly dominant, to have more of a dual structure than Libya, where myriad violent groups compete for control of the state and oil resources. We find that this intuition is correct, as Figures 3.5 and 3.6 show. Spectral embedding showing conflicts and cooperation for 37 organizations in northern Nigeria clearly confirms that Boko Haram is in conflict with virtually everyone, a situation comparable to that of Daesh in the Middle East, which opposes all governments and non-state actors – including Al Qaeda – in the region.

In Libya, spectral embedding conducted on 30 organizations highlights the ongoing conflict between pro-Islamist groups and pro-government forces (Figure 3.6). Islamist groups, on the left of the graph, are composed of Islamist militias such as Libya Dawn and Libya Shield, and of Jihadist groups close to Al Qaeda such as the BRSC, a coalition that includes Ansar al-Sharia, the February 17 Brigade and the Rafallah Sehati Brigade. These groups, based in Tripoli and in Benghazi, all oppose the Libyan Army, as indicated by several long ties. Among pro-government forces, on the right, are anti-Islamist militias such as the

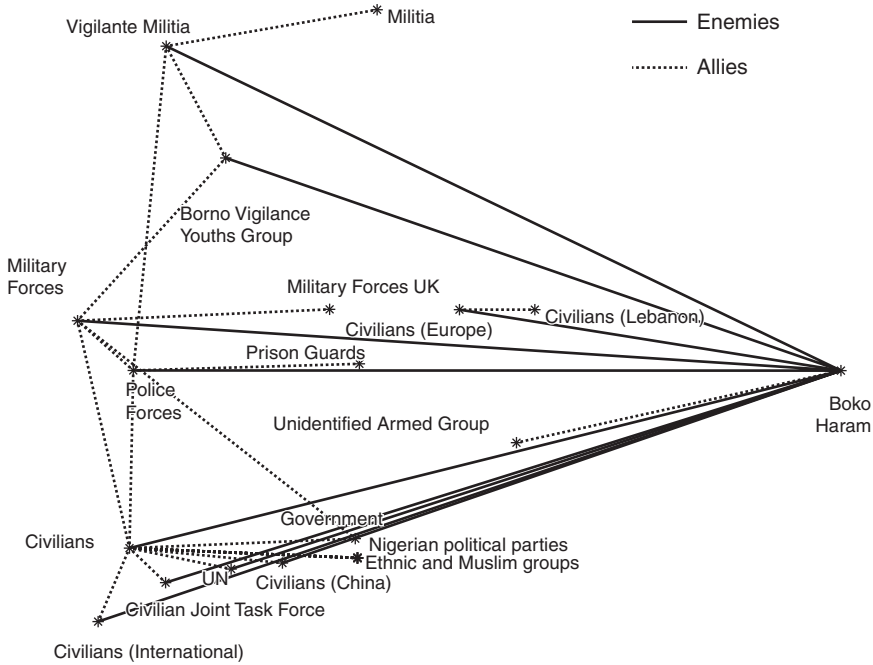

Figure 3.5 Spectral embedding showing positive and negative ties for 37 organizations in Northern Nigeria, 1997–2014.

Note
For the sake of clarity, the violent Nigerian organization Ansaru is not shown.

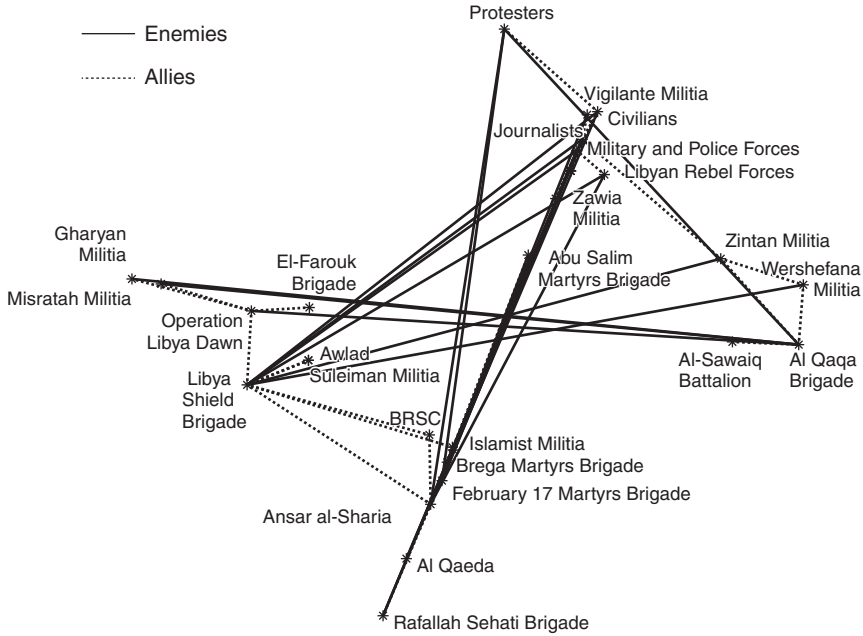

Figure 3.6 Spectral embedding showing positive and negative ties for 30 organizations in Libya, 1997–2014.

Zintan Militia, the Al-Sawaiq Battalion and the Al Qaqa Brigade. Civilians and journalists are located near the internationally recognized authorities of Libya.

Spatial analysis of mobility patterns

This section examines the spatiality of select Islamist groups that have developed attack patterns across the Sahel-Sahara region. For strategic and policy purposes, we are particularly interested in whether state border strategies and multinational military missions have had a measurable effect on the trans-border movement of Islamist groups.

Changing mobility patterns

The analysis that follows reveals no evidence of a "sanctuary" pattern in which Islamist groups make systematic use of a particular border area. However, Table 3.3 reveals that the movement of Islamist groups changed completely between 2004 and 2014: while the first seven years were marked by an apparent unpredictability of events across time and space, the last three years were characterized by a concentration of events, due to the outbreak of

Table 3.3 Spatial patterns: key metrics

Year	*Number of events*	*Cross-border movements (%)*	*Number of victims*	*Average distance between events (km)*	*Average distance to borders (km)*	*Average time between events (days)*
2004	15	43	103	478	132	27.3
2005	3	50	63	502	39	122.7
2006	3	50	15	675	334	209.0
2007	1	–	3	–	162	35.0
2008	8	43	17	411	63	44.8
2009	11	80	30	136	137	36.5
2010	17	63	75	708	199	18.4
2011	29	61	64	864	106	12.8
2012	103	7	153	234	148	3.5
2013	155	13	768	330	146	2.6
2014	44	19	143	463	154	7.5

the Malian conflict and the strategies adopted by some states to control their borders. This shift occurred in a political environment where the number of violent incidents and victims related to Islamist groups in Sub-Saharan Africa has been on the rise (Dowd 2015a). While only 30 events totaling 201 victims were reported between 2004 and 2008, there were 359 events and 1233 victims between 2009 and 2014. The intensification of attacks significantly reduced the average frequency between violent incidents, from an average of 44.8 days in 2008 to 7.5 days in 2014.

The region has always been characterized by a high level of trans-border activity. Figure 3.7 confirms that, until 2011, Islamist groups traveled extensively across borders and, in many regions of Mali, Mauritania, Algeria and Niger, without much risk of being apprehended. It became common for

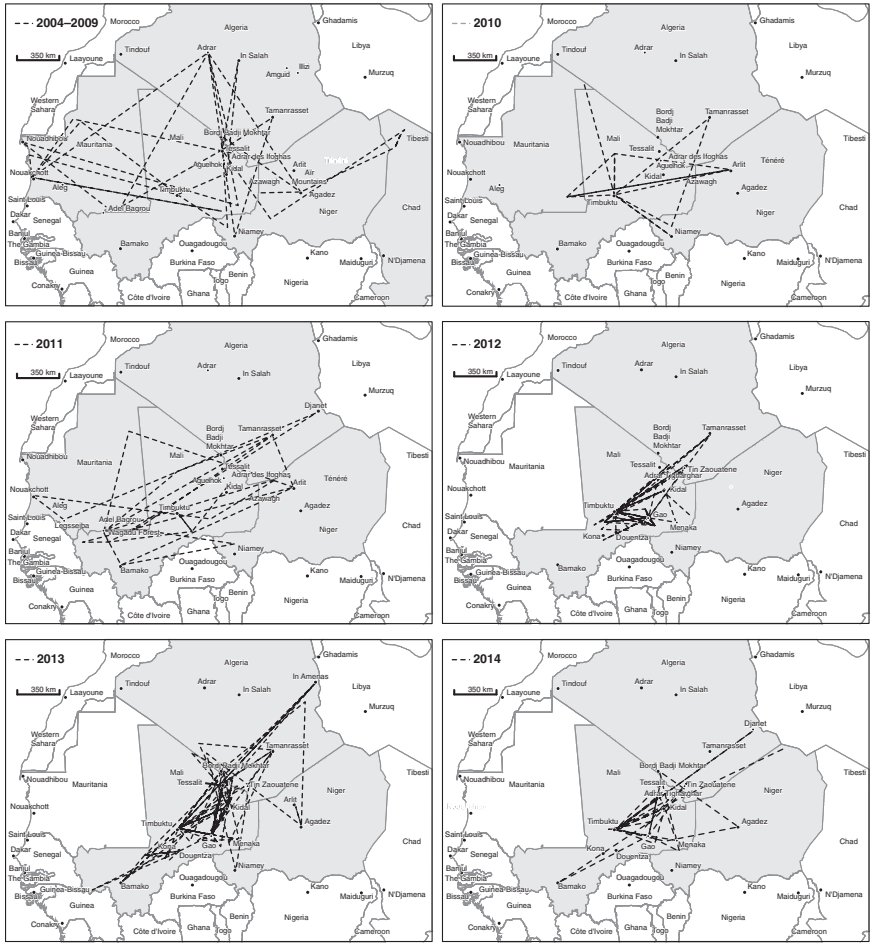

Figure 3.7 Events connected chronologically, 2004–2014.

successive events to occur hundreds or thousands of kilometers apart, in different countries and irregularly, from Algeria to Mauritania, the Mauritanian–Malian border and Niger. In 2005 and 2006, the average distance between two events exceeded 500 km, which is impressive given the harsh terrain and lack of road infrastructure, in particular in the Sahara. One of the best-known movements of this period is also the one that marked the beginning of the Saharan expansion of what would become AQIM. Between February 21 and April 11, 2003, 32 European tourists were kidnapped in the region between Illizi and Amguid in Algeria by Abderazak el-Para (born Amar Saïfi) and Abdelhamid Abu Zeid (born Mohamed Ghadir), two militants of GSPC. As Algerian security forces gave chase, the terrorists and hostages initially journeyed over 3000 km to northern Mali. After having spent several months establishing alliances with leaders of local nomadic tribes, they moved to Niger through the plains of Azawagh, the Aïr Mountains and the Ténéré desert, and ended up in the mountainous area of Tibesti in Chad where they were killed or captured, a second journey of over 2500 km through some of the most inhospitable environments on the planet.

In 2011, Mauritania and Algeria undertook a series of joint counter-terrorism operations aimed at AQIM's military bases. Such an attack took place in June in the Wagadu forest on the border between Mauritania and Mali. The central intelligence cell created to facilitate coordination between Saharan and Sahelian countries, known as the Combined Operational General Staff Committee (CEMOC), first met in Bamako in April 2011. Nonetheless, the level of regional cooperation remained low because Mali was not trusted by its neighbors, which accused it of colluding with Islamist groups. Henceforth, Mauritania and Algeria would conduct military operations in Mali when they deemed their interests to be threatened by the activities of transnational groups. The chronological succession of attacks by AQIM in 2011 shows a high intensity and percentage of cross-border movements. For example, AQIM claimed responsibility for a bomb attack in Bamako, the capital of Mali, on January 5, followed by a hostage taking in Niamey, Niger three days later. On February 1, these attacks were followed by an AQIM car bomb in the Mauritanian town of Adel Bagrou, the abduction of an Italian tourist in Djanet, Algeria, a day later, and the killing of a Mauritanian policeman by two members of AQIM in the region of Legsseiba near the north bank of the River Senegal on February 3.

The year 2012 contrasts sharply with the period 2004 to 2011 because most events transpired in Mali, and, to a lesser extent, Algeria. Following the fall of Colonel Muammar Gaddafi in Libya (2011) and President Amadou Toumani Touré in Mali (2012), a provisional alliance between Al Qaeda-affiliated groups and secessionists rebels of the MNLA launched a wide-ranging military offensive against the Malian Army. Over a matter of weeks, all major cities of northern Mali were seized, including Tessalit and Kidal in the Adrar des Ifoghas, where the offensive started, as well as Menaka, Timbuktu and Gao. New groups such as MUJOA and Ansar Dine were particularly active during this period and started to clash with their former Tuareg allies over the cities in the north of the

country and main lines of communication. Our analysis shows that during this period the distance between violent events and borders is more stable (approximately 150 km) than during the preceding period during which average distances to borders varied from 39 to 334 km.

In 2013, the French-led Operation Serval reasserted control over northern Mali. As French and Chadian troops progressed north, Islamist groups were driven from Kona, Douentza, Gao and Timbuktu, and were chased out of their stronghold of the Adrar of the Ifoghas. Operation Panthère, launched around Tessalit on February 18, 2013, successfully defeated them, possibly because the French and their allies adopted some of the principles of warfare that had made Islamists and rebels so successful in the region. Operation Panthère relied on a combination of airstrikes, artillery and ground combat operations conducted by the French, knowledge of the country provided by Tuareg guides and battle-hardened Chadian troops.

As in 2012, most events in 2013 took place in Mali and Algeria, along a southwest–northeast axis extending from Bamako in Mali to Tamanrasset in Algeria. While the French and their allies pushed north, the rebels of the MNLA seized Kidal and Tin Zaouaten from Islamist groups, and clashed with AQIM and MUJAO. The Algerian army also clashed with Islamist groups, fleeing Mali toward Libya. The most brazen terrorist attack was launched in January 2013 against the gas facility of In Amenas in Algeria where MUJAO and Al Moulathamoun coordinated their activities, resulting in at least 67 deaths. A decade after being expelled from Algeria, Al Qaeda-affiliated groups were back in the country. Later that year, a camp of Niger's military was hit by MUJAO in Agades in May, military barracks were attacked in Niamey in June by Those Who Sign in Blood, and two French journalists were killed by AQIM in Bamako in November 2013.

The spatial patterns of attacks in 2014 are similar: principally concentrated in northern Mali and, to a lesser extent, in southern Algeria, localized events resulted from the French offensive in the Tighaghar Mountains that killed many Islamist leaders, and from MNLA rebels clashing with MUJAO. Roadside bombs and suicide car bombings organized by Al Mourabitoune targeted the United Nations Multidimensional Integrated Stabilization Mission in Mali (MINUSMA). The French-led anti-terrorist Operation Barkhane replaced Operation Serval in August 2014, and relies on highly mobile forces. Contrary to previous military engagements that targeted "one country, one crisis, and one theater of operations," Operation Barkhane explicitly addresses the regional and cross-border dimension of terrorist activity throughout the region. The operation relies on three ports in the Gulf of Guinea, two main airports in the Sahel, and a series of Saharan outposts located at the extreme periphery of Chad, Mali and Niger to disrupt cross-border trafficking routes and terrorist networks. Considering that Algeria and Libya are beyond the reach of any foreign armed forces and that the French military is stretched to the limit, for the time being Operation Barkhane is the most ambitious military initiative at the regional level.

State border strategies

Do borders not matter if they cannot offer sanctuary? On the contrary, our analysis suggests that borders do matter because countries have put in place management strategies that affect the spatial patterns of Islamist groups. It supports Arsenault and Bacon's (2015) distinction between government will and capability to fight foreign terrorist groups.

States may have the military capacity to challenge transnational groups and choose to do so (see Table 3.4). In the region, Mauritania and Chad are probably the only countries that have both the military capacity to challenge transnational groups and have chosen to do so. Despite the small size of its armed forces, Mauritania adopted a number of strong military measures to control the flows of Islamist groups across its borders: it developed mobile patrols, attacked intruders systematically and established partnerships with local tribes. As our analysis revealed, this firm attitude, combined with a national strategy for deradicalization, has occasioned a significant decrease of violent events since 2012. In Chad, the government relies on mobile military forces that have proven their effectiveness not only against rebels coming from neighboring Darfur but also abroad. Chad's military has played a key role in the counteroffensive that eventually led to the reconquer of northern Mali in 2013. Chadian troops rely massively on light Toyota Land Cruiser trucks ("technical") mounted with weapons, which were for the first time successfully engaged in the surprise attack against the Libyan air force base of Colonel Gaddafi at Wadi Dum during the Aozou Strip conflict in the late 1980s. Land Cruiser pickups have the same advantages as the ubiquitous camels celebrated by T.E. Lawrence during the Arab Revolt of the mid-1910s: they are fast, easy to replace and carry a heavy payload.

Some states may also be in a position to deny foreign fighters access to their territory but choose not to do so for strategic reasons. Whether Algeria would have adopted this strategy is a matter of debate. On the one hand, having suffered from decades of political violence, Algeria is strongly committed to combating terrorism in the region and plays a major role in peace negotiations in Mali. During the Malian conflict, Algeria deployed tens of thousands of troops to secure its borders, which are probably the most heavily guarded in the region. On the other hand, Islamist groups would have been unlikely to emerge in northern Mali if Algeria's borders had been hermetically sealed. Many of the aforementioned groups originally hail from Algeria or are affiliated with organizations based there, and our work suggests that Algerian borders are easily crossed by

Table 3.4 Government will and capacity to fight transnational groups

		Will	
		Strong	*Weak*
Capacity	Strong	Mauritania, Chad	Algeria (?)
	Weak	Niger	Mali

Islamist groups, possibly to get food and oil supplies through informal arrangements with state representatives and local traffickers.

The third situation, where states may want to disrupt transnational groups without being able to project military power into borderlands, characterizes Niger. The 5700 km border of Niger has long been poorly guarded due to lack of men and material. AQIM and other groups have capitalized on the situation either to take hostages in the region or to move to the south of Libya, where numerous Islamist groups have found favorable conditions. Recent development should contribute to strengthening the ability of the Nigerien government to monitor its borders: in addition to the Barkhane operation led by French forces in the region, drones are now deployed in Niamey, a new American drone base is currently being built in Agades (Washington Post 2014), and Germany has announced that it will open a military base in Niger to support the UN Mission in Mali.

Finally, Mali exemplifies a lack of political will and ability to fight foreign Islamist groups. The gradual withdrawal of the state from the north of the country in the 2000s left Mali's borders unguarded and frequented by traffickers and militant groups. The differences observed between Niger and Mali, two Sahelo-Saharan countries with similar economic and human levels of development, is interesting in several respects. It appears that the border between the two countries is obviously both weakly guarded and porous, but it still matters. In addition to being an obvious resource for extremist groups and traffickers that can exploit it politically and economically, the border signposts a different composition of the polity and how it is politicized, for example, with regard to Tuareg rebellions. The main reason why Niger has not experienced rebellions in the 2010s and entanglement between Salafi-inspired rebels and rebels from minority groups seeking autonomy is because of the different composition of the polity. While the north of Mali has, since colonial times, been primarily governed by buying the loyalty of certain Tuareg tribes, Niger has implemented a long-term peace process that gives more decentralized powers to local municipalities in the north and ensures that key actors in previous rebellions are integrated within the state and military apparatus (Grégoire 2013).

Conclusion

This chapter has examined the structure and spatial patterns of violent extremist organizations in North and West Africa, with a particular focus on trans-Saharan Islamist groups. Building on publicly available data, we started by mapping how 179 organizations involved in political violence were structurally connected through conflict and alliances. Our results show that the network which connects actors in conflict has a low density, a low level of transitivity and contains few central actors, three typical features of negative-tie networks. AQIM is unequivocally the most connected organization, both in terms of the overall number of actors with which the group is in conflict, and the respective centrality of its enemies. In network terms, this is a liability. Divided into several clusters, the

positive-tie network has a long path-length distance, low density and low clustering coefficient, a structure that suggests that most organizations tend to build limited alliances rather than broad coalitions across the region.

We then combined the two networks and modeled the effect of having friends and foes simultaneously. Using the attack relationships, we also measured the level of outgoing and incoming aggression of each group. From this approach, five categories emerge. The first category includes neutral actors, represented in the middle of our graphs. The following categories include three kinds of groups that cluster together: victims, groups that are attacked more than they themselves attack, and groups that counter violence and thus attack more than they are attacked (e.g., militaries). The fifth category includes violent extremist groups that attack more than they are attacked, such as violent extremist organizations. Groups that are net attackers are indistinguishable at the level of individual behavior, but clearly separated into pro- and anti-violent extremism based on the groups to which they are close. This conclusion is in line with our original assumption that the propensity to use political violence concurs with a group's position in the social network.

The second section of the chapter mapped a series of 389 events related to nine major Islamist groups in the region. Spatial analysis suggests that violent events involving Islamist groups have followed different patterns depending on the period under consideration but reveals no evidence of a border 'sanctuary' because many Islamist groups seek to control the movement of people and (often illicit) goods. The inability to garrison a sparsely populated region such as the Sahel-Sahara makes it difficult to hold territory. This situation is similar to the one adopted by Daesh between Syria and Iraq, and radically different from the territorial objective of such groups as Boko Haram in Africa, or the Taliban on the Afghanistan–Pakistan border, for which the defense of a delineated territory is paramount.

While violence was concentrated almost exclusively within Algeria until 2004, cross-border movement has since intensified, following the establishment of military bases by AQIM in Mali. This suggests a "mobility" scenario similar to the Arab revolt of the twentieth century during which a highly mobile irregular force defeated the immobile and defensive Ottoman Turkish Army. While the desert is seen by many as a hostile environment that "distances and isolates [violent groups] from major population centers and force them to disperse rather than concentrate their forces" (USAID 2014: 16), our analysis suggests that until the French-led military offensive of 2013, military operations of trans-Saharan Islamist groups were "more like naval warfare than ordinary land operations, in their mobility, their ubiquity, their independence of bases and communications, their lack of ground features, of fixed directions, of fixed points" (Lawrence 1920: 14). More recently, Islamist groups have concentrated their operations in northern Mali as well as in southern Algeria, leaving Mauritania, Niger and Chad relatively unscathed. Owing to the Malian conflict and to a series of state and international military initiatives, cross-border movement has been on the wane in some countries, which seems to validate our original assumption that Islamist groups concentrate on border segments that are less heavily guarded and/or where informal arrangements with border officials are possible.

Our results have policy implications for governments and external forces involved in deterring politically violent organizations. First, unlike their adversaries, violent extremist organizations are socially and spatially connected across the regions; thus there is a need for collective security institutions that can help countries coordinate, build trust and go beyond ad hoc engagements. In recent years, several "Sahel" strategies have been initiated by organizations as diverse as the European Union (2011), the United Nations (2013), the Economic Community of West African States (2014), the African Union (2014) and the regional coordination framework G5 Sahel to address governance, security and development in the region. Building institutional capacity around common interests is likely to pay off in a region that is largely devoid of collective security institutions. Precedent also suggests that states outside the region will continue to play a supporting rather than a lead role. In addition to supporting capacity-building efforts already underway, Western governments should be prepared to mount a comprehensive whole-of-government effort in support of local authorities that will minimize their local footprint, while optimizing outcomes. From a military perspective, the fluidity of personal allegiances and mobility of actors across borders in the region calls for a mobile and flexible military response. Regional volatility notwithstanding, Operations Serval and Barkhane suggest that desert insurgents are not impervious to external attack. As Western armies and their African allies become more mobile and flexible in their regional responses to political violence, desert insurgency proves to be a double-edged sword that can also work against those who know the terrain best.

Appendix 1 Violent extremist organizations, 1997–2014

Abu Obeida Brigade
Abu Salim Martyrs' Brigade
Al Jihadia
Al Qaeda
Al Qaqa Brigade
Al-Burayqah Martyr's Brigade
Al-Salafiya
Ansar al-Sharia
Ansar Dine
Ansaru
AQIM: Al Qaeda in the Islamic Maghreb
Boko Haram
Brega Martyrs Brigade
El-Farouk Brigade
Falcons for the Liberation of Africa
February 17 Martyrs Brigade
Fighters of The Martyrs Brigade
FIS: Islamic Salvation Front
GIA: Armed Islamic Group

GMA: Mourabitounes Group of Azawad
GSL: Free Salafist Group
GSPC: Salafist Group for Preaching and Combat
Islamic Emirate of Barqa
Islamic State of Tripoli
Knights of Change
Libya Shield Brigade
LIDD: The Islamic League for Preaching and Holy Struggle
Martyrs' Brigade
MUJAO: Movement for Unity and Jihad in West Africa
Muslim Brotherhood
Nawasi Brigade
Nusur al-Sahel Brigade
Rafallah Sehati Brigade
Soldiers of the Caliphate in Algeria
Those Who Signed in Blood
Timizart Brigade

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4 Spatial and temporal diffusion of political violence in North and West Africa

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Introduction

The study of how crime and political violence diffuse across time and space has greatly benefited from the increasing availability of geo-referenced data and the use of spatial statistical analysis (O'Loughlin and Raleigh 2008; Zammit-Mangion et al. 2013; Metternich et al. 2017). In urban policing, for example, the design and use of hot-spot analysis based on historical data allows us to predict when and where various kinds of crime are most likely to occur, and to preposition policing assets accordingly (Braga 2005). In this limited sense, predictive modeling of crimes has been remarkably effective. The urban environment lends itself to this kind of analysis: criminals are creatures of habit, they tend to travel limited distances, and some areas are naturally more target-rich than others.

If we try to adapt this approach to attacks by violent extremist organizations in North and West Africa there are some obvious difficulties. Just as in urban settings, some natural targets attract repeated attacks; for example, foreign workers in West African capitals or government forces stationed on military bases. Most victims of recent conflicts in the region are, however, civilians, killed in a rather unpredictable manner by armed groups whose main objective is ethnic or tribal homogeneity (Kaldor 2012). In such "new wars," control over people, not territory, leads a multiplicity of state and non-state actors to build a complex ecosystem of affiliated and opposing groups that also constrain when and where an attack by a particular group might take place (Walther and Tisseron 2015; Zheng et al. 2015). Attacks also reflect competition between traffickers and violent extremist groups struggling to control trans-Saharan criminal networks, who often clash far from inhabited areas (Lacher 2012). Furthermore, many violent groups in the region do not limit their attacks to a particular "turf" as might urban gangs; instead, they move relatively freely across the region, including across state boundaries.

The situation is far removed from a conventional Clausewitzian framework, which recommends attacking the enemy with maximum force at its strongest point. Insurgent groups have fewer resources and compensate by striking at locations that maximize impact, even abstractly via publicity, while minimizing cost.

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Attackers often rely on guerrilla warfare. They avoid head-on confrontation, thereby blurring the line between zones of war and zones of peace. Naval battles are a more apt analogy: notwithstanding strategic constraints such as the need to blockade enemy fleets, the precise locations at which battles occur are not contingent upon terrain in the way in which many engagements on land are.

Against this background, this chapter explores the spatial and temporal diffusion of political violence in North and West Africa. To this end, it models the strategic landscape in a group commander's mind, taking into account that, far from being clinically abnormal, most terrorists pursue collective goals rather than personal fantasies (Sageman 2004; Horgan 2014). In that sense, most violent extremists may be seen as rational actors that tend to make choices based on costs and benefits, although their goals and actions are clearly not normal in a moral sense. The location of an attack requires a complex calculus that combines properties of the comparative attractiveness of targets, the physical geography of the terrain between the current location and potential targets, the obstacles and impediments to movement between the current location and targets, including borders that must be crossed, the difficulty of operating close to targets, and the need to maintain an element of surprise. We wish to understand what motivates or constrains a group leader to attack at a location other than the most obvious one: that is, the one that would yield the greatest overt pay-off.

This chapter leverages the Armed Conflict Location and Event Data project (ACLED) dataset that catalogues violent extremist incidents in North and West Africa since 1997. We use these data to generate a form of "social network" whose nodes are administrative regions, an approach similar to the one described by Batagelj et al. (2014), and whose edges are of qualitatively different types: undirected edges representing geographic distance, undirected edges representing the costs associated with having to cross borders, and directed edges representing consecutive attacks by the same group at two locations. We analyze the resulting network using spectral embedding techniques that combines these different edge types into a "map" of North and West Africa that depicts the permeability to attacks from the perspective of any violent group. This map of permeability reflects the impact of distance, borders and time on violent group actions, and so provides a first step toward principled planning, prepositioning and response.

The chapter proceeds as follows. The next section outlines existing literature on the two geographic features that are most likely to influence how attacks are conducted across space and time: the distance between places, and the impediment of state boundaries. The third section describes the geographical and temporal distribution of attacks in the region. The fourth section develops spectral techniques that model the effects of border costs and analyzes attack location over time. The fifth section discusses the main implications of our work before concluding.

Networks, space and borders

The common assumption that space shapes social relations is often based on physical distance. Proximity increases network density by increasing the propensity to have contact with other actors, which enhances individual integration, cohesion and shared values (Wellman 1979; McPherson et al. 2001; Hipp et al. 2011). Since proximity increases the probability of informal talks and social meetings, it is particularly valuable for the exchange of tacit and sensitive information. Face-to-face communication remains crucial, despite the rapid decrease of transport costs and the improvement of communication technologies that essentially favor the transmission of codified information (Liben-Nowell et al. 2005; Mok et al. 2010; Onnela et al. 2011). These general principles apply to violent extremist organizations as well, since they must often assess the advantages and disadvantages of conducting attacks in a distant location. Distance constrains attack locations in two ways. First, when attacks involve the same people or resources, these must be transported from one location to another, which takes time and costs money. Second, a distant location imposes transaction costs, such as unfamiliarity with the physical and social terrain, different languages and so on.

Borders are one important aspect of the effect of distance (Cerina et al. 2014). As Engel and Rogers (1996) and Borraz et al. (2016) showed, borders introduce price distortions that are equivalent to adding an extra distance between locations. Borders also limit social exchanges, even when people use social media (Takhteyev et al. 2012; Lee et al. 2011) and are a major impediment to labor market integration, despite formal agreements that promote the mobility of labor (Bartz and Fuchs-Schündeln 2012). In addition to hindering the mobility of goods and people, borders also have strong effects on political violence, which often occurs at the subnational level (Dowd 2016). Even when borders offer jurisdictional protection and opportunities for creating safe havens (Campana and Ducol 2011), they nonetheless distort distance and affect the mobility of armed groups. The effect of borders on the decision by a group to carry out attacks in more than one country can, therefore, be modeled as obstacles to be surmounted. The practical cause of the obstacle may be the overhead of the crossing, either overtly or covertly; differences in culture on the other side; or the increased risk associated with operating away from "home turf" where, for example, it may be less obvious who can or should be bribed.

This chapter presents a novel approach to border effects, which takes into consideration that, as the effect of borders increases, the resulting structure becomes less and less planar, and so a simple map representation becomes less and less accurate. The modification we suggest is instead to represent the locations where attacks have taken place as a network where the nodes are attack locations and the edges represent distances (increasingly modified) between them. Just as a mountain can make the travel distance between two points much longer than it seems to be from a planar map, we introduce virtual mountains to represent distances that are longer than they appear because of the presence of

borders. Borders are more non-homogeneous in their effect on travel times than mountains are, so to represent them we replace the natural structure with a network whose nodes are locations and whose edges represent the effective distance between these nodes. This network will not be planar, because effective distances will differ from physical distances, but our modeling technique allows them to be mapped back into two dimensions for visualization.

Geodesic and temporal distribution

The primary data source used in this chapter is the ACLED dataset that records violence and protest in North and West Africa over the period 1997 to 2015. Rich data for each incident are available, including timing, groups participating as attackers and victims/targets, and location, both in terms of latitude and longitude, and by administrative district (Raleigh et al. 2010; Raleigh and Dowd 2016). We restrict our attention to incidents that are clearly categorized as violent and which fall into one of the following categories: Battle with and without change of territory; Riots and protests; Violence against civilians; and Remote violence. Attack locations for our purposes are at the granularity of local administrative districts.

The uneven geography of attacks in North and West Africa

As one would expect, statistics show that the distribution of the 29,272 attacks by 921 groups at 1831 locations is not random. The location where the most attacks took place is near Benghazi in Libya, where 1230 attacks are recorded. However, the mean number of attacks per location is 16, and the mean number of attacks for the least-attacked 1600 locations is only 4.7; thus the distribution is highly skewed. If we consider instead how many organizations have carried out attacks at each location, the highest score is a location near Tripoli where 60 different groups carried out an attack. However, the mean number of groups attacking at a given location is 3.7. Of course, these highly skewed distributions mean that conventional hot-spot analysis can, and should, be carried out. However, in the North and West Africa setting it cannot be enough, owing to the constant shifting set of actors, allegiances and motivations.

These observations make it clear that this setting is far removed from conventional warfare where ground is taken and held; and that participants do not form large, stable blocs. Rather, interactions are fluid and consist of smaller, constantly shifting members and alliances (Bencherif and Campana 2016). The decision about where to carry out an attack is constrained by two sets of factors: properties of the target, and properties of the attacking group. Properties of the target may be used for risk analysis; targets are attacked for a reason, and their attractiveness at any given moment assessed. The more difficult properties are those of the attacking groups, whose internal processes may be opaque, and who are fundamentally motivated to do the unexpected. However, such groups cannot attack at will – they are constrained by

resources, broadly interpreted. We focus on the constraints imposed by distance (which matter in a non-urban environment) and the way borders distort distance.

Figure 4.1 shows the distribution of all attacks by latitude and longitude. Attack locations are not evenly distributed across the region. The main clusters of violence, by decreasing order of fatalities reported in the ACLED data, are located in Nigeria, Northern Algeria, Northern Libya, the Chad–Sudan border and along the Gulf of Guinea. Nigeria is especially affected by violence, with 50,144 fatalities, most of them resulting either from ethnic violence, fights to control oil production in the Niger Delta, or from attacks by Boko Haram. In West Africa, the border between Chad and Sudan remains a focus of conflict due to persistent fighting between the Sudanese government and rebels in Darfur. The portion of the Gulf of Guinea that extends from Abidjan to Banjul has suffered from a succession of civil wars in the Ivory Coast, Liberia, Sierra Leone and Guinea-Bissau.

In North Africa, Algeria has also been markedly affected by violence, principally due to activity by three organizations in conflict with the Algerian government: the Armed Islamic Group (GIA), the Salafist Group for Preaching and

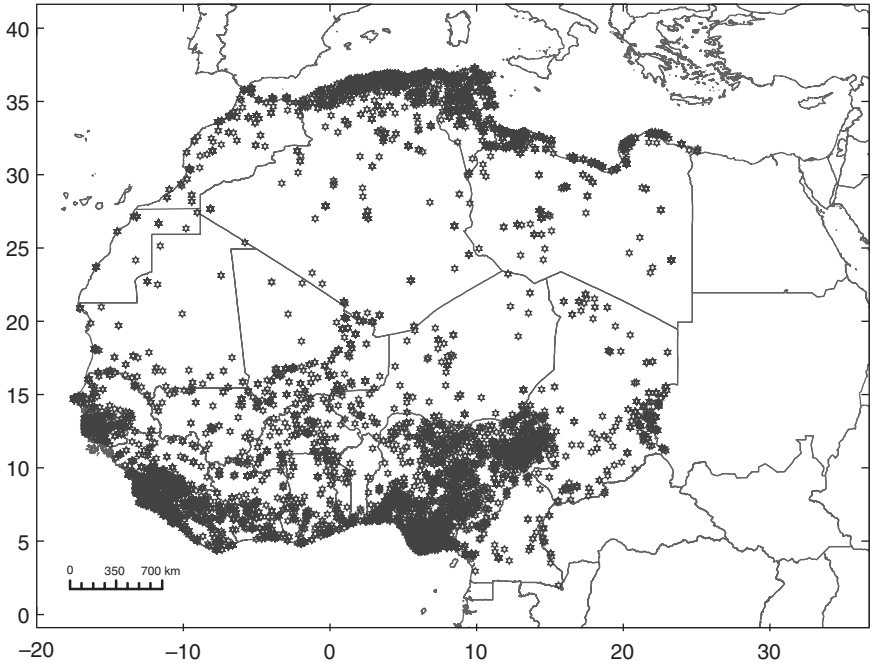

Figure 4.1 Positions of all attacks by latitude and longitude.

Note
The Mediterranean coast can be seen at the top of the figure, the Atlantic coast on the left and the Gulf of Guinea on the lower side.

Combat (GSPC) and Al Qaeda in the Islamic Maghreb (AQIM). Violent Islamist groups were involved in 93 percent of the 12,050 fatalities in Algeria. With 12,610 fatalities reported, Libya is another epicenter of violence, principally due to the overall political instability that followed the ousting of Colonel Gaddafi in 2011 and the subsequent civil war. In comparison, the Sahel and Sahara regions are less immediately affected by violence, with the notable exception of northern Mali where secessionist rebels and Islamist groups have opposed the government since 2012. More than 1200 of the 2761 victims of violent events reported in Mali from 1997 to 2015 died in an event involving one or several Islamist groups, including AQIM, Ansar Dine, the Movement for Oneness and Jihad in West Africa (MUJAO) and Al Mourabitoun. In Mauritania, where violent Islamist groups have also been active, the number of victims resulting from clashes with such groups is much lower, with 86 fatalities, while in Niger, the number of victims (997) has increased rapidly due to Boko Haram.

Some of the organizations whose attacks are captured in the dataset tend to focus on a single country. For example, several of the countries considered suffered civil wars over the period under consideration, and others had extended conflicts over presidential successions. However, it is still noteworthy how often organizations from one country carried out attacks in another. For example, the Islamist group AQIM, historically based in Algeria, has conducted numerous attacks in neighboring countries, such as Niger, Mauritania and Mali. Boko Haram is also responsible for attacking civilians and security forces in Niger, Chad and Cameroon. The transnational activity of violent organizations has prompted many governments of the region to carry out attacks abroad. At the beginning of the 2010s, for example, the Mauritanian military destroyed military bases belonging to AQIM in Mali. More recently, Chad sent troops to both Nigeria and Cameroon to fight Boko Haram.

Temporal distribution

Over the past 20 years, North and West Africa have experienced episodic violence. As shown in Figure 4.2, the total number of fatalities was particularly high during the 1990s, the "decade of despair" for Africa due to a rise in the number of conflicts on the continent that contrasted with the general decline observed elsewhere in the world at the end of the Cold War (Themnér and Wallensteen 2014). Our data, which capture the last three years of the 1990s, highlight the high number of victims resulting from civil wars in Liberia (1989–1997 and 1999–2003), Sierra Leone (1991–2002) and Guinea-Bissau (1998–1999). The return of political stability to Sierra Leone and Liberia at the beginning of the 2000s coincides with the beginning of the first civil war in the Ivory Coast (2002–2007). From the mid-2000s onward, the rise of violent Islamist groups, shown in black, is evident. Apart from the peak in fatalities in 2011 due to the second civil war in the Ivory Coast (2010–2012), the majority of the victims of recent conflicts are involved in clashes with violent Islamist groups, and their number is on the rise.

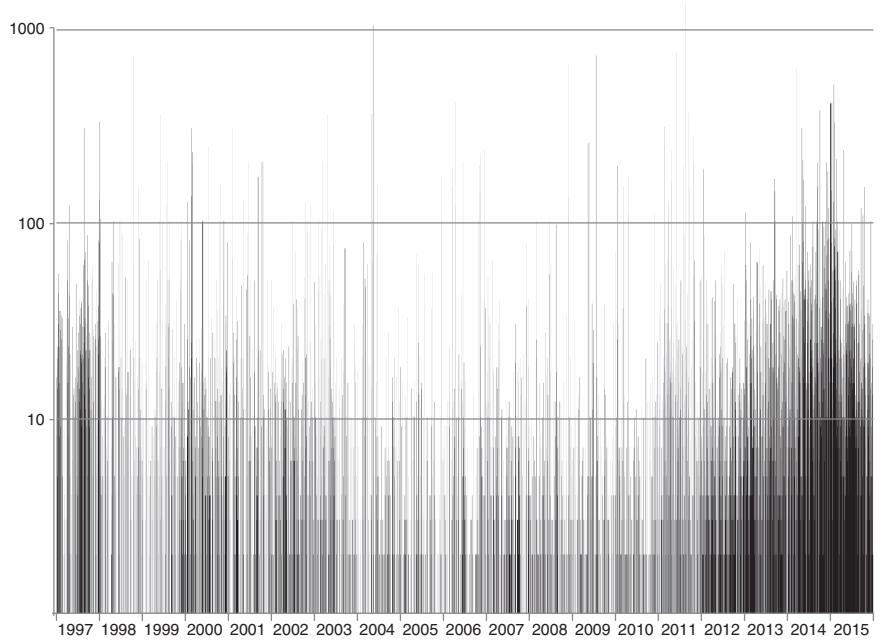

Figure 4.2 Fatalities related to all groups (in gray) and Islamist groups (in black), 1997–2015.

Modeling with spectral embeddings

We begin our modeling with a network derived from the location data by building an $n \times n$ adjacency matrix, A, with rows and columns corresponding to locations, and whose ijth entry is the weight of the edge connecting them. If the edges are undirected, then the ijth and jith entries are the same, and the matrix is said to be symmetric. The matrix has 1831 nodes representing the attack locations, fully connected by edges whose edge weights are the geodesic (great circle) physical distances between them. These distances were calculated from the latitudes and longitudes using the haversine function.

Spectral embedding of graphs

While networks are a natural way to represent data involving nodes and connection patterns, the adjacency matrix representation is difficult to understand. Two approaches to making network data intelligible are used: graph drawing and graph embedding. Graph drawing, on the one hand, attempts to provide the most understandable visualization of a network by placing the nodes and edges so that they do not occlude one another, while still placing nodes that are similar as close to one another as possible. It emphasizes clarity of the resulting picture.

Graph embedding, on the other hand, tries to represent a network as accurately as possible, so that the distances between each pair of nodes are as close to their similarity in the network as possible, at the expense of producing a picture that may be hard to understand directly. Graph drawing produces a representation that is qualitatively accurate, while graph embedding produces a representation that is quantitatively accurate.

We will use spectral embedding (Spielman 2011; von Luxburg 2007), the most effective of the graph embedding approaches, to represent networks in geometric form. This requires a mathematical technique with two main steps.

First, the adjacency matrix, A (of distances in our case) is converted to one of a family of Laplacian matrices. We begin by using the combinatorial Laplacian, L, given by the matrix equation: $L = D - A$ (4.1), where D is the matrix whose ith diagonal entry is the total edge weight of the edges connected to node i, with all of its other entries zeros. Since A is symmetric, so is L. In other words, the diagonal entries of L are the (weighted) degrees of each node, and the off-diagonal entries are the negatives of the corresponding edge weights in the adjacency matrix. Second, an eigendecomposition of L is computed such that: $L = Q \Lambda Q^{-}$ (4.2) where Λ is a diagonal matrix of eigenvalues, in decreasing order, Q is the $n \times n$ eigendecomposition of L, and the superscript dash indicated matrix transposition. If the network is connected, then the final eigenvalue is zero, and we ignore the final row of Q. The k rows preceding it may be interpreted as the coordinates of each node of the graph in a k-dimensional space. In other words, if we take the n rows of Q and the $k = 2$ rows n-1 and n-2 of Q, we can use these as coordinates to place points corresponding to the n nodes in a two-dimensional rendering of the network.

This spectral embedding comes with strong mathematical guarantees that it is the most faithful representation of the network structure in k dimensions (Spielman 2011). From an intuitive viewpoint, the effect of spectral embedding is to begin with the cloud of points representing the nodes of the graph in a space of dimension n-1, in which the distances between each pair can be represented exactly. The eigenvectors are then oriented along orthogonal directions for which the cloud has the greatest variation: the n-1st eigenvector along the direction of greatest variation, the n-2nd along a direction orthogonal to this with the next greatest variation, and so on. Choosing $k = 2$ creates a projection of the graph into the two directions that most accurately represent the distances between every pair of nodes, given the constraints from all of the other nodes.

Before we apply this spectral approach to the attack location network, we must alter the way in which edge weights are used. The edge weights in a network should be large for nodes that are strongly connected and small for nodes that are weakly connected. Distances, however, are the exact opposite – locations that are far apart (and so weakly associated) have large values for their mutual distance. The edge weights need to be inverted so that close locations have large weights and vice versa. There are several ways to do this, but we choose to subtract each distance from equation (4.1) $\times$ the longest distance between any pair of locations in the network.

In the figures that follow, the nodes of the network are color-coded by the countries in which they are located. Figure 4.3 shows an embedding of the attack locations based purely on geodesic distance between all pairs. The difference between this and Figure 4.1 (based on position) is that the network of locations draws them closer together when attacks happen close together in space. In other words, hot spots get hotter. National borders may be seen when the locations are color-coded by country, but would be much less obvious if they were not. This indicates that there are few differences in the locations of attacks along the Gulf of Guinea or along the Mediterranean coast; but Burkina Faso and Mali show clear separations from their southern neighbors; and there is a strong separation between attacks in North Africa and those further south. Mauritania, and to some extent Algeria, are bridges between these two regions.

The effect of linear (additive) border costs

We now examine the effect of the presence of borders as it might enter into the calculus of a group planning its next attack. A simple way to model the cost of

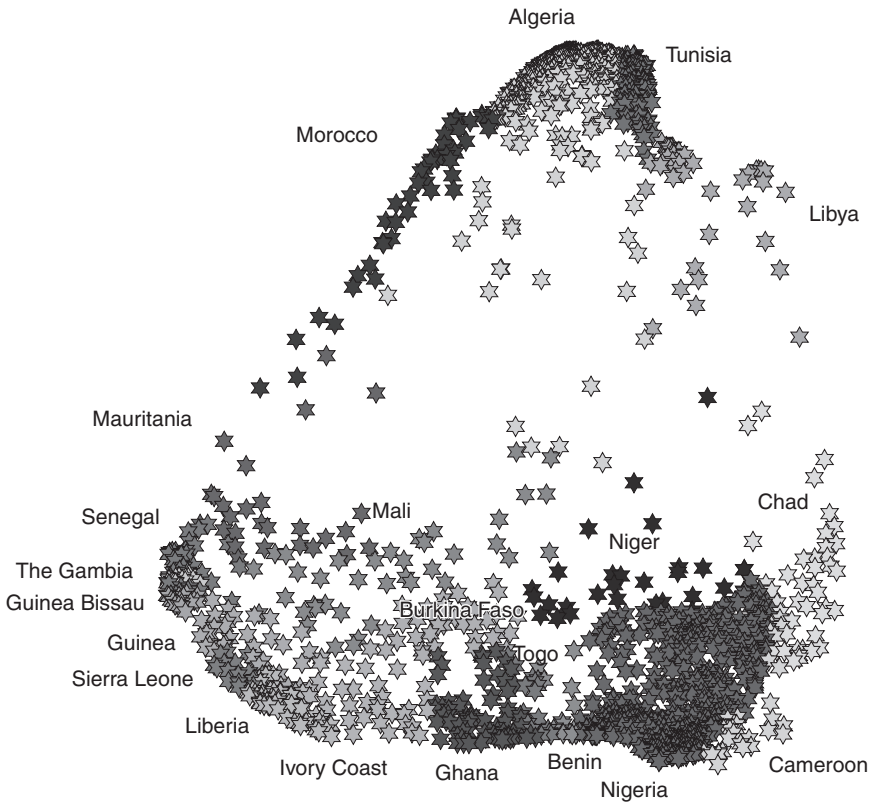

Figure 4.3 Spectral embedding based on geodesic distance.

crossing a border is as an increased distance between origin and destination. For example, assuming typical speeds of 20 km/h for travel, the addition of 100 km to account for crossing a border captures a delay of five hours caused by the overheads of crossing.

We first compute the number of borders that must be crossed to pass between all pairs of the 21 countries under consideration. This calculation was based on the great circle distance between a median point in each country but, when such a route would have required crossing many borders and a slightly longer route would have required crossing many fewer borders, the lower number of border crossings was used. For example, a direct path from Sierra Leone to Niger passes through Guinea, the Ivory Coast and Burkina Faso, but a path through Guinea and Mali crosses fewer borders without adding much distance.

In a model where border crossings are modeled as artificial added distances, the effect of multiple crossings is linear, since crossing two borders is twice as expensive as crossing one. Given a distance equivalent for each border crossed, we add this distance to the edge weight associated with each pair of nodes before inverting distances as described earlier.

Figure 4.4 shows the embedding when borders are modeled as equivalent to an increased distance of 50 km between countries. The maximum distance between attack locations in the dataset is almost 5000 km, so this is a small

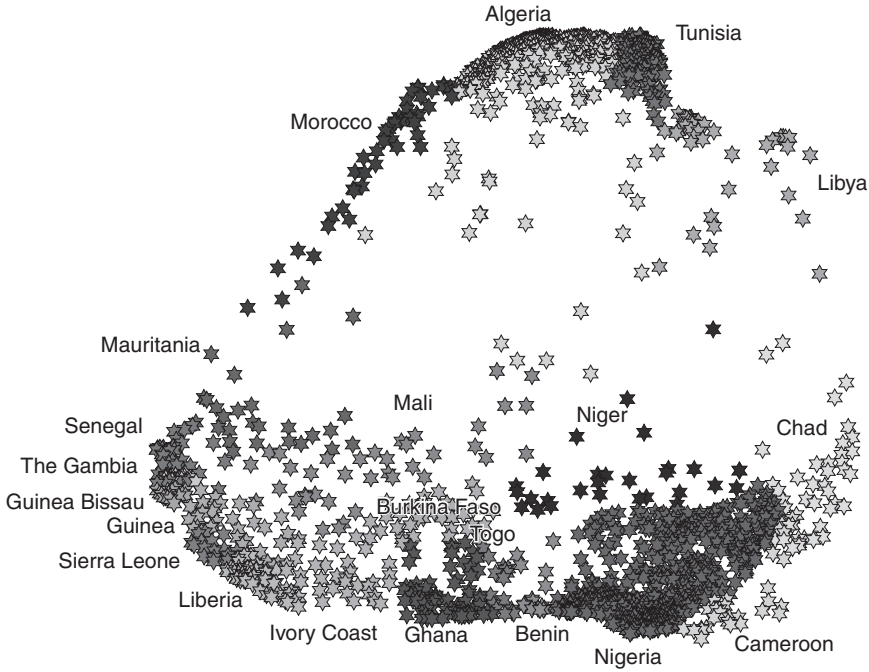

Figure 4.4 Spectral embedding with borders modeled as equivalent to distances of 50 km.

distortion, and indeed the differences between Figures 4.3 and 4.4 are too small to see at this resolution. However, when this distortion is increased to 100 km, the situation changes. Figure 4.5 shows the resulting embedding. On the one hand, attack locations in different countries now begin to separate in the visualization, indicating that they have become less similar, especially along the Gulf of Guinea. On the other hand, the border between Algeria and Tunisia shows little change, indicating how similar attack locations in these countries are. When the effect of a border is increased to be equivalent to 500 km, Figure 4.6 shows that locations clearly separate by country: cross-border locations seem less similar, and locations within the same country, by contrast, seem more similar to one another.

From the perspective of a group leader at a particular location and considering the location for a next attack, these results suggest that the presence of a border has little influence until the potential overhead of crossing that border is at least equivalent to the costs of 100 km of intra-country travel. This has implications for the amount of effort a country should put into hardening its border to have any effect on violent extremist organizations attack calculus.

Non-linear border costs

While an argument could be made for linear border costs, it seems more plausible that the perceived cost of crossing borders is non-linear. For example,

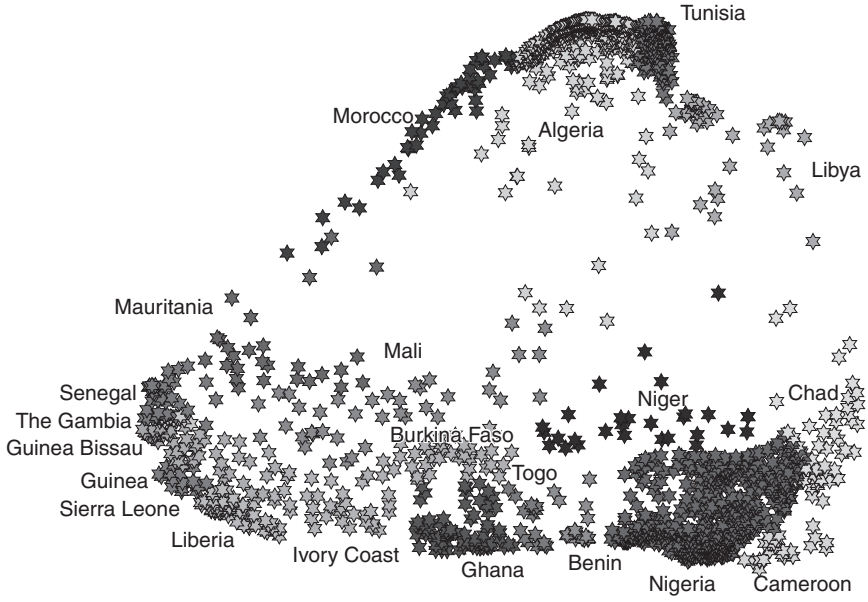

Figure 4.5 Spectral embedding with borders modeled as equivalent to distances of 100 km.

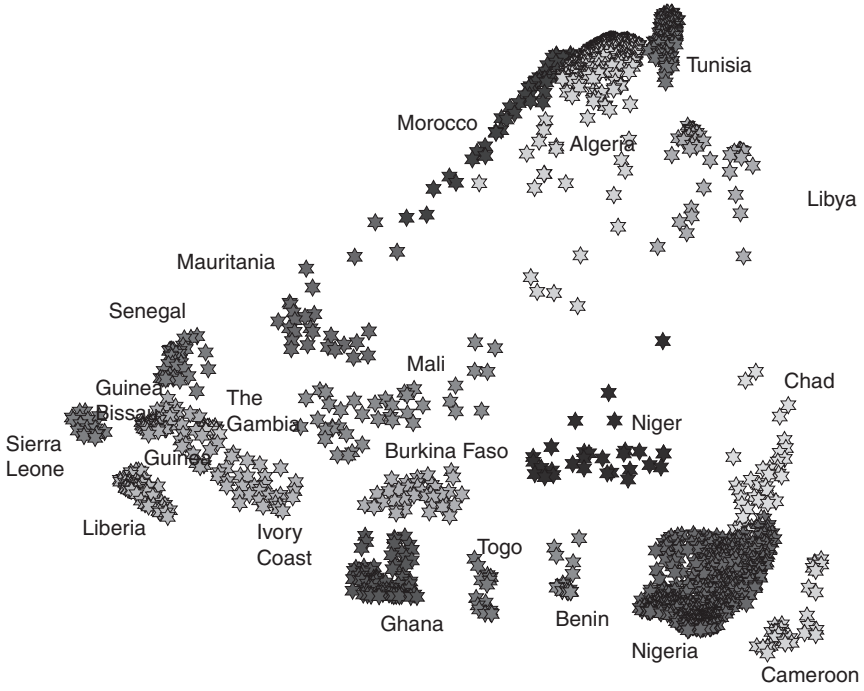

Figure 4.6 Spectral embedding with borders modeled as equivalent to distances of 500 km.

suppose that the probability of interdiction at any given border is 20 percent. Then the probability of interdiction when crossing two borders is 36 percent, since there is an 80 percent chance of successfully crossing the first border, and an 80 percent chance of success at the second border, so the probability of crossing both successfully in sequence is $0.8 \times 0.8 = 0.64$. Thus a group planning an attack two countries away should perceive it as substantially more costly than one in a neighboring country.

There are arguably two ways in which groups might frame non-linear border costs. On the one hand, a group with pan-national ambitions, such as AQIM, must exert its influence by carrying out attacks in countries that are far away from its center of influence. For such groups, a border-crossing cost might be appropriately framed in terms of success rate, and values as large as 95 percent would be necessary for them to succeed across states. On the other hand, a group whose interests are primarily domestic, such as Boko Haram, may regard borders as substantial impediments to their choices of attack locations, both because of the discomfort of operating in another country, and the reduced impact such an attack may have on their local agenda. For such groups, a much more substantial cost associated with crossing borders, perhaps 50 percent, may frame their calculus appropriately.

A border adjacency matrix for the 1831 locations was computed by setting the ijth entry to a given border success probability (between 0 and 1) raised to the power of the number of borders between the country of location i and the country of location j. If the probability of success is 0.95, then the result is $0.95^0 = 1$ for locations in the same country, 0.95 for locations in neighboring countries, $0.95^2 = 0.9$ for locations two countries apart, $0.95^3 = 0.86$ for locations three countries apart, and so on. If the probability of success is only slightly smaller, the effect becomes more pronounced. For a probability of success of 0.9 per border, the rate of success for crossing two borders sequentially is $0.9^2 = 0.81$ and for three, $0.9^3 = 0.73$.

Borders as a separate layer

Non-linear border costs cannot be represented as an addition to the representation of distances, because their impact depends on the particular pairs of locations being considered. Another way to incorporate their impact must be found. We do this by considering locations to be connected by two kinds of relationships: the obvious one based on how far apart they are, and the other by how many borders must be crossed on the path between them. Each of these two "maps" looks roughly similar, but it is the differences between them that are most interesting. Our strategy is to align or reconcile them into a single representation that captures the effects of both kinds of distance simultaneously. We can then compute the closeness of any two locations taking full account of both relationships.

We have two adjacency matrices: one captures geodesic closeness and one captures border-based permeability. Both have the property that larger entries mean nodes are "closer." Our aim is to embed the network in such a way that the distance between points in the embedding reflects not only their physical distance apart, but also the effect of the number of borders that lie between them.

To do this we construct a new network and use a spectral technique to embed it (Skillicorn and Zheng 2014). The new network is built as follows: each node is replicated into two versions, a dark-gray version and a light-gray version. The dark-gray versions of the nodes are connected using the adjacency matrix based on distances and the light-gray versions are connected using the adjacency matrix based on border crossings. We can think of these two sub-graphs as forming two layers. Now we connect each of the pairs of replicated nodes by new (say, black) edges. Thus we have a single graph with dark- and light-gray nodes, and dark-gray, light-gray and black edges.

The question that now arises is how to assign weights to the new, black edges. The larger these weights are, the more the two layers are forced to be "aligned." We can imagine that, in the larger graph, edges behave like springs that pull the nodes they connect with a force proportional to their edge weight. In each layer, nodes are pulled together based on their closeness (in the dark-gray layer) or cross-border accessibility (in the light-gray layer), but they are also pulled together by how similar their "role" is in both layers at once. Note that the edge weights in the distance layer are much larger than those in the border layer.

To see how to assign weights to the black edges, we convert the adjacency matrices to random walk matrices by computing the sum of edge weights in each row, and dividing the entries of each row by its sum. The matrix entries are now values between 0 and 1, which can now be interpreted as probabilities. The name "random walk" comes from imagining a walker who inhabits the network, moving constantly from node to node along the edges. At any given node, the walker chooses which node to visit next by choosing from among the outgoing edges in proportion to their probabilities. The random walker view of a network is quite elegant: for example, the proportion of time that a random walker spends at each node is a measure of its importance, since important nodes tend to be well connected and so easy to visit regularly.

A variation of a random walk matrix, with better properties, is a *lazy* random walk matrix. Here the entries of each row are divided by twice the row sum, so that the entries sum to 0.5. The remaining 0.5 is placed in the diagonal position. The interpretation is now that the random walker makes decisions among the outgoing edges as before, but may choose, with probability 0.5, to remain at the current node for the next step.

We use this as a model to motivate the new $2n \times 2n$ random walk matrix. The entries corresponding to each sub-graph are mapped to values of between 0 and 0.5, the diagonals are left as zeros, and the remaining 0.5 probability is assigned to the black edges between the layers. Thus, from a random walk perspective, a lazy random walker behaves in each layer as it would before, but can move from layer to layer with probability 0.5 on each step.

The random walk matrix for the larger graph is bigger ($2n \times 2n$), but most of the extra entries in this matrix are zeros. The top left-hand corner is the random walk matrix from the distances, the lower right-hand corner is the random walk matrix of border-crossing permeability, and the other two corners are diagonal matrices of the edge weights of the black edges, and so are mostly zeros. The cost of computing an eigendecomposition depends on the number of non-zero values in the matrix, so computing an eigendecomposition for the bigger graph is not much more expensive than computing one for each of the existing networks separately.

Now the standard spectral embedding algorithm may be used to convert this larger adjacency matrix to a Laplacian, compute its eigendecomposition, and embed the resulting graph in a two-dimensional space. In this random walk embedding, each location is represented by embedded dark-gray *and* light-gray points. The distance between the two points corresponding to the same location (the length of the embedded black edge) reflects how different their roles are from the perspective of distance and the perspective of borders. Locations for which these points are far apart are of particular interest.

Figure 4.7 shows the full embedding of the two-layer graph with border-crossing success probability set to 95 percent. The dark-gray versions of the nodes lie around the outside of the embedding, being "pushed" apart by the effect of borders; the light-gray versions of the nodes lie further toward the center, pulled inward by a relatively smaller effect of border-crossing costs; and the black lines indicate the magnitude and direction of the difference for each location.

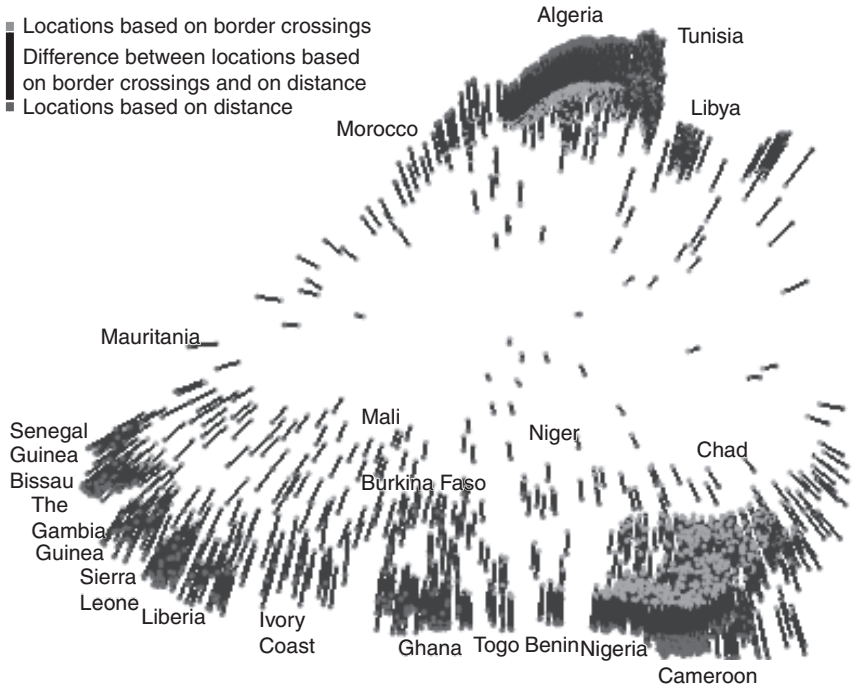

Figure 4.7 Embedding of two-layer graph with border crossing (probability: 0.95).

Note
Dark gray nodes: locations based on distance; light gray nodes: locations based on border crossings; black lines: difference between the two. Borders push locations apart by amounts that depend on the global similarities.

Figure 4.8 shows the embedding of the locations based on distance, which represents our dark-gray nodes color-coded by the countries in which they are located as before. Comparing Figure 4.7 with Figure 4.5, where borders were represented as equivalent to distances of 100 km, shows that the spread of locations is not dissimilar – but there is a greater spread from east to west as expected, given the number of borders along the Gulf of Guinea.

Figure 4.9 shows the difference between locations based on distance and on border crossings. The black lines, also color-coded by country, make it clear that the effect of borders is to spread locations further apart from a virtual center in southern Algeria, a fixed point where the distance to all other locations in North and West Africa is proportional to the number of borders that have to be crossed to reach them. This point corresponds to the commune of Bordj Badji Mokhtar, in Adrar Province, Algeria. Bordj Badji Mokhtar and the adjacent trading town of Al-Khalil in Mali have long been known for being a crossroads for arms and drug traffickers and a central node in the transnational

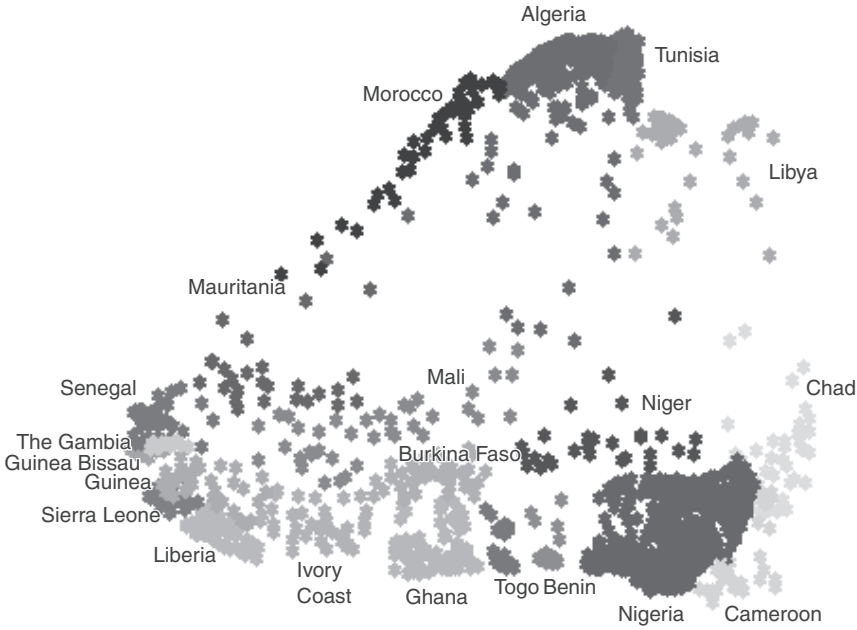

Figure 4.8 Spectral embedding based on non-linear border costs, with border crossings (probability: 0.95).

network that connects local Tuareg tribes with the Algerian military and secret police (Scheele 2012). Between 2008 and 2014, Bordj Badji Mokhtar has been the theater of repeated clashes between Algerian governmental forces and Islamist groups such as AQIM and MUJAO. Other examples of particular remote but "rational" locations for crossing numerous borders include the small Algerian town of Tin Zaouten, which has experienced several major conflicts between Algeria, AQIM and the MUJAO since the beginning of the 2010s, and the Salvador Pass located at the crossroads between Niger, Libya and Chad, more than 1200 km from the nearest capital city, where traffickers and violent Islamist groups have clashed with French and Nigerian military forces stationed in the area.

Figure 4.10 shows a similar figure but with the border-crossing success rate reduced to 80 percent. With this assumption, the distortion introduced by borders is quite different. Locations in the north and center of the region show the same radial distortion, in which locations appear further apart than they are owing to the presence of borders. However, for the countries in the southwest and southeast, the distortion introduced by borders is oriented orthogonally to the distortion previously seen. For example, Sierra Leone and Liberia "push" one another apart rather than being influenced by more distant countries such as Algeria and Tunisia; and Nigeria and Cameroon show a similar pattern.

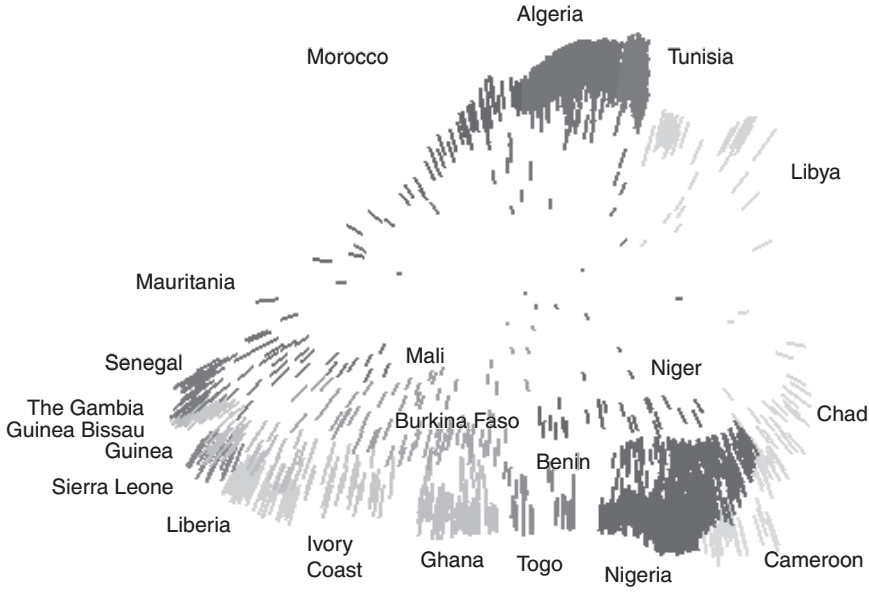

Figure 4.9 Difference between embedded positions based on distance and border crossings (probability: 0.95).

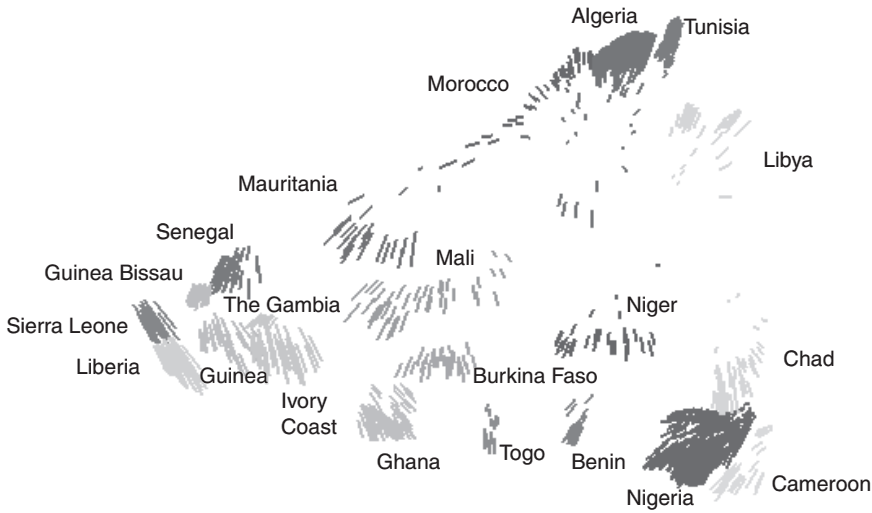

Figure 4.10 Difference between embedded positions based on distance and border crossings (probability: 0.80).

Figure 4.11 shows what happens when the probability of successfully crossing borders is reduced to 50 percent, reflecting the mindset of groups with primarily local agendas. Distortions caused by borders are almost completely local, depending primarily on a few near neighbors. Because of the roughly triangular shape of North and West Africa, the net effect is that most of the distortions align toward the center but, since the probability of crossing a substantial number of borders drops quickly to a small value, the countries are only weakly connected. Note that Cameroon sees the rest of the region through the lens of Nigeria, from which it is now indistinguishable. This situation reflects well the increasing interdependence between the two countries since Boko Haram, historically active in Nigeria, spread to adjacent countries in 2014.

Time sequence as a separate layer

Thus far, we have ignored the dimension of time. The attacks carried out in the name of a single group may have involved separate subgroups, and so be more or less independent. However, it is natural to consider the sequence of attacks by each particular group. Unless subgroups of the organization act completely independently, there are some constraints on the sequences of attacks, and these may offer insights into the group's constraints or strategy. For example, if the same subgroup carries out successive attacks, they must travel from one location to another, perhaps taking or gathering material; and perhaps crossing borders as well. Even if the attacks are not carried out by the same individuals, the time sequence reflects, at some level, strategic thinking by the group's leadership.

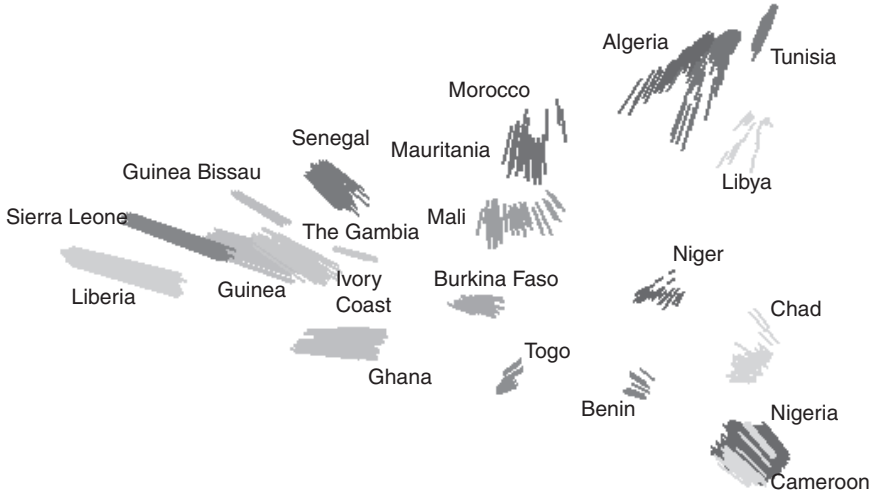

Figure 4.11 Difference between embedded positions based on distance and border crossings (probability: 0.50).

From the ACLED dataset we extract a third adjacency matrix connecting successive attacks by the same group by a directed edge of weight 1. If the ijth entry is 1, then the jith entry is unlikely to be, so this matrix is typically asymmetric. Our analysis includes Boko Haram and nine other Islamist groups who share a common historical and ideological background and form several components of a single, flexible network: Al Qaeda, Ansare Dine, AQIM, GIA, Al Mourabitoune, GSL, GSPC, MUJAO and Those Who Signed in Blood (Walther and Leuprecht 2015). Note, however, that AQIM has historically occupied two very distant regions: the Kabylie region in northern Algeria, where its "national" emir Abdelmalek Droukdel is still supposed to reside, and the Sahel-Sahara region where several sections (*katibas*) have developed since the mid-2000s. Over the years, major divergences of opinion have developed between the "national" leadership in Kabylie and its Saharan section leaders (Walther and Christopoulos 2015), who have been repeatedly criticized for their autonomous and often criminal operations (Associated Press 2013; Wojtanik 2015). Furthermore, the two groups are often unable to communicate freely due to the distance and counter-terrorism operations of the Algerian military. Mapping the chronological activity of both AQIM's Kabylian leadership and Saharan sections would give the impression that much of the attacks span the Saharan desert, which is probably not realistic. To solve this issue, we have considered separately all violent events located south of In Amenas in Algeria.

Figure 4.12 shows the locations' embedded distance as demonstrated in Figure 4.3, but overlaid by black edges connecting sequential attacks by the same organization; that is, whenever there is a 1 in the newly constructed directed adjacency matrix. The map confirms the pan-regional ambition of the nine Islamist groups affiliated with Al Qaeda, who conducted attacks from Mauritania to Chad, often across borders. Their attack patterns diverge greatly from those of Boko Haram, the majority of whose violent attacks took place within Nigeria itself (Dowd 2015, 2016).

We now want to extend the embedding to include the time sequence structure. We do this by extending the layered model to three layers: one representing geodesic closeness, one representing border permeability, and one representing sequence in time.

The fact that the edges are directed in the new third layer introduces three complications to the embedding process. First, in an undirected network, the importance of a node is proportional to the total edge weight of the edges connected to it. This is no longer true for a directed network – a node may have many heavily weighted incoming edges, but it may not be important if these upstream nodes themselves are hard to reach. Importance derives from the entire graph rather than being a local property. Second, a random walker can become trapped at a single node that only has incoming edges (but this is easy to detect), or in a region that collectively has no outgoing edges (and this is expensive to detect). Third, a random walk matrix is not necessarily symmetric, which the standard embedding algorithm requires.

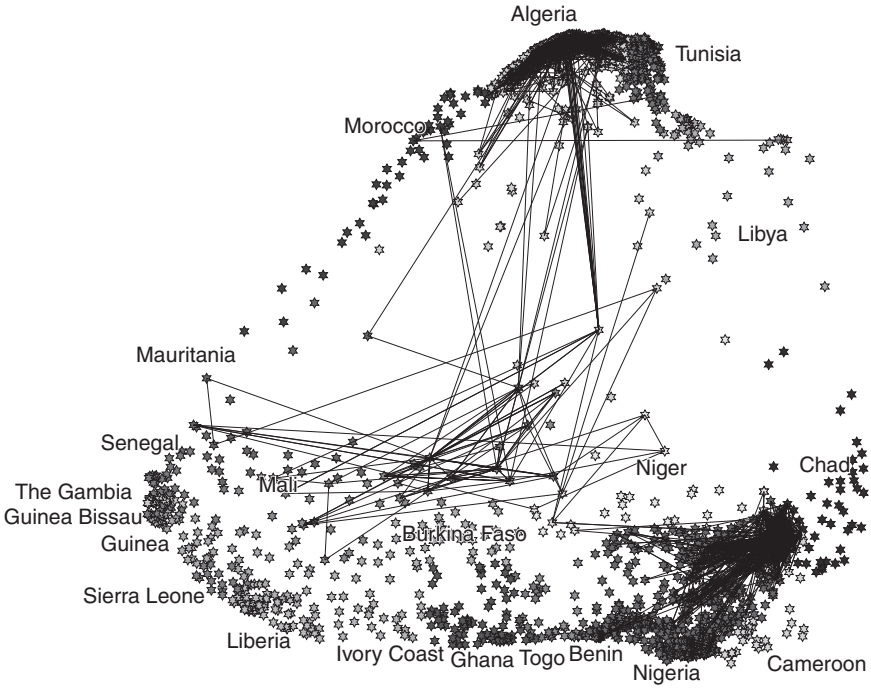

Figure 4.12 Spectral embedding overlaid by lines connecting sequential attacks by the same group.

Note
Only ten groups with pan-national intentions are shown.

A solution to these problems was developed by Chung (2006), but it has a number of drawbacks. Instead, we use a newly developed approach that models edge direction by replicating each node into an outgoing version and an incoming version, and connecting these in the obvious way by *undirected* edges. This reduces the problem to embedding an undirected graph at the expense of adding more layers. As before, new edges have to be added between the versions of the same nodes. This approach has been validated against the known social structures of the Florentine families in the time of the Medicis (Skillicorn and Zheng 2014), and has been applied to understand the social networks of criminal networks (Skillicorn et al. 2015).

The construction is as follows. We combine three layers: the border accessibility layer (with success probability 0.95 since these groups have pan-national ambitions), the geodesic distance layer, and the time sequence layer. In the previous construction we converted each layer into a random walk matrix, divided the total edge weights incident at each node in half, and allocated half to edges that remain in the layer (proportional to their original values) and half to

the edge to the other layer. We cannot follow this strategy for the three-layer graph because the directed adjacency matrix cannot be converted to a random walk matrix. However, we do use the same intuition: the total outgoing edge weight incident at each node should be divided in half, with half remaining within the layer and half allocated to the edges to other layers. There are now two other layers, so the amount allocated to other layers is split equally between them.

The edge weights in the border accessibility layer are between 0 and 1; the edge weights in the geodesic layer are between 0 and ~4500, and the edge weights in the time sequence layer are between 0 and 16. If we use this approach directly, edges from the geodesic distance layer to other layers will dominate, since their weights are so much larger than those of the other two layers. To compensate we must apply a normalization to each of the sub-graph adjacency matrices to make the magnitudes of the edge weights comparable between the layers. We do this by dividing the entries for each layer by the mean of the non-zero entries in that layer. Almost all non-zero values are close to 1, with the exception of larger entries in the sequence layer.

A further (highly technical) complication arises because of the extreme sparsity of the sequence layer; in comparison, the other two layers are fully connected. If the sequence layer were to be embedded by itself, there would be two strong clusters with a weak connection between them, and many isolated nodes. The isolated nodes would be embedded at the origin, with the two clusters in a dumb-bell shape. When this layer is connected into the larger graph, the other two layers have the effect of connecting all of the nodes in the sequence layer to one another indirectly by paths of small weights. Nodes with no connections within the sequence layer are embedded close to the center, nodes with weak connections within the sequence layer are embedded further out, and nodes that are strongly connected within the sequence layer are embedded furthest out. This is, of course, the inverse of what we would want, namely important nodes being embedded centrally. The solution is to further normalize the edge weights in the sequence layer by making the sum of the edge weights incident to each node constant – so that nodes without any connections in the layer are given a heavily weighted self-loop, nodes with weaker connections in the layer a less-weighted self-loop, and so on. The result is a three-layer structure, with added *directed* edges between copies of the same node in the different layers.

We now replicate each layer into two more sub-layers, one to which the outgoing edges are attached, and one to which the incoming edges are attached. All edges are now undirected; thus we can use the standard embedding (on a $6n \times 6n$ matrix whose entries are almost all zeros). The newly replicated copies must also be connected to one another by edges whose weights depend on the incident edge weights of the pair. This construction is intricate but essentially straightforward (Zheng and Skillicorn 2015).

The resulting embedding is shown in Figure 4.13. Note the difference from Figure 4.12, where sequence plays no role in embedded position. It is clear that Boko Haram attacks are local to Nigeria, with occasional incursions into Chad and

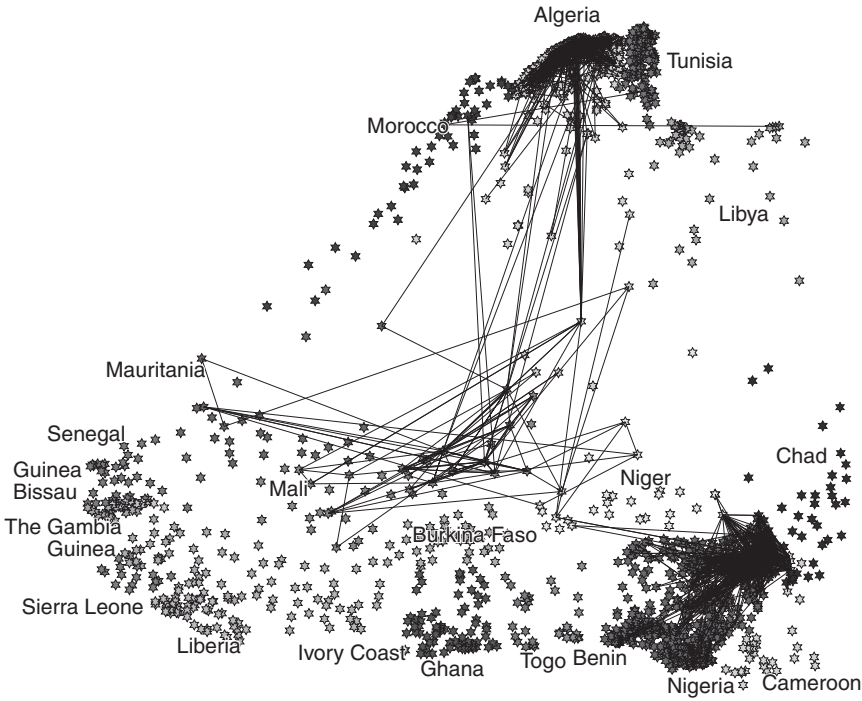

Figure 4.13 Spectral embedding of the three-layer network, with locations attacked sequentially appearing more similar.

Cameroon. There are several locations that are the site of repeated attacks. The attacks by Islamist insurgents affiliated with Al Qaeda are concentrated in northern Algeria, but another nexus of attacks may be observed in southern Algeria, Mali, Mauritania and Niger. These second groups of attacks are much more widespread physically. Note that, as locations attacked sequentially appear more similar, locations where this does not happen are spread further apart in the embedding.

Conclusion

The aim of this chapter was to provide a dynamic description of the structure of conflict in North and West Africa across time. While necessarily limited in the causal inferences that may be drawn, our findings significantly advance the state of knowledge in network science and conflict studies.

First, the chapter expands our understanding of the way structural data can be extended into the analysis of conflict through the application of spectral embedding techniques to network science. We have shown how newly developed extensions to spectral embedding techniques (with typed edges, and directed

edges) that have been previously applied to conventional social networks, where humans are nodes and relationships are edges, may be extended to social networks in which the nodes are locations and edges represent distances as perceived by the actors concerned.

Second, the chapter suggests ways to think differently about the nexus of space and conflict: commonly we think of networks as a function of place; instead, this chapter inverts this convention to think of place as a function of networks. Place is no longer simply a physical location – its positional and strategic importance define it, and these change as the movements that give rise to networks change. Our study of political violence in Africa is an application of ideas from social networks to networks of a different kind, reflecting the fact that place is a human construct as well as a physical one. An interesting finding of our work is to show that some of the most violent places in the region are situated virtually in the middle of nowhere. In the extreme north of Mali or in the northeastern reaches of Niger, violent events create ephemeral places of action hundreds of miles from any inhabited areas. Instead of thinking of conflicts as a function of place per se, we can now see them as a function of movements. Since movements, unlike place, are not fixed, strategic consideration may now be given to ways to influence, alter or disperse some movements while generating and encouraging others (Retaillé and Walther 2013). We have long known that conflict is dynamic; this chapter posits a method to model that dynamism, one that makes it possible to respond to conflict and violence in terms of strategic consideration of movement rather than simple spatial coordinates.

Finally, spectral embedding of these networks of places provides an insight into the potential mindset of group commanders as they consider their next actions. Geodesic distance obviously plays a role, but other constraints are also significant. Borders are one such constraint. We have modeled the effect of borders from two perspectives: that of a group with pan-national aspirations, and that of a group with more local aspirations, and shown that the mental landscapes produced are very different. In other words, we can show that strategic intention affects the framing of the transaction costs imposed by crossing borders and resource constraints of operating across vaster distances, and so affect the calculus of a group's leadership. Constraints as simple as habits also play a role: there are some pairs of locations where attacks took place.

Our findings have implications for conflict prevention and early intervention in the region. For example, consider the practical problem of anticipating, after an attack by a particular group, the probable timing and location of the next attack. Without extrinsic information, the conventional approach is simply to draw concentric circles around the location of the current attack, and to assign a reduced probability the more distant each location. However, if we know that borders represent an impediment to movement (whose cost we can estimate), or that habits play a role, or that target groups are themselves mobile, then these contours of probability should be warped, concave in shape where movement in that direction is hard, and convex when movement is easy (even mentally easy,

as in a habit). Our technique forgoes this complex, ad hoc manipulation, and warps the space instead, so that locations that are easier to reach (physically, border-crossing wise, or strategically) are embedded closer together, and locations that are hard to reach are embedded further apart. As a result, concentric circles again demarcate regions that are equally likely to be the site of the next attack. In other words, a concentric circle drawn on any of the embeddings included in this chapter represent locations at similar strategic distance from its center, given the cost assumptions associated with that figure.

Myriad other measures potentially modulate the role of distance in projecting the "next" place. The varying difficulty and desirability of border crossings for migrants into and within Europe is one example: some countries are attractors and so the distance to them may seem shorter than they are in the mental calculus of migrants, but some borders are harder to cross, making distances that involve them seem longer than they are. The ability to incorporate these multiple modulating factors with distance, to create a mental map that combines all of these varying criteria into a framework that migrant populations may hold and informs their behavioral logic enables both insight and strategic reaction in what may otherwise appear as wholly unpredictable settings.

Our approach to political violence gets us closer to a prototype of predictive modeling of conflict of the sort that is widely used by urban police to anticipate crime. We can now model some of the decision-making calculus that informs leaders' decisions with respect to potential target sets and resource allocation by weighing the costs and benefits of such decisions in the light of transaction costs, such as those imposed by borders. Here we have treated all borders as equally difficult barriers, but the methodology would also allow more detailed modeling. For example, the efforts by the Mauritanian government to enhance their border security since 2011 by increasing patrols and working with local tribes make this border effectively more difficult to cross, and this could be added into the border cost matrix to recalibrate the mental landscape, not only of the adjacent countries but of groups from much further afield.

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Part II

Transnational extremism and policy responses

5 Nigeria's Boko Haram

Local, national and transnational dynamics

Caitriona Dowd

Introduction[1]

The spread of Islamist violence into new regions and with renewed intensity on the African continent presents an urgent threat to civilian security, political stability and economic development in the region. Since its emergence in 2009, the violent Nigerian Islamist group commonly referred to as "Boko Haram"[2] has evolved from a nationally oriented militia group, to an internationally networked armed organization with a growing presence in an increasing number of regional countries. This geographic and tactical evolution has presented challenges to the establishment of a consensus around a coherent analytical narrative and conceptualization of the group. Early analyses contended that Boko Haram is a primarily domestic phenomenon, mostly concerned with affecting social and political change within Nigeria, and influencing Nigerian political élites and stakeholders (Dowd and Raleigh 2013; Eveslage 2013; Oftedal 2013), with the physical diffusion of militants and transnational factors offering a limited explanation for the geography of Islamist violence (Dowd 2015). By contrast, more recent characterizations emphasize the group's transnational reach, threat to regional security, extra-territorial alliances and seemingly global agenda for action (Karmon 2014; Bearzotti et al. 2015; Comolli 2015; Onuoha 2014; Weeraratne 2017).

Although explicitly spatial analysis has rarely been applied directly to, or called upon as evidence in, these debates (Walther and Leuprecht 2015), issues of spatiality, territoriality and geography are not incidental to our understanding of Boko Haram: in fact, they are central components of a comprehensive theory of group strategy, ideology and agenda, and hence have generated extensive debate. At the core of this contention lie critical theoretical and empirical questions, including: (1) How can the nature of armed groups be best understood – through their actions, their statements, or a combination? (2) How can we account for armed group evolution and change in tactics, statements, ambitions and actions? And (3) How can we interrogate the presumed role of factors such as ideology, strategy and territory in violence, and their interrelationships with one another? For example, does ideology drive particular territorial or tactical strategies, or do tactical considerations drive territorial and ideological adaptation?

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Fundamentally, transnationalism can represent many different things in a conflict. First, it may reflect the involvement of external neighboring states, or international or regional powers, in confronting a militant group within its country of origin, without the group itself expanding its reach beyond its borders (Ansorg 2014), or similarly, foreign fighters being recruited into a nationally contained conflict (Malet 2010). It may involve a group active across borders eliciting a similarly internationalized military and policy response (Tull and Weber 2015). It can refer to regionalized conflict systems in which militants move across borders in the pursuit of "sanctuary," safe havens and rear operating bases (Salehyan 2007; Walther and Leuprecht 2015). Alternatively, it may reflect transnational alliances between and across groups operating in different geographic spaces (Bacon 2014; Asal et al. 2016). Finally, it can characterize a group which has actively and deliberately set out to pursue a transnational, perhaps even global, violent political and social agenda for change (Agbiboa 2014a).

In spite of this growing body of research on the divergent components of transnationalism and its diverse manifestations in contemporary conflicts, the explicit ways in which Boko Haram – and at the same time, other violent Islamist groups – exercise and manifest their transnationalism remains under-explored. It is often assumed that violent Islamist groups automatically pursue an actively global agenda and that territorially expansive violence will follow, owing to the typical association of violent Islamism with a network of rootless, globally interconnected militants. However, not only does in-depth research attest to the complexity of the internal debates within such organizations concerning the relative focus which should be placed on domestic versus transnational or global activities (Steinberg and Werenfels 2007; Hansen 2013), but the advancement of spatial analytic techniques, and the greater availability of finely grained, geocoded conflict event data both make it possible to interrogate the precise dimensions of this transnationalism in new and robust ways.

This research seeks to leverage these recent advancements in order to interrogate the question of *what kind* of transnationalism Boko Haram engages in. To do so, I trace the development of Boko Haram's geographic profile through analysis of conflict event data drawn from the Armed Conflict Location and Event Dataset (ACLED) (Raleigh et al. 2010). Employing concepts from the geography of diffusion and contagion, the study distinguishes between the escalation, relocation and containment of violence, in addition to violence occurring at spatially discrete flashpoints, in order to more precisely understand the dynamics of this evolving organization.

A study of Boko Haram's geographic profile reveals the following features: first, group violence was characterized by escalation and expansion during the period 2009 to 2012, as violent activity attributed to the group increased in frequency and intensity, and spread outward from its northeastern strongholds across much of Nigeria. Thereafter, the period 2013 to 2014 witnessed Boko Haram becoming increasingly subject to containment as military pressure on the group mounted, and violent events became more heavily clustered in the northeast of the country. Third, in contrast to the group's evolving global rhetoric,

Boko Haram's recent increasing geographic reach internationally during the period 2015 to 2016 represents a process of relocation, rather than escalation and expansion. Boko Haram's activity has indeed spread across borders, but it has failed to retain operational capacity and presence in many of its former sites of activity within Nigeria, highlighting that this transnationalism is a response to military pressure and restrictions on movement. In this way, Boko Haram's territorial profile of violence parallels the evolution of other armed Islamist groups, including Algeria's former Salafist Group for Preaching and Combat (GSPC), now Al Qaeda in the Islamic Maghreb (AQIM), which increased its territorial reach southward into the Sahel while reducing its presence within Algeria itself (see Harmon 2010; Walther and Christopoulos 2015). This relocation has also occurred at the cost of much of the flashpoint violence Boko Haram carried out in earlier years. Critically, as Boko Haram's reach within Nigeria has contracted, it has relocated to nearby regions in neighboring countries.

These spatial patterns nuance and qualify assumptions regarding the expansive nature of Boko Haram's transnationalism, demonstrating instead that the group is contracting and being contained in an ever smaller space, with ever decreasing territorial scope and operational capacity. Moreover, these findings present potential avenues for future research, and opportunities to robustly explore them, at the core of the question of the role of ideology in violent Islamist groups: critically, if transnational action is primarily a strategic and tactical consideration, rather than a deliberate and ambitious strategy for international action, what does this mean for our conceptualization of violent Islamist groups as globally interconnected and transnationally ambitious? Finally, the findings point to the value of spatial analysis in identifying not only whether a group is transnationally active, but specifying the precise nature of that transnationalism, in order to understand trends and patterns in violence. This chapter will focus on one dimension of transnationalism only: the physical presence and activity of armed groups across borders. Other manifestations of regionalization or transnationalization, such as international linkages between groups, the movement of cross-border financial flows, resources or trafficked goods, or the engagement of regional powers in a transnationalized conflict system, are beyond the scope of this study alone. In so doing, the chapter contributes to emerging research agendas seeking to demonstrate the added value of spatial analysis in understanding and conceptualizing conflict processes, dynamics and actors.

Transnational violent Islamism

The transnationalization of political violence is a growing focus in conflict studies: while conventional approaches to understanding civil war have emphasized domestic factors such as inequality, state capacity and internal social divisions, a growing body of research emphasizes the potential for conflict spillover, the physical diffusion of violence from neighboring states, the effects of "bad" neighborhoods, and the use of neighboring states as "rebel sanctuaries" for groups seeking to evade capture (Buhaug and Gleditsch 2008; Salehyan 2007,

2008; Schutte and Weidmann 2011; Weiner 1996). Even as civil wars take on the mantle as the most common form of conflict in the post-Cold War international system, these nominally "internal" conflicts are rarely wholly internal, with frequent opportunities and incentives for external and transnational actors from other violent groups, to neighboring states and transnational civil society to become engaged, and with conflicts fueled by the cross-border flow of goods, finances and human resources in the form of recruits (Checkel 2013)

In contrast to this important transnational focus, recent trends in political geography research have brought the question of the subnational scale to the forefront of the disaggregated study of conflict. An understanding of subnational spatiality is central to the fundamental dynamics of contemporary political violence: conflicts rarely occur throughout an entire state, or with equal intensity everywhere. Conflicts tend to be concentrated in particular regions and locations, and it is in the significance of those areas and their characteristics that the drivers of conflict can be identified. As Cederman and Gleditsch (2009: 488) note, "[I]f civil wars are local phenomena, specific to particular areas and actors or groups, then there is no reason why the relevant local characteristics should be captured in national-level measures."

Recent research in conflict studies has emphasized the importance of the subnational level as the unit of analysis, as it provides a more spatially differentiated explanation for the concentration of conflict in particular regions and spaces within often large, diverse and differentially governed states (Buhaug et al. 2011; Raleigh et al. 2010). This is particularly the case in states with multiple, often contemporaneous but spatially discrete forms of violence (Buhaug and Lujala 2005; Raleigh 2014). In wider conflict data research, scholars have found strong evidence of relationships at the subnational level which have typically been obscured in national-level aggregate measures, including the geographic clustering of inequalities (Østby et al. 2009), subnational concentrations of wealth (Hegre et al. 2009) or of particular resources or livelihoods (Buhaug and Lujala 2005), local population size (Raleigh and Hegre 2009), and distance from the capital city (Buhaug and Rød 2006).

In spite of the explanatory power of subnational characteristics and dynamics in conflict, to date, much quantitative research has continued to focus on country-level data. This emphasis is at odds with the local scale at which violent groups emerge, and the local-level conditions that shape their identities and activity (Kaufmann 2011; Dowd and Raleigh 2013). Moreover, while research on other forms of violence and conflict has expanded to explore local-level determinants and factors shaping violence, this approach has achieved only limited attention in the study of Islamist violence. Finally, much more research is required into understanding how these subnational dynamics feed into the observed, and important, forms of transnationalism discussed above. As Checkel (2013: 3–4) summarizes,

> So, the transnational clearly matters […] it has become a truism to argue that the external and the internal, the global and the local, the state and

> non-state actors are inextricably linked. The theoretical challenge – for scholars in general and students of civil war in particular – is to explain the interactions across these various levels. […] What is the nature of the causal connection between the transnational and the local?

The geography of Islamist violence is of particular relevance to our understanding of these phenomena and scales, in light of the fact that this form of violence is almost exclusively conceptualized in terms of its transnational, and seemingly global, characteristics. The transnational nature of religious movements, the simultaneous emergence of Islamist violence in geographically disparate parts of the world, its occurrence in locations far from the original sites of conflict (for example, in the targeting of attacks against civilians in New York, Bali, London and Paris), and reported organizational and coordination linkages within and across discrete violent Islamist groups, are all called upon in support of the perception that this is a global phenomenon, with an expansive, and unpredictable, reach (see Onapajo et al. 2012).

While the question of scale and place undoubtedly has general relevance to the study of politics and conflict, a nuanced understanding of these factors as they pertain to Islamist violence specifically is particularly critical. Recent research particularly emphasizes the growing transnationalization of Islamist violence in Africa and beyond. Both policy-makers and violent Islamist groups themselves place considerable emphasis on this transnationalism and global interconnectedness, and much less on the conditions of local place and space, and the interplay between the local and the transnational, which may shape or determine the emergence or dynamics of Islamist violence.

Dominant characterizations of Islamist violence associate growth in this phenomenon with a globalizing, interconnected and internationally active network of militants, which produces an "infectious regional threat" (Karmon 2014: 74), constituting a form of "terrorism without borders" (Agbiboa 2014b). Territoriality and geography have been central to public discourses and framing of Boko Haram violence: Nigerian officials have often deflected blame for Boko Haram's ongoing activity onto regional neighbors, claiming that Chad, Niger and Cameroon have not done enough to prevent cross-border movements of militants, and that Boko Haram's recruitment relies heavily on regional fighters (Comolli 2015). Borno State officials have also referred to the possibility that "the three North-Eastern states [of Borno, Yobe and Adamawa] will no longer be in existence" if Boko Haram is not effectively countered (quoted in Ajayi 2014).

The global dimensions of the conflict have also been foregrounded in political statements: in May 2014, then-Nigerian President Goodluck Jonathan described the conflict with Boko Haram, thus: "what started as a local insurgency in North Eastern Nigeria has now evolved into *the new frontier of the global war of terrorism* against our civilization, our way of life, and against the many prospects of stability in our region" (emphasis added). Addressing the Regional Summit on Security in Nigeria held in Paris, Jonathan declared: "This is not anymore a challenge to Nigeria alone: it is a threat to each and every one of us in this room"

(quoted in Vanguard 2014). Then-French President François Hollande echoed this sentiment, stating, "We know the threat, it is serious, *it is dangerous for the region, for Africa, and so for Europe*" (quoted in de la Baume and Rubin, 2014, emphasis added). Similarly, after Boko Haram leadership declared its allegiance to the Islamic State in 2015, a U.S. Bureau of African Affairs official announced the need "to work together with all states in the region to prevent these ties from getting stronger and break the ties that do exist. *This is a global fight – it is not just a Nigerian fight*" (Thomas-Greenfield 2016, emphasis added).

The group itself also emphasizes the importance of the transnational in their declarations and public statements: in August 2014, Boko Haram's leader, Abubakar Shekau, refused to recognize the Nigerian state at all when he declared, "We are in an Islamic caliphate. We have nothing to do with Nigeria. We don't believe in this name" (quoted in Chothia 2015). In a separate video in which the Boko Haram leader claimed responsibility for the mass casualty attack on Baga town in January 2015, Shekau burnt a Nigerian flag, declaring a black Islamist standard as the "replacement of the Nigerian flag" and stating emphatically, "Nigeria is dead, [the] constitution is dead" (quoted in Vanguard 2015). Emphasizing the regional nature of the conflict, Shekau also released a video explicitly threatening President Paul Biya of neighboring Cameroon, warning that the country would "taste what has befallen Nigeria" (quoted in Zenn 2015a).

However, the extent to which Islamist violence represents a truly transnational phenomenon in Africa varies significantly across groups. Only since 2014 has Boko Haram exhibited significant transnational activity, becoming increasingly active in Cameroon, Chad and Niger, in addition to Nigeria. This cross-border activity notwithstanding, even in 2015, the vast majority (72 percent) of Boko Haram violence took place within the borders of Nigeria itself. This activity profile mirrors other violent Islamist groups on the African continent, such as the Somali-based Al Shabaab, which has increasingly garnered international attention for its involvement in high-profile attacks in Kenya. While violence in Kenya, and in Uganda in 2010, is notable and has resulted in devastating loss of life in both countries, the group remains, by and large, primarily concentrated in Somalia, where to date, over 95 percent of its violence is concentrated. These patterns can be meaningfully contrasted with a group such as AQIM, which has, over time, transformed from a group primarily active in Algeria (where 99 percent of its recorded activity took place in 2007) to one more evenly split between Algeria, Mali, Mauritania and Niger, in 2011; and finally, concentrated in Mali as of 2015.[3]

Not only do violent Islamist groups diverge in the degree of their transnational activity, but violent actors also vary in the nature of that transnationalism. A comprehensive understanding of the precise nature of transnationalism demands a conceptualization not only of the *occurrence* of transnational violence, but also the ways in which groups *operationalize* transnational mobility and presence. Specifically, several studies have proposed important differences between the transnationalization of conflict through the *escalation* and *expansion* of violence into neighboring regions, whereby armed groups remain active in

their original locations and simultaneously expand; in contrast to the *relocation* of violence, whereby violence diffuses without remaining a constant in original locations (Schutte and Weidmann 2011), or emerging flashpoints of violence in geographically discontiguous spaces (Baudains et al. 2013).

In the case of Islamist violence specifically, violent groups may engage in a number of different territorial tactics: hypothetically, they can hold territory constantly and retain operational capacity within those zones, while simultaneously expanding their reach outward through *escalation*; they may leverage country borders in order to evade capture by security forces (Walther and Leuprecht 2015), in a process of *relocation*; or they may be active in discrete, discontiguous spaces through which flashpoints of violence emerge.

The dynamics of Islamist violence undoubtedly demonstrate the diffusion of conflict transnationally, but this observation alone does not shed light on the *precise* transnational features of this conflict. Increased international presence need not correspond automatically to escalation at every level: as illustrated in the example of evading capture across borders, movement across and between countries can reflect the flight of groups from an armed opponent (such as state security forces), whereby groups are pushed out of one country through a concerted military campaign. The diffusion of AQIM into southern Algeria and toward its border with neighboring Sahel states illustrates this (Steinberg and Werenfels 2007: 408); as does Boko Haram's increased use of safe havens in neighboring Cameroon throughout 2014 and 2015. As one senior defense official characterized the mobility of the Islamic State, "ISIL is very much like a balloon. […] When you squeeze it, it moves elsewhere. They've shown that in Iraq, to some degree, where they live to fight another day" (quoted in Moody 2015: 8). This strategic leveraging of borders may be particularly pronounced for groups who have recently allied with a high-profile international partner, as this declaration clearly establishes them as a high priority for national regimes and international stakeholders. In other words, the stakes of an Islamist insurgency aligned with a global actor such as the Islamic State, as Boko Haram has been since 2015, are much higher than conflict associated with a more localized, domestic agenda.

For these reasons, this research sets out to explore the geography of transnational activity not only at the national but also at the subnational levels, in order to determine the degree to which transnationalism truly reflects a process of expansion and escalation, or one of relocation and evasion, in the context of Boko Haram violence.

Methodology

The research draws upon data from ACLED (Raleigh et al. 2010) and analyzes patterns of violence attributed to Boko Haram at a fine level of spatial and temporal disaggregation, to trace the evolution of the group in its violence intensity, tactics and geography over time. The unit of analysis is the level of Boko Haram-attributed violent events,[4] coded by their location, and aggregated

according to the month/year and subnational administrative unit. The data cover the period from January 2009 to June 2016, providing records for 2174 Boko Haram-attributed violent events, and 29,226 reported fatalities associated with the group's activities, across four countries (Cameroon, Chad, Niger and Nigeria), with reported (but non-violent) presence also recorded in Mali. Because they are not relevant to the research question at hand, all non-violent events (including troop movement and riots/protests) attributed to the group are excluded from the analysis.

Boko Haram's multidimensional transnationalism

Over the past ten years, Boko Haram's violence has undergone a process of transformation, from a relatively small and contained militant force operating primarily in Nigeria's northeastern states of Borno, Yobe and Adamawa, and concentrated on domestic, national targets; to one active throughout the territory of the country and, most recently, in several neighboring states. At the same time, the group has enhanced and formalized links with transnational violent Islamist organizations, notably through its declaration of affiliation with the Islamic State (BBC News 2015).

While this transformation is well documented, it is typically taken to demonstrate the growing regionalization and internationalization of Boko Haram's violence. This line of argument departs from analyses which foreground the domestically focused nature of Boko Haram's violence and rhetoric (see Dowd and Raleigh 2013; Oftedal 2013; Eveslage 2013), to contend that documented Boko Haram presence in neighboring states clearly reflects an "immediate and infectious" internationalism (Karmon 2014: 77). The result is a debate which appears to polarize positions as diametrically opposed: either Boko Haram is a primarily domestic, nationally focused militant organization, or it is a transnationally active, global "jihadist" threat. Importantly, the internal disputes over the concentration of resources and attention on the "near" or "far" enemy which are well documented in the case of other militant Islamist organizations (see, in the case of other militant Islamist groups, Steinberg and Werenfels 2007; Hansen 2013) qualify both positions in important ways, although they are not always explicitly acknowledged.

By the time of writing, and in light of the rapid evolution and transformation of the conflict dynamics, few observers would argue that Boko Haram remains a wholly domestic militant organization, given both its regional activity and its professed organizational affiliation with the Islamic State. Nevertheless, I contend that the *precise nature* of Boko Haram's transnationalization remains under-specified: while a growing international presence can certainly be traced through the group's recorded violence, the specific function of that transnationalism deserves greater attention, so as to distinguish between a group that is expanding in operational scope and genuinely focused on a transnational, or even global, agenda for violent political and social action, and one that is leveraging cross-border mobility primarily for the purposes of evasion and self-preservation.

The distinction between an expanding and escalating violent Islamist organization, and one which is increasing its international reach as part of a strategic and instrumental evasion tactic, is important for the conceptualization, theorization and ultimately practical policy action that is most appropriate to address Boko Haram and similar violent groups. For example, where violent Islamist groups are actively seeking to expand their realm of operations to neighboring states as part of a concerted effort to enhance and increase their operating space and territorial control, this reflects an aggressive political and social agenda for action, and one which may be carefully linked to evolving ideological frames and goals in a group's public statements (Eveslage 2013). By contrast, where a group is leveraging porous borders to evade capture, while relocating its violence rather than increasing its geographic scope, this has different implications for the potential role of ideology, the comparability of violent Islamist groups with other violent organizations, and the implications of conflict escalating into a multi-state dispute (Salehyan 2008). Spatial analysis of conflict event data is particularly well suited to supporting the development of a finely grained and nuanced understanding of the use and leveraging of territory, and to casting light on the diverse logics and strategies of group survival that underpin these tactics.

I propose that the geography of Boko Haram's violence may be understood in three distinct phases of territoriality, regionalization and internationalization, the features of which are documented below.

Escalation and expansion (2009–2012)

Although precursors of Boko Haram's current organization have been documented as far back as the early 2000s, the group first demanded national and international attention in July 2009, when a clash with security forces in Borno State escalated into a high-intensity battle in which hundreds of people were killed in just a few days of intense violence. In the course of these clashes, Boko Haram's leader, Mohammed Yusuf, was killed in police custody, and the group went briefly underground, to regroup later under the leadership of Abubakar Shekau (Nigeria Security Network 2015).

The period 2009 to 2012 coincided with an era of escalation and expansion for Boko Haram: the frequency and intensity of violent events increased from just 19 recorded violent events in 2009, to 349 in 2012 (Table 5.1).

In spite of this dramatic increase, however, only two violent events were attributed to Boko Haram outside Nigeria during this time. In other words, a huge escalation in the intensity and frequency of violence was characterized by Boko Haram significantly expanding its presence *within* Nigeria in 2012 (Figures 5.1, 5.2). A wave of violence emanated outward from the far northeast of the country: in 2009 and 2010, the group was active in just five Nigeria states. By 2011, this had increased to 11, and peaked at 19 different Nigerian states in 2012.

Several scholars suggest that this period coincides with the transformation of Boko Haram into an internationally focused organization, with the attack on the

Table 5.1 Violent events attributed to Boko Haram by country, 2009–2016

Country	*2009*	*2010*	*2011*	*2012*	*2013*	*2014*	*2015*	*2016 (Jan–Jun)*
Nigeria	19	37	116	347	260	395	432	205
Cameroon				1	2	77	92	75
Chad				1		1	26	3
Niger					1	1	47	36
Total	19	37	116	349	263	474	597	319

Source: ACLED.

UN Headquarters in Abuja, in 2011, marking a "watershed" moment for the organization (Karmon 2014; 75). Similarly, Pham (2012: 4) argues that this incident "showed that far from being a spent force, Boko Haram had adopted one of the deadliest instruments in the jihadist arsenal and had demonstrated that it was now capable of carrying out attacks far from its usual areas of operation." During this period, Boko Haram may have begun to lay the groundwork for transnational activity in countries such as Cameroon, through the creation of a network of sympathetic preachers, before beginning military activity directly (Zenn 2015b), However, analyses of the group's recorded activity, above, and discourse analysis into the statements of the group (Eveslage 2013), both indicate an almost exclusively domestic focus at this time.

Containment (2013–2014)

In contrast to this period of geographically expansive operations, the years 2013 and 2014 both witnessed a contraction from this peak and a general containment

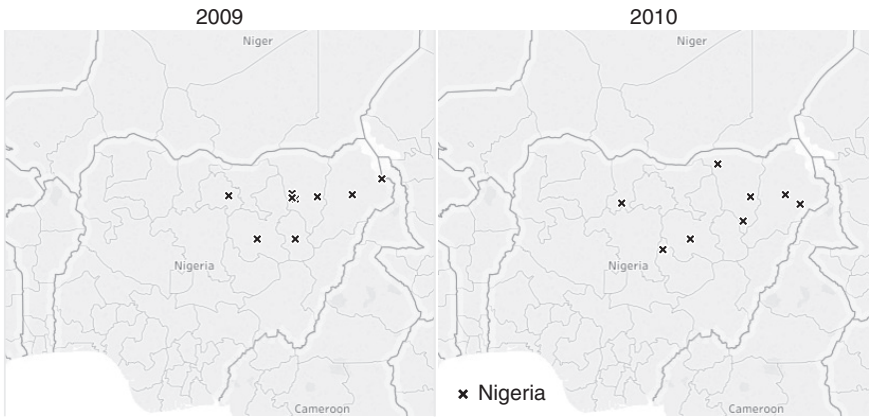

Figure 5.1 Violent events attributed to Boko Haram by location, 2009–2010.
Data source: ACLED.

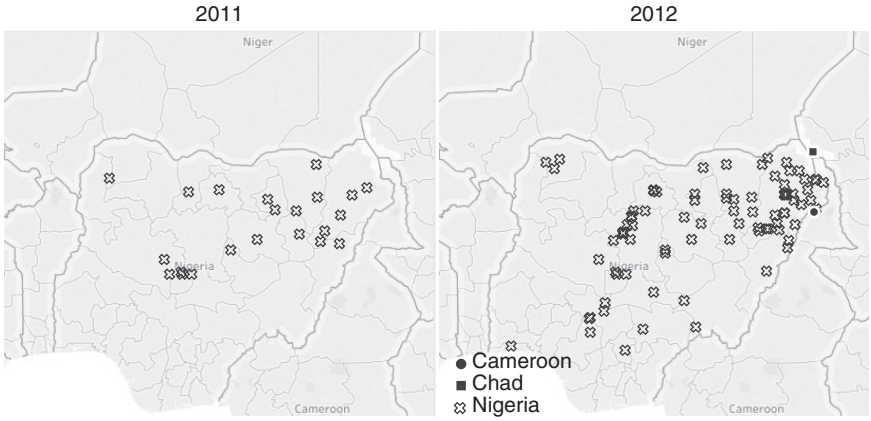

Figure 5.2 Violent events attributed to Boko Haram by location, 2011–2012.
Data source: ACLED.

of violent activity in Boko Haram's traditional stronghold of Nigeria's northeast. While violence levels escalated, Boko Haram was active in an average of 15 discrete Nigerian states during this time (Table 5.2).

This period of containment coincided with the declaration of a state of emergency in three of Nigeria's northeastern states (CNN 2013), creating pressure on the group's activity in the north-central and northwestern states where it had conventionally engaged in limited, sporadic, but often high-intensity violence. Although there were some limited events further south, and west, than Boko Haram's Borno stronghold (Figure 5.3), these were far less frequent than in previous years.

This period also coincided with the first significant expansion of activity into far northern Cameroon, and more limited activity in Chad and Niger. Prior to this point, analysts argue that Boko Haram under the leadership of Abubakar Shekau had largely limited its activity in neighboring states to the use of safe havens and training sites, restricting its violence to sporadic attacks on

Table 5.2 Discrete number of subnational administrative units of Boko Haram activity by country, 2009–2016

Country	*2009*	*2010*	*2011*	*2012*	*2013*	*2014*	*2015*	*2016 (Jan–Jun)*
Nigeria	5	5	11	19	13	17	13	3
Cameroon				1	1	1	2	1
Chad				1		1	2	1
Niger					1	1	2	1
Total	5	5	11	21	15	20	19	6

Data source: ACLED.

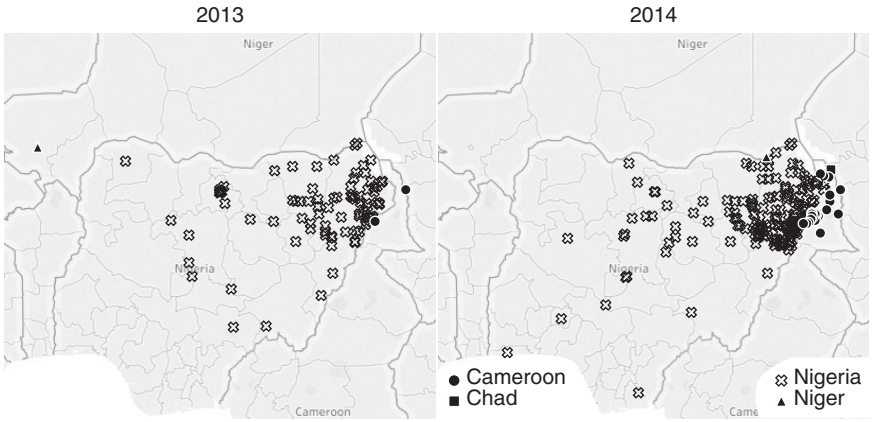

Figure 5.3 Violent events attributed to Boko Haram by location, 2013–2014.
Data source: ACLED.

international civilians, in a bid to avoid drawing neighboring countries into a regionalized conflict. For their part, neighboring states reportedly did not crack down on Boko Haram's presence for fear of repercussions in the form of targeted attacks by Boko Haram (Comolli, 2015). This logic shifted in 2013/2014 as the group came under increasing military pressure within Nigeria and began to expand its operations within northern Cameroon in particular. Nevertheless, early attacks attributed to the group there in 2013 and 2014 perpetuated a pattern of targeting international civilians from China, Colombia, Italy and France (Amnesty International 2015: 69, Onuoha 2014: 7).

Territory and spatiality became significant in a second way in 2014, when Boko Haram declared an Islamic caliphate in northern Nigeria (BBC News 2014). Facilitated by issues of low morale, reports of poor equipment, and high levels of defection among the Nigerian military, Boko Haram made rapid territorial gains (Sahara Reporters 2014; Stein 2015; Sieff 2015). By late 2014, the group was reportedly in control of no less than 20,000 square miles of territory in northeast Nigeria (Pieri and Zenn 2016), including territory within 60 km of Borno's capital, Maiduguri, and began to form a "pincer" around the city (Pham 2016). Research suggests that by their very nature, territorial disputes are robustly correlated to multiple measures of conflict escalation (Braithwaite and Lemke 2011), which may account for the intensification of violence – both in frequency and in reported fatality levels – associated with the year 2014.

Contraction and transnational relocation (2015–2016)

In 2015, Boko Haram's violence was characterized by two countervailing geographic trends: on the one hand, it was the year in which the group engaged in

its most extensive cross-border violence to date, with 165 discrete violent events attributed to the group in Cameroon, Chad and Niger (Table 5.1). In another feature of transnationalism, 2015 was also the year in which the group formalized and declared its alliance with the Islamic State (BBC News 2015). This period coincides with the era in Boko Haram's evolution that Pérouse de Montclos (2016: 79) has described as "a spatial expansion of attacks" and Bearzotti et al. (2015: 7) characterized as "spreading widely outside the state boundaries." However, 2015 was also the year in which Boko Haram's activity began to substantially contract within Nigeria itself: the tide appeared to turn on Boko Haram's recent territorial gains, with the group losing considerable ground in Borno and Adamawa (Nigeria Security Network 2015). This loss of territory was driven in part by the establishment of the deployment of a Multinational Joint Task Force (MNJTF) comprising troops from Nigeria, Chad and Niger, which drove back Boko Haram in key sites, including the twin towns of Gamboru Ngala in Borno State (Nigeria Security Network 2015; Oyewole 2015).

In addition to losing control of territory, Boko Haram was also increasingly restricted in its movements and operations even in territory outside its control: in 2015, the group was active in just 13 discrete Nigerian states, and in only 3 between January and June 2016; these years have represented a substantial reduction in Boko Haram's domestic space (Table 5.2). During this time, Boko Haram lost control of a sizable share of the territory it had previously seized.

This contraction is also evident in the geographic space in which the group was operating. In addition to measuring the discrete number of countries or subnational units in which Boko Haram was active, violent event data may also be used to calculate a measure of the monthly average geodesic distance between sequential events attributed to the group. The measure records the shortest linear distance between sequential events in order to capture Boko Haram's near-simultaneous presence in multiple locations. It is calculated by sorting violent events attributed to Boko Haram by event date, and event location (to avoid biasing the data in instances where they are active in the same location on the same day in multiple events), and then calculating the distance between the geocoded longitudinal and latitudinal points of each sequential event. Non-violent events, and events coded with a GeoPrecision of 3 (those for which there is a higher degree of uncertainty as to their precise location) are excluded, and the average annual distance between events calculated. The advantage of using this approach is that it facilitates a measure of group presence across a state and over the course of a conflict, which illustrates key features of the group's operational capacity and mobility: where Boko Haram is active within a short period of time in northeastern, central and southern Nigeria, this reflects, in part, the group's wide geographic reach, the ability of militants to move over territory, and its success in establishing militant cells in distant towns and cities.

Using this method, it is clear that Boko Haram's operating space within Nigeria has evolved significantly over time. In 2012, the year of its most expansive operations, there was an average distance of 286 km between sequential Boko Haram-attributed attacks within Nigeria. In other words, the group had

near-simultaneous operating capacity in a territory that spanned almost 300 km at a given time. By contrast, this figure fell to 164 km in 2015, and between January and June 2016 it was just 108 km, almost one-third of its 2012 peak (Figure 5.4). This clearly demonstrates the shrinking operational space Boko Haram had within Nigeria itself.

Even when regional countries are added to the analysis, and the same calculations run to account for the full range of regional Boko Haram activity, 2015 and 2016 still see a significant decline: down from 288 km in 2012, to 185 in 2015, and just 135 km between January and June 2016. In other words, by mid-2016, not only was Boko Haram's domestic operating space contracting, but the range of its operational scope within the entire region was shrinking: as of June 2016, the group was increasingly constrained in a small corner at the meeting point of Nigeria, Cameroon, Niger and Chad, as illustrated in Figure 5.5.

This containment and relocation has taken place at the expense of some of the group's previous tactics of "flashpoint" violence (Baudains et al. 2013).[5] Flashpoints are defined as sites of violence in which there is no violence in neighboring states, which means that spillover effects and the diffusion of violence to geographically proximate zones cannot account for their occurrence. These types of attacks include attacks such as the 2010 Christmas Eve church attacks around the Middle Belt city of Jos, in an area in which the group was not typically active, and far removed from its northeastern stronghold (Guardian 2010). Other

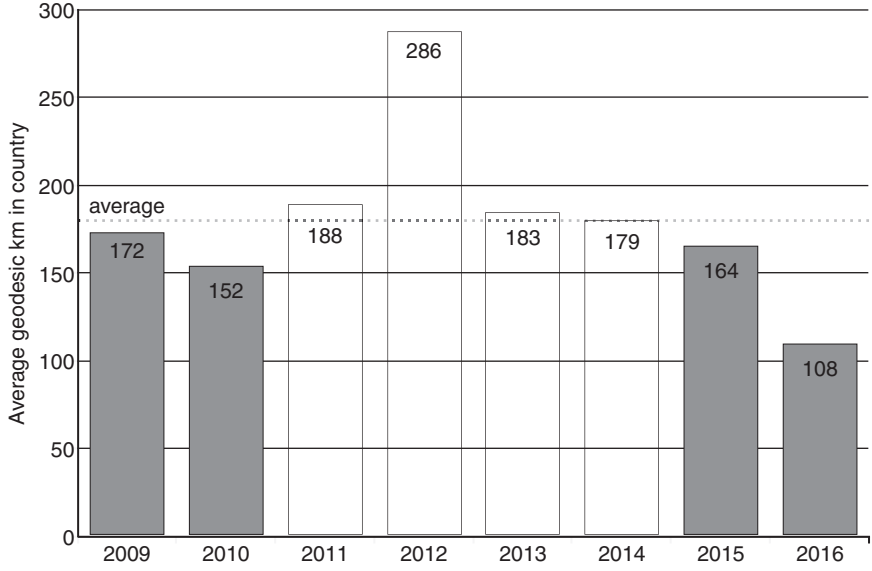

Figure 5.4 Average geodesic distance between sequential Boko Haram violence locations, Nigeria, 2009–2016 (in km).

Data source: ACLED.

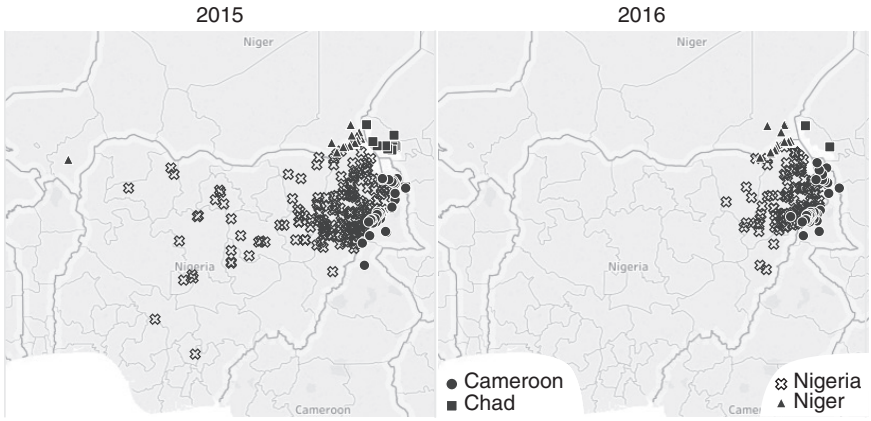

Figure 5.5 Violent events attributed to Boko Haram by location, 2015–2016.
Data source: ACLED.

examples include Boko Haram's bombing of police headquarters in Abuja in June 2011 (BBC News 2011); the July 2012 bombing of a police station in the far northwestern state of Sokoto (IRIN News 2013); and a June 2014 car bombing in Lagos (Voice of America 2014). These types of hit-and-run-style attacks were a relatively common feature of Boko Haram's activities outside its northern strongholds throughout the early years of its insurgency.

Flashpoint attacks are a second means of estimating the operational space of a group: where Boko Haram militants have the capacity and freedom to move from one part of the country to another, undetected and unhindered, in order to carry out violence in an area far from home, this suggests considerable operational capacity and geographic scope. By contrast, where this type of attack is more limited, this suggests that a group's operational capacity and extent of its mobility may be more restricted. The analysis bears out Boko Haram's increasingly restricted capacity: over the period 2010 to 2014,[6] Boko Haram engaged in an average of 2.6 flashpoint attacks per month, peaking at an average of 5.9 per month in 2011. In 2015, this fell to just 1.3, or half the rate of the preceding five years. In addition to the level of these attacks falling, the frequency with which they occur has declined as well: between 2010 and 2014, an average of eight months a year witnessed at least one incident of flashpoint violence; in 2015, this had fallen to six months.

Conclusion

The framework above departs from previous analyses of Boko Haram which suggest multiple phases of the group's evolution by shifting attention away from intensity, organization and tactics such as suicide bombing, or mass casualty

attacks (Pham 2016), and focusing instead on the geography of violence and the spatial patterns of the group's diffusion, to illuminate key features and trajectories in this conflict.

The findings provide strong evidence for two divergent patterns of geographic diffusion of Boko Haram's violence. First, over time, the distinct number of countries in which Boko Haram has been active has increased. Internal dissent within Islamist organizations on whether to focus on the "near" or "far" enemy (Steinberg and Werenfels 2007), and the extent to which groups direct energy toward a truly transnational agenda (Hansen 2013) notwithstanding, we have seen a clear increase in both the discrete number of countries of violent activity, and the frequency and intensity of that cross-border violence. Nevertheless, the geographic dynamics we see also exhibit a countervailing trend: namely a reduction in the number of subnational spaces in which the group is active. In other words, while Boko Haram has increased its international presence, subnationally it is contracting, rather than expanding. This corresponds to a pattern of relocation violence, where groups shift their scope of activity, typically under military pressure.

Together, these findings point to significant ways of nuancing and advancing our understanding of the violence of transnational actors and violent Islamist groups in particular. In spite of a dominant narrative which sees such groups as part of a globally interconnected, relatively homogeneous and undifferentiated network, an overemphasis on the transnational, global dimension of such groups both obscures local conditions; and under-specifies the precise nature of their transnationalism. Continued transnational activity and increasing international presence should not be read exclusively as a sign of increasing strength, but instead, in the case of Boko Haram, as a function of the strategic branding, performance of transnationalisms and tactical self-preservation of a militant group under pressure. The impression of a globally interlinked, and increasingly powerful, violent Islamist network active and expanding across the world is one which needs to be nuanced with insights from the fields of geography and conflict studies: if conflict is increasingly transnational, in what precise ways is this occurring, at what scale and by which processes? Further research is warranted into the precise mechanisms by which conflict diffuses across transnational spaces, through processes such as emulation, learning and coercion (Wood 2013), alongside the more familiar explanation of migration and physical movement of militants (Salehyan 2007) in analyses of Islamist violence.

The findings also present a counterfactual challenge to theorists who emphasize the ideological and doctrinal specificity of violent Islamist groups: if Boko Haram had not been restricted in much of Nigeria, how might its transnational ideology and tactics have evolved differently? In other words, what can spatial analysis tell us about the causal direction of cross-border activity and physical presence, and the pursuit of a transnational agenda? Did Boko Haram become transnationalized through its deliberate pursuit of this agenda, or were decisions to expand operations in neighboring countries taken out of strategic interest and tactical considerations? If the latter, what does this in turn tell us

about the role and meaning of ideology as a unique and definitional feature of violent Islamist groups?

These findings have implications beyond Boko Haram alone: as Islamist violence continues to increase on the continent; and transnational actors such as the Islamic State and, to a lesser extent, Al Qaeda, continue to coordinate and ally with national affiliates and branches across Africa, understanding the dynamics and geography of that violence will remain imperative to a clear analysis of the conflict processes at play. Elsewhere in Africa, Islamist violence has expanded in Somalia, Kenya, Mali, Libya, Egypt and Tunisia (Dowd 2015; Moody 2015; Abukar 2014), where these processes, outcomes and dynamics deserve further scholarly attention as they evolve and shift. Further comparative research is warranted to explore whether further expansion in Asia and beyond mirrors patterns evident in Africa.

The findings also suggest potential avenues for further research at the interface of geography, spatial analysis and conflict studies on the role and nature of place and locality in violent conflict. The analysis has demonstrated that Boko Haram's violence profile reduced domestically at the same time as it expanded transnationally, not only in the discrete number of subnational units in which the group was active, but also in the extent of its operating space within Nigeria. In other words, and somewhat counter-intuitively, Boko Haram has become more "localized" – insofar as its presence and violence are now more concentrated in a single enclave – at the same time as it has transnationalized. While all Boko Haram's violence within Nigeria is by definition "domestic" or "national," the group has arguably become more *local* precisely as it expanded into neighboring states, reduced the distance between attacks, and concentrated its activity in a single geographically contiguous space. This is particularly pronounced in cases, as in northeastern Nigeria and neighboring regions, where cross-border social, ethnic and religious networks and ties proliferate (Pieri and Zenn 2016), and communities share similar experiences of political and economic marginalization from a central state (Dowd 2015). What implications may this have for our understanding of the construction and perception of scales such as the "local," "national" and "transnational," and how they are framed and understood by conflict-affected communities, and armed groups, in their own terms (see, e.g., Angerbrandt 2015, 2016)?

In conclusion, by demonstrating the relevance and significance of the local scale to shaping the emergence and dynamics of transnational Islamist violence, and by presenting evidence on the complex and dualistic geographic transnationalism of internationally networked violent Islamist organizations, the findings of this research present a challenge to dominant conceptualizations of militant Islamism, its supposedly highly networked and globally interconnected nature, and the proposed primacy of international factors in shaping these conflicts. Importantly, attention to the transnational nature of Islamist violence should not obscure key features of the domestic environment which render it feasible in the first place. While spatial analysis can cast light on the different dimensions of transnationalism, it alone cannot tell us what the features of those environments

are that make them appealing to violent groups in the first place, or that give them traction among local communities (Dowd 2015). In other words, it is important to both understand the precise dimensions of transnationalism, as well as to maintain a sense of how transnational dynamics relate to the local and sub-national features of a conflict.

Notes

1 I am grateful to Clionadh Raleigh, Olivier Walther and Henrik Angerbrandt for kindly commenting on earlier drafts of this chapter. All errors remain my own.
2 Formerly, officially named *Jamaat Ahl as-Sunnah Lid Dawh wa al-Jihad*, recently renamed "Islamic State's West African Province," the group is referred to herein by its more commonly recognized colloquial name of Boko Haram.
3 All statistics sourced from ACLED, Version 6 (Raleigh et al. 2010) available at www.acleddata.com/data/.
4 According to ACLED's codebook a politically violent event is

> a single altercation where often force is used by one or more groups for a political end, although some instances – including protests and non-violent activity – are included in the dataset to capture the potential pre-cursors or critical junctures of a conflict.
>
> (Raleigh and Dowd 2016: 7)

Non-violent events such as riots are not considered here.
5 I measure flashpoints by coding the number of Boko Haram-attributed events which take place in a state in which no Boko Haram violence has been recorded in surrounding (neighboring) states during the same month.
6 There are no records of Boko Haram-attributed flashpoint violence in the year 2009, as all violence attributed to the group took place in geographically contiguous states in the same months.

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6 External incentives and the African subregional response to Boko Haram

Nikolas Emmanuel

Introduction

One cannot deny that many of today's African internal conflicts are highly transnational in nature, with links between armed groups, criminal and terrorist networks spreading regionally or even globally. Whether or not this is a "new" phenomenon remains debatable (Kaldor 2012; Kalyvas 2001). However, it is certain that these conflicts move easily across borders, even using them as resources, especially with regard to fragile states. Such weak border control creates an environment hospitable to insurgent groups, who can easily move between states looking for sanctuary and potentially more lucrative routes for illicit trade to fuel their efforts. The transnational reach of groups like Al Qaeda in the Islamic Maghreb (AQIM) or Boko Haram (also referred to as al-Wilāyat al-Islāmiyya Gharb Afrīqiyyah or Islamic State West Africa Province), among others, prolongs conflicts and deepens the vicious circle of structural violence and state fragility.

In addition, international efforts to address the challenges posed by such transnational security threats have been rather ad hoc, with different key external actors, including the United Nations, African Union, France, the United Kingdom and the United States, pursuing their own policies, interests and objectives. That is to say, little coordination is being undertaken by the international community to confront transnational security threats on a regional or subregional level. To make matters worse, the key outside players frequently deal with the states involved in a mostly bilateral manner, not as a coordinated group. External actors can make a difference in facilitating a response by providing the proper incentives to facilitate action by local states, but these efforts must be done in a concerted, multilateral manner (Emmanuel 2010, 2013).

Clearly, the best way to deal with a transitional threat is through an international or even transnational response that flows easily across borders, like the menace it faces. Given this reality, this chapter advances our understanding of the ways in which extra-African states are encouraging and facilitating cross-border collaboration and the construction of a regional security complex around a conflict zone in the fight against Boko Haram (Buzan and Wæver 2003).

There has been extensive discussion among scholars, policy-makers and journalists about how African states have tried to mitigate the many problems posed

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by the resilience and strength of certain violent extremist organizations such as Boko Haram. Yet, a lacuna exists in what has been written on the topic concerning the role that key extra-continental players are exercising to facilitate cooperation and a coordinated response in the fight against terrorism on the continent. Against this background, this chapter focuses on the following two questions: (1) How are subregional states reacting to the transnational threat posed by Boko Haram?, and (2) What impact are the actions by external players having on inter-state cooperation to fight terrorism in Africa? Here, I will explore the example of how the states around the Lake Chad Basin (Nigeria, Niger, Chad and Cameroon) are working together to fight Boko Haram with the help of incentives (primarily aid, but also arms transfers, intelligence sharing, training, etc.) provided by key external actors (primarily France and the United States). This chapter will use the example of the Lake Chad Basin Commission (LCBC) and its Multinational Joint Task Force (MNJTF), originally formed in 1994 by Nigeria to control the activities of armed groups and bandits coming from Chad and Niger, to show that while regional security complexes can emerge and organize directly around a local threat such as Boko Haram, they are frequently facilitated by actors outside the initial region. In this case, as in others across the continent, extra-African players have taken on important roles aimed at encouraging international cooperation and enhancing the capacity of the subregional actors by providing important incentives.

What are incentives?

African states today are strongly encouraged by the international community to play a more central role in confronting crises on the continent. This encouragement is mostly done through an incentives approach that promotes structural arrangements, distributive or symbolic rewards or punishments (Emmanuel 2015; Rothchild and Emmanuel 2010; Rothchild 1997). Incentives aim to raise the opportunity costs of continuing behavior that is perceived as undesirable to the "sender" (Cortright 1997; Cousens et al. 2001). Here, both France and the United States have used a variety of incentives to get the countries in the subregion around Lake Chad – Cameroon, Chad, Niger and Nigeria – to cooperate on how to best confront Boko Haram. This has been done with aid, training and other forms of support, primarily to strengthen borders and allow national armies in the subregion to work closely together within each other's territories.

More generally, an incentives approach consists of a variety of policy options that an external actor may use to encourage particular behaviors in the targeted actor(s), seek to be a catalyst and to shift behavior, easing uncertainty about their future intergroup relations (North 1990; Zartman 2001). Put differently, according to Aaron Griffiths and Catherine Barnes (2008: 11), incentives are measures that "can be applied to encourage or persuade one or all of the parties to a conflict to cooperate by introducing rewards for compliance." Therefore, incentives are rewards or the offer of a reward. Yet, it would not have been offered if the "sender" did not expect something from the "recipient"; for instance, a particular

kind of action (Suhrke and Samset 2007). In line with this logic, David Cortright (1997: 7), who analyzes how states use incentives toward other states, defines an incentive as "the granting of a political or economic benefit in exchange for a specified policy adjustment by the recipient." Therefore, an incentive is the act of granting a benefit (or the threat to remove one) with a clear expectation of receiving something in return. These types of policy instruments are used to influence other people's behavior.

Incentives are important resources available to external players. Most importantly, outside players can use incentives that encourage certain outcomes over others. In the case at hand, military aid from the United States and direct military intervention as well as troop training from France have acted as strong incentives, encouraging collaboration throughout the Lake Chad area against Boko Haram.

I will divide the rest of this chapter into three sections. The first section analyzes Boko Haram as a transnational threat; the second examines the emergence of the Lake Chad Basin regional security complex in recent years, and the third section examines how this French and America foreign military aid acted as an incentive facilitating a coordinated response from the states in the subregion to defeat Boko Haram.

Boko Haram: from Nigerian threat to transnational threat

In recent years Boko Haram has transformed itself from a Nigerian problem into a significant transnational security challenge across the entire Lake Chad Basin subregion. Since 2009, the transnational extremist organization commonly called Boko Haram has led a brutal insurgency that poses a serious threat to Nigerian security where the organization began its violent campaign. Borno State in northeastern Nigeria, which contains Boko Haram's principal bases, is a huge area that stretches from the plateau of central-eastern Nigeria to the edges of Lake Chad along the borders of Cameroon, Chad and Niger. From those bases, Boko Haram has regularly carried out attacks in Cameroon and uses that country as a *base arrière* to hide from the Nigerian armed forces, reorganize and rearm its combatants up until 2012 when they began undertaking terrorist operations within Cameroon itself (see Figures 6.1 and 6.2). Boko Haram began attacks in Chad and Niger around the same time. The national threat became a transnational one.

So, why has there not been more international support for Nigeria to defeat Boko Haram before the threat spread into the subregion? Primarily, Nigeria is perceived globally as a country that has sufficient resources (oil money) and the capabilities (strong military) to confront the problems within its territory. True, in addition to Boko Haram, the Nigeria government does face some other daunting tasks, including dealing with insurgency and piracy in the Niger Delta, ethnic clashes in the Middle Belt, and armed Fulani pastoralists. All of this demonstrates that Nigeria appears to be currently overwhelmed with these internal crises. Clearly, Boko Haram has overstretched Nigeria's security service, allowing the group to easily spill over into its neighbors (ICG 2014). What about

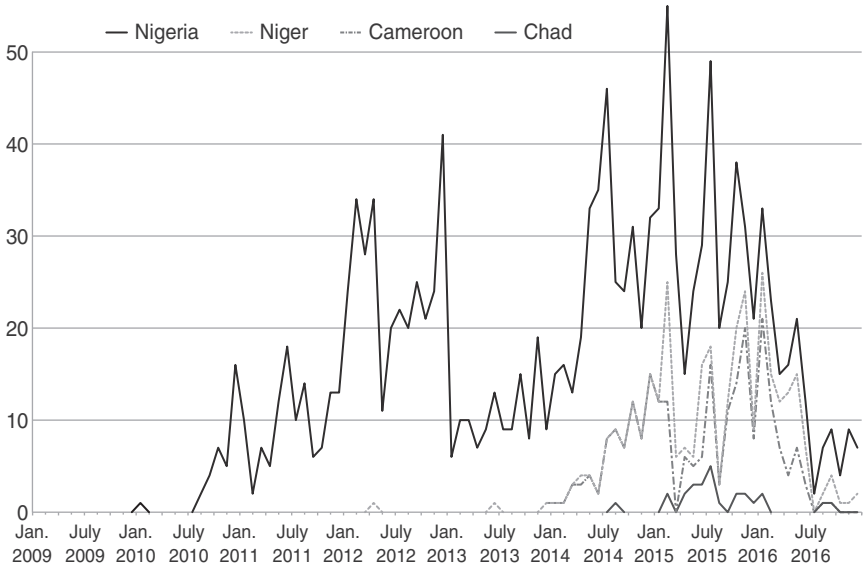

Figure 6.1 Total attacks attributed to Boko Haram by country, 2009–2016.
Source: ACLED.

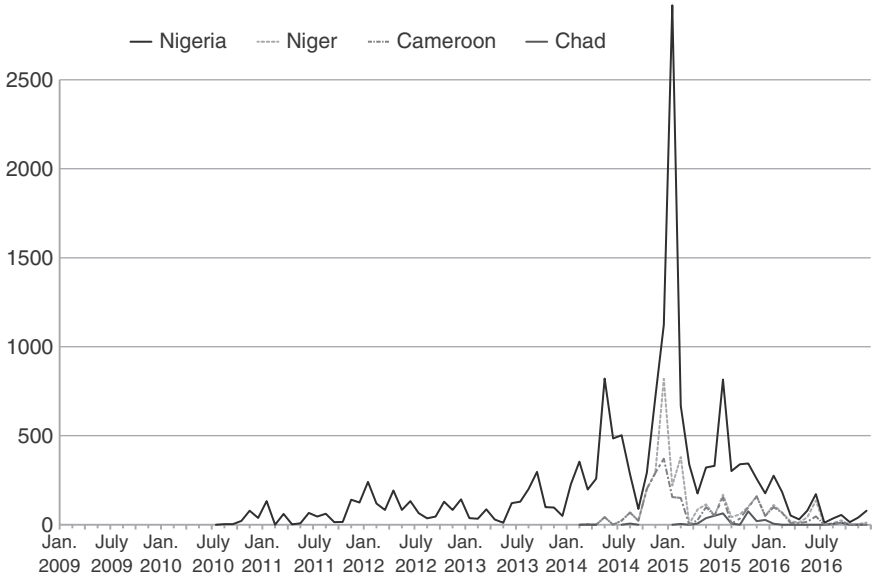

Figure 6.2 Total fatalities attributed to Boko Haram by country, 2009–2016.
Source: ACLED.

a coordinated regional response from West African countries in the Economic Community of West African States (ECOWAS)? The subregional organization, although critical in the past in Liberia and Sierra Leone, has been unable to offer any serious support to Nigeria, since Abuja had historically played a central role in military interventions and peacekeeping in West Africa. This has led to the rather ad hoc development of the MNJTF around the Lake Chad Basin.

The Boko Haram conflict has easily flowed across the porous borders in the region. As a result, tens of thousands of people have been killed in the conflict over the past seven years, with 2.8 million displaced in the subregion and 9 million needing assistance (UN 2016). Although the deaths related to Boko Haram's insurgency have fallen off recently, as seen in Figures 6.1 and 6.2, it is still considered by many as one of the world's deadliest terrorist organizations (Council of Foreign Relations 2016; Foucher 2016). Nigeria has been by far the hardest hit by the attacks from Boko Haram in recent years, but since 2014 the populations in the neighboring states have clearly not been spared.

The transnationalization of Boko Haram's activities changed the perspectives of many concerning the organization. Over the past several years, as demonstrated in Figures 6.1 and 6.2, Boko Haram has had an impact across the subregion (Deltenre and Liégois 2016). This may be primarily seen in the high levels of deadly terror attacks carried out by the Islamic State organization-linked group. In addition, at the group's high point, in 2015, the transnational extremist organization dominated a huge swathe of territory mainly in northeastern Nigeria, but also across parts of northern Cameroon, southwestern Chad and southeastern Niger. This reality led the four governments (along with the Republic of Benin, which will not be discussed here because it is out of the immediate subregion) around Lake Chad to begin working together. However, this level of collaboration in the subregion is recent and has not been easy. To start with, over the past several years, Boko Haram has used the hilly terrain along the Nigeria–Cameroon border, together with the difficult swampy areas around Lake Chad, to avoid containment by the Nigerian armed forces. Early in the insurgency, the Cameroonian armed forces had decided not to confront the Nigerian jihadist organization. Yaoundé hoped that Boko Haram would leave Cameroon alone if they ignored their presence. This changed after Boko Haram undertook a series of kidnappings along the border inside Cameroon in 2013 (IRIN 2013). Cameroon and Nigeria began closer military cooperation and tried to crack down on their mutual borders following these events.

Nonetheless, attacks by Boko Haram continued on both sides of the Nigerian–Cameroonian border and it was not until the brutal attack by the jihadist organization on the MNJTF military base at Baga, Nigeria on January 3, 2015 that the governments in the region began to work more closely together to contain the emerging transnational threat. In the attack on Baga, Boko Haram insurgents overran the base, causing the armed forces based there to flee in disarray. ACLED reports the total number of fatalities at around 400. This overwhelming defeat called into question the Nigerian strategy, causing a major reorganization within the Nigerian Army, and the opening up of the possibility of allowing foreign forces

(mainly Chadian military and private military contractors) to operate on Nigerian soil (Freeman 2015; Al Jazeera 2015). Until recently, Nigeria was reluctant to have external and international security forces on its territory. Following the Baga rout, the Lake Chad regional security complex began to take shape, with a coalition of military units from the neighboring countries starting a coordinated campaign against the transnational extremist organization.

The emergence of a Regional Security Complex around the Lake Chad Basin

The analytical framework used here builds on insights from Barry Buzan and Ole Wæver's (2003) Regional Security Complex (RSC) theory to conceptualize the emergence of the Lake Chad Basin as a (sub)regional community built around security issues. RSCs most frequently develop in response to shared threats, in this case Boko Haram; but this phenomenon is not new in Africa. We see this trend in Somalia with the African Union Mission in Somalia (AMISOM) where the national armed forces from a number of interested East African states along with an additional number from the Horn of Africa have mobilized to counter Al Shabaab. Similarly, in West Africa, the G5 Sahel countries are increasingly coordinating their efforts to deal with transnational terrorism in the Sahelo-Saharan subregion.

This relatively recent (sub)regionalization of security in the African context may be better understood in light of Karl Deutsch's (1954: 33) concept of the security community, which refers to:

> a group which has become integrated, where integration is defined as the attainment of a sense of community, accompanied by formal or informal institutions or practices, sufficiently strong and widespread to assure peaceful change among members of a group with reasonable certainty over a long period of time.

While Deutsch's early work on regionalization is insightful, Buzan and Waever's (2003) theorization of the RSC provides us with a better understanding of the above-mentioned phenomena in Africa (see also Lake and Morgan 1997; Keller and Rothchild 1996).

Buzan (1991: 187) began the discussion in the context of the post-Cold War by stating that a security complex consists of "a group of states whose security concerns link together sufficiently closely that their national securities cannot reasonably be considered apart from one another." Clearly, the security of a given state impacts its neighbors and those in general proximity to it. For example, a destabilized Nigeria and the spread of Boko Haram's violence has had a significant effect on its neighbors. Here, since states in the subregion share a common threat, reactions to that danger can result in the construction of a security complex. The countries in the security community realize that they must work collectively with each other, since they perceive that alone they would not be able to secure their countries from the common threat. The danger from Boko

Haram, for example, justified a joint security response and a coordinated effort from the countries around the Lake Chad Basin. However, this would entail transforming that relatively weak subregional body into a much more powerful multilateral actor, which would mean increasing cooperation among Nigeria, Niger, Chad and Cameroon, producing something strong enough to counter the transnational threat from Boko Haram.

The Lake Chad Basin Commission (LCBC) was initially formed on May 22, 1964 by Chad, Cameroon, Niger and Nigeria, the core countries in the current effort to contain Boko Haram. The Central African Republic and Libya became members at a later date. The LCBC was originally conceived of as an economic body, although it received little attention compared to the other major multilateral organizations in Africa. However, recently the proto-regional grouping became re-energized and focused increasingly on security. Boko Haram's violent campaign in Nigeria and around Lake Chad led the four original members (plus Benin) of the LCBC to transform the existing MNJTF in April 2012, this time with a counter-terrorism mandate. One reason that the countries in the region turned to the LCBC and the MNJTF are coordination problems among the member states. That is to say, the countries in the Lake Chad Basin belonged to two different subregional communities – Niger and Nigeria are members of ECOWAS, while Cameroon and Chad belong to the Economic Community of Central African States (ECCAS). Since the transnational threat posed by Boko Haram stretches across these two African organizations, a coordinated multilateral response was that much more difficult.

Perhaps, however, this somewhat marginal subregional organization is not the proper regional security community to be taking on this threat. Why not the African Union? Why not ECOWAS or ECCAS? The fact is that none of these three regional bodies came forward with a plan to tackle Boko Haram. So, the countries in the LCBC, perceiving a common threat from the jihadist terror organization, reinvigorated this subregional organization out of necessity. This security complex re-emerged with an emphasis on military cooperation to fight transnational terrorism in the member states.

While the MNJTF began in its current form in 2012, it was not until events in late 2014 brought the first wave of action by the member states against Boko Haram. In November 2014 Boko Haram began to attack Nigeria's neighbors in earnest, first by kidnapping the Deputy Prime Minister of Cameroon. In response, Yaoundé deployed its élite troops from the Brigades d'Intervention Rapide (BIR) units in the extreme north of the country, dislodging Boko Haram insurgents and forcing them into neighboring Chad. This led N'Djamena to intervene, using its battle-hardened troops, in Northern Cameroon and help disrupt the terrorist networks that had established safe havens across the border from Nigeria.

The subsequent attack on the joint military base in Baga in 2015 was definitely a turning point in the Lake Chad Basin RSC. Shortly thereafter, a major offensive was undertaken in a series of coordinated cross-border operations that

turned the tables on Boko Haram, rapidly reducing its operational capacity as a large-scale insurgency. The campaign against Boko Haram was relatively successful, pushing them back on a number of fronts. According to Nigerian President Muhammadu Buhari, in 2015,

> [W]e strengthened our cooperation with the Lake Chad Basin Commission Members and Benin. By December the armed forces of Nigeria, Cameroun, Chad and Niger degraded Boko Haram and squeezed them into a small enclave of Sambisa Forest. […] This [joint regional effort] should in turn prevent Boko Haram from continuing to take advantage of its ability to move across borders.
>
> (nta.ng 2016)

Today, the MNJTF comprises a force of 8500 troops with a mandate to coordinate cross-border activities and end the Boko Haram insurgency. The development of this RSC would be helped along with critical incentives laid out by key actors in the international community, namely the United States and France.

External incentives and Regional Security Complex formation

The Multinational Joint Task Force around Lake Chad represents an important emergent regional security complex which is organized under the auspices of a larger continent-wide security arrangement, the African Union, and is closely supported by several extra-African actors, including the U.S.A. and France. All of the members of the MNJTF, along with their supporters, recognize that it is necessary to work collectively to defeat the significant transnational threat. Their struggle is seen as part of a larger regional strategy aimed at reducing the danger of transnational jihadist organizations in the greater Sahelo-Saharan region, stretching from Mauritania to Somalia. That is to say that Boko Haram is one of many tough challenges in this part of Africa.

The coordinated military offensives in 2015 and 2016 by Nigeria, Niger, Chad and Cameroon reversed the advances made by Boko Haram in previous years. As has been indicated, "this development clearly shows that with the appropriate strategies, political will and resources, Boko Haram can be contained" (Salihu 2015: 3). This demonstrates that, as Gompert (2006: 10) clearly argues, "[w]ith Western help, capable African combat troops […] can be improved and melded into effective multilateral intervention forces." The critical question that remains is: How have external actors helped facilitate this successful subregional response to counter the spread of Boko Haram's reach? What incentives have been provided?

Outside actors have played a secondary role in assisting the development of the Lake Chad Basin regional security community by helping to build and pool the capacity of the states around the area. The "capacity" and "will" of the states

in the subregion are some of the critical variables in the struggle against an insurgency such as Boko Haram (Arsenault and Bacon 2015). Regional responses can augment these variables by pooling capacity and collectively bolstering the will to intervene. These processes are supported by the international community through what may be called an incentives approach, primarily with the extension of foreign assistance, but also with the sharing of intelligence, the provision of logistical support, training and direct military intervention.

The goal of outside actors is to build collective capacity and the will to cooperate militarily with other states in the subregion by using incentives to encourage these behaviors. Two external actors in the international community stand out in the provision of incentives to the member states of the MNJTF and will therefore receive close attention in the following pages. They are France and the United States. France's behavior will be scrutinized in light of its ongoing Operation Barkhane in the subregion, Paris's close historical relations with three of the members of the MNJTF (Cameroon, Chad and Niger), and France's recent training and supplying of the Nigerian armed forces. The American role will be examined due to its military (although somewhat small) deployment in Cameroon and Niger, along with its security-related aid to the states around the Lake Chad Basin and to the MNJTF itself.

France: spreading influence around the Lake Chad Basin

The threat of Boko Haram, and its spread into Nigeria's francophone neighbors (part of France's self-perceived sphere of influence), led Paris to increase its military aid and to provide close support for military operations throughout the Lake Chad Basin. That is to say, France has played a critical role in supporting the construction of the regional security complex designed to defeat Boko Haram out of its own perceived national interest. Paris is reinforcing its relationship with traditional allies around Lake Chad, while also spreading its influence to new friends like Nigeria.

Paris has also become more directly involved with Nigeria, sending French Special Forces to train the Nigerian armed forces so that they could better counter the Boko Haram insurgency at home. It is important to note that French military assistance data are not readily available. However, an increase in aid to the subregion may be expected to accompany increased military training and other activities related to the ongoing Operation Barkhane, which is headquartered in N'Djamena, Chad. France began working with its regional allies against Boko Haram in 2013 as an extension of Operation Barkhane (Doya 2016). Since then, Paris has acted as close coordinator of subregional activities, assisting in the development of the regional security complex to fight the transnational extremist group.

As Boko Haram began to commit attacks beyond Nigeria in Cameroon, Chad and Niger, in early 2014, French President François Hollande organized the Paris Summit. This meeting brought together the presidents of Nigeria, Niger, Chad and Cameroon, in addition to representatives from the United States, the United Kingdom, as well as the European Union. The goal of the summit was to strengthen

military and intelligence cooperation among states in the subregion in order to better confront the Boko Haram insurgency, which at the time was at its zenith.

The following year, 2015, was a critical year in the fight against Boko Haram, namely the emergence of the Lake Chad Regional Security Complex, in which France plays a central role. On February 4, 2015, *Le Figaro* newspaper reported that French planes were carrying out reconnaissance missions on the Nigerian border on behalf of Chad, Niger and Cameroon (Barluet 2015). In addition, France deployed a limited number of troops to Diffa, Niger and to the Cameroonian border with Nigeria, although the deployment comprised only around 10 to 15 military personnel (Lagneau 2015). On the topic, French Foreign Minister at the time, Laurent Fabius, stated: "there is a zone of stability, including Chad, Cameroon and Niger that must not be destabilized" (French Foreign Ministry 2015). Furthermore, France's close historic relationship with the francophone countries around Lake Chad can help us better explain Paris's reaction to the spread of Boko Haram's violence. It is important to note that when considering French military aid to the region the focus has been on arming Nigeria, Chad, Cameroon and Niger (Griffin 2015).

Chad is seen by many as a lynchpin in the fight against Boko Haram. Its troops are battle-hardened after years spent fighting internal insurgencies, not to mention the difficult deployments in Mali and the Central African Republic. More specifically, the Chadian armed forces played a key role in the fight against Boko Haram, deploying its own troops across its borders in Nigeria, Niger and Cameroon, pushing the group away from its borders (Bloomberg 2015). Furthermore, France has over 1000 of members of its armed forces present in the country and has based the transnational Operation Barkhane in the Chadian capital, N'Djamena. Chad has historically been a priority for French military assistance and is the home of a major air base. Paris played a significant role in building Chad into a regional power, actively supporting French operations in Mali, turning it into what has been dubbed the "best in the region for desert zone operations" (Gros et al. 2013: 902).

After years of hesitation, Cameroon has become an important actor in the fight against Boko Haram. Yaoundé has worked with U.S. Special Forces to secure its border with Nigeria. France has historically maintained close defense cooperation with Cameroon and has played an important role in modernizing its armed forces over recent years (Belibi 2015). Yet, France is not alone in assisting and arming the Cameroonian armed forces – the U.S.A., China, Russia, Israel and Germany have all been active in assisting Yaoundé to improve its military.

Finally, Niger, after the events in Mali, has also become a significant recipient of French military aid, and Paris is working with Niamey to fight Boko Haram and other transnational threats (northwestern border with Mali and northern border with Libya). France has specifically been working with Niger to increase its ability to monitor its borders.

France clearly views Boko Haram as a threat to its interests and to its allies in the subregion. Nonetheless, France is not the only extra-continental actor present in the fight against Boko Haram. Washington also views destabilizing Boko Haram in its national interest.

United States: helping, but how much?

Alongside France, the United States is one of the most active extra-African supporters in the fight against Boko Haram. Some in Washington, such as Brigadier General Donald C. Bolduc, Commander of the United States military's Special Operations in Africa, view the situation as one in which the "Lake Chad basin is ground zero in the fight against militant Islam in Africa" (Mwakideu 2016). Based on that assessment, the U.S. State Department indicates that they

> commend Nigeria, Niger, Chad, Cameroon […] for standing up the Multinational Joint Task Force. We support the MNJTF – which can play, and is already playing, an important role in planning and coordinating security operations, expediting the exchange of information, and ensuring that security forces uphold human rights. Since Boko Haram has no respect for international borders, strategic success requires that the governments of this region work together.
>
> (U.S. Department of State 2016a)

However, what types of incentives has Washington offered to facilitate a subregional response to Boko Haram? How significant are these incentives, which have primarily been offered in terms of aid flows?

Accordingly, in 2015, the United States provided US$133 million to strengthen the MNJTF, building its cross-border capabilities, and further cooperating in the fight against Boko Haram. This aid for the multilateral organization, interestingly, was actually larger than the total bilateral military and police aid for the same year from the United States to Cameroon, Chad, Niger and Nigeria combined – which stood at only US$103.2 million. Yet, as seen in Table 6.1, the increase in American military aid to the subregion (multilateral and bilateral) is very recent, dating back to only 2015.

Before 2015, only Niger benefitted from an increased aid level, perhaps due to the desire to increase Niamey's capacity to defend its western border with Mali from transnational extremist groups in the Sahelo-Saharan area.

Table 6.1 U.S. military and police assistance (in current millions of US$)

	2009	*2010*	*2011*	*2012*	*2013*	*2014*	*2015*
Cameroon	1.8	2.5	1.9	1.5	2.2	6.1	40.6
Chad	1.7	2.1	1.1	0.6	8.1	6.9	20.4
Niger	0.4	0.8	0.4	12.5	12.3	37.5	31.2
Nigeria	7.7	5.2	3.7	15.5	10.9	8.4	11
Lake Chad Regional	–	–	–	–	–	–	133
Somalia	246.6	104.4	77.4	198.6	192.3	202.2	319.2
Afghanistan	6280.9	9999.9	11431.9	9801	6062.8	4557.1	4404.2
Total U.S. (global)	18,571.3	23,754.9	24,419.3	21,542.9	18,527.8	17,073.6	19,982.1

Source: Security Assistance Monitor (2016).

However, it is important not to exaggerate the American commitment to the subregion, which is dwarfed by the huge military and development aid flows going from the U.S.A. to other priority areas such as Afghanistan or even Somalia.

To fight Boko Haram, in addition to direct military assistance for the region and the individual member states, the U.S.A. upped the ante when in October 2015 Washington approved the deployment of 300 of its special forces troops to support the Cameroonian military in securing its northern borders with Nigeria and along Lake Chad. These troops were sent to provide airborne intelligence, surveillance and other types of reconnaissance, without being directly involved in combat. Their objective is to coordinate "operations with the regional multinational force to provide better intelligence on the cross-border activity of Boko Haram," primarily using drones (Global Risk Insights 2015). With this approach, according to Linda Thomas-Greenfield, U.S. Assistant Secretary of State for African Affairs, "We are providing advisors, intelligence, training, logistical support, and equipment to our partners" in the struggle against Boko Haram (U.S. Department of State 2016b). Along with France, the United States has begun to play an important role in helping facilitate a coordinated subregional response in the Lake Chad Basin against transnational extremism.

Conclusion

The offer of incentives by external actors such as France and the United States has been important in facilitating the emergence of a coordinated multilateral military response by the states in the Lake Chad Basin subregion to a common threat. In the fight against Boko Haram, even minor support from these two important external actors appears to have played at least some role in enabling closer coordination in the subregion, although this is difficult to assess to what extent, given the opaqueness of the military aid and arms transfer data from France and to a lesser extent to the U.S.A. Nonetheless, the example of the emergence of the MNJTF around the Lake Chad Basin shows us that outside parties have a wide variety of options available to them, short of undertaking muscular military intervention themselves. The most frequently deployed incentives include military assistance, military and policy training, weapons transfers, logistical support, small teams of élite forces as trainers, intelligence cooperation, as well as communications support.

Clearly, for the countries around the Lake Chad Basin, 2016 was less violent than any other year since 2009. Boko Haram no longer controls large swathes of territory stretching across Nigeria, Niger, Chad and Cameroon, as it did at the beginning of 2015. It has been beaten back by the MNJTF member states, but the jihadist insurgency is far from defeated. The jihadist extremist organization is now reduced to committing less spectacular asymmetrical terrorist attacks or carrying out regular massacres in remote villages. Yet, this terror still leaves millions in the area afraid to return home, preferring to stay in makeshift internally

displaced or refugee camps than risk being attacked by the group. However, beyond the human tragedy that is Boko Haram, it is estimated that the conflict to date has caused at least US$9 billion worth of damage across the subregion (Doya 2016). This devastation presents a dramatic setback to an already deeply impoverished part of the world.

Beyond creating the opportunity of a coordinated, subregional military response against Boko Haram, donors and the states in the region must try to address the deep grievances that exist across all of the countries around Lake Chad, as well as in the entire Sahelo-Saharan region of Africa. These include significant levels of food insecurity for millions, poverty, and lack of jobs for many in the subregion. External actors, such as France and the United States, among others, need to provide further non-military incentives to help pull the populations in the subregion out of these difficulties or risk facing more of the same in the future. Military assistance is necessary to help the countries in the Lake Chad Basin fight back against the Boko Haram menace in the short and medium term. However, in the long term, job opportunities need to be created for the people in the subregion so that the attractiveness of future extremist organizations will not be as strong.

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Part III

States, civil society and transnational extremism

7 Terror, territory and statehood from Al Qaeda to the Islamic State

Jaume Castan Pinos

Introduction

In recent years, the study of terrorism has largely focused on the de-territorialized character of transnational extremist organizations (Gunaratna 2002; Jones 2006; Hehir 2007; Knoke 2015). New terrorism, it is claimed, is framed as a territorially diffused network with global orientation (Neumann 2009: 29) as opposed to old territorialized and structured terror. Al Qaeda and its *modus operandi* have been used as a suitable example of an organization that epitomizes a new era of post-territorial terrorism. According to this argument, Al Qaeda has managed to achieve a global reach that potentially questions the importance of territory and safe havens for terrorist organizations (Medina and Hepner 2013: 27–29). Embracing this point, Hehir (2007: 320) points out that "the terrorist threat which al-Qaeda poses to the West is not one which is state-based, or even clearly territorially-bounded." Therefore, this implies not only that the state is losing relevance but also that the territorial dimension is bound to vanish from the picture.

Different metaphors, such as spider web, franchise and social movement (Neumann 2009: 39), have been employed to describe this "global network." All those images point in the direction of the de-territorial and even decentralized perspective. This is conceptualized by Sageman (2016: 5) as a "global neojihad" and characterized by lack of organization, fluidity and lack of boundaries. The overarching notion behind this approach is that Al Qaeda has led the change, imitated by other terrorist groups, from a "territorial jihad approach to a universal jihad mindset" (Gunaratna 2002: 235). This transformation, which was partly due to circumstances – namely the U.S.-led intervention in Afghanistan that dismantled the group's headquarters and infrastructure in 2001 – forced the organization to become "a diffuse global network, working loosely with a broader movement of affiliated groups and individuals inspired by al-Qaeda's jihadist–Salafist worldview" (Jones 2006: 557).

This process of de-territorialization was accompanied by a move toward decentralization, following Al Qaeda's expulsion from Afghanistan and the arrest of key leaders from the organization (Shapiro 2013: 16). What is often neglected is that prior to 2001, Al Qaeda resembled and behaved like a state, not

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least because "it controlled territory, maintained an army and waged war, forged alliances, taxed and spent, and enforced a system of law" (Benjamin and Simon 2003: 169). More recently, Al Qaeda has taken advantage of the Syrian civil war "by supporting radical elements of the opposition" (Zimmerman 2013: 17), such as Jabhat Fateh al-Sham, and by using this strategy the organization has been able to establish territorial control over several areas of this Levantine state.

According to the post-territorial narrative, there are both strategic and ideological elements that have led to the de-territorialization of terror. From a strategic point of view, territory and territorial control would constitute nothing but a hindrance, a liability that would make terrorist organizations more vulnerable and easier targets for counter-terrorist measures developed by their enemies, namely Western states. In the words of David Knoke (2015: 4), "counterterror pressures […] compel terrorist groups to change their structures and actions," making them more decentralized and de-territorialized. In practical terms, this means that Al Qaeda employs a franchise model where training, resources and attacks occur throughout the world (Medina and Hepner 2013).

From an ideological point of view, the de-territorialization narrative argues, Al Qaeda and similar groups have also become de-territorialized by embracing the *Ummah*; that is, an imagined global community which encompasses all Muslims, regardless of their national affiliation. In fact, national affiliation, and the nation-state attached to it, is seen by most Salafi/Wahhabi militants as a colonial construct that needs to be overcome, since it divides the Muslim community in artificial man-made lines. This fits well with Olivier Roy's (2004) categorization of neofundamentalism, a conservative view of Islam that rejects national and statist notions while supporting the idea of a universal category of Muslims or *Ummah.* Consequently, the de-territorial discourse asserts that both from a strategic and an ideological point of view, the link between Salafi/Wahhabi terrorist organizations and territory has been decisively eroded.

This chapter challenges this view by re-evaluating the importance of territory for terrorist organizations. Building on the case of Al Qaeda and the Islamic State (IS), it shows that the aims, strategies and actions of both organizations remain territorially rooted. The following section discusses the complex relationships between terror and territory, using an analytical framework that contributes to facilitating the distinction between sovereignty claims and control over territory. The argument is illustrated with examples of contemporary as well as historical organizations engaged in political violence. Subsequently, the chapter scrutinizes the significance of the territorial dimension for Al Qaeda, and argues that, contrary to popular assumptions, the aims of Al Qaeda dramatically resemble those of the Islamic State with regard to territorial matters. The final section concentrates on examining how IS perceives, organizes and *instrumentalizes* territorial affairs, by conducting a comprehensive analysis of its (territorial) discourses through its flagship publication *Dabiq* from July 2014 to July 2016.[1] Such analysis of the Islamic State propaganda magazine is useful because it allows us to understand how this terrorist group views itself and how it projects its image, nature and aims to the international reader. In addition, the focus

on *Dabiq* allows us to illustrate the complex and seemingly contradictory relationship of this terrorist organization with territorial matters. The complexity derives, among other factors, from its binary overlapping objective: on the one hand, it aims to destroy the Arab states that emerged from colonial rule, while on the other, it advocates the creation of a Caliphate based on the *Ummah*. Territorially speaking, this entails a double logic of de-territorialization and re-territorialization that is scrutinized and problematized in this chapter.

Terror and territory

One of the challenges to the de-territorialization arguments stems from the existence and importance of safe havens. It is therefore not surprising that scholars who support the idea of the de-territorialization of terror are critical of the fact that traditional conceptions of safe havens "are all anchored in state-centric and territorial conceptions of space" (Campana and Ducol 2011: 399) and, as a result, attempt to reframe it. The U.S. Department of State (2015: 293) defines safe havens as "ungoverned, under-governed, or ill-governed physical areas where terrorists are able to organize, plan, raise funds, communicate, recruit, train, transit, and operate in relative security because of inadequate governance capacity, political will, or both." The definition bears similarities with the more simplified conceptualization proposed by Arsenault and Bacon (2015: 87) who define safe havens "as places in which terrorist groups can operate without fear of counterterror retaliation or pressure." In both cases, physical areas and places have territorial connotations that defy the notion of territorially unbounded terrorism. In fact, Arsenault and Bacon (2015) point out that the groups who are able to survive longer and consequently pose a bigger threat are those that can rely on a physical space.

Safe havens, however, are not the only physical spaces that non-state actors engaging in political violence have controlled or aimed to control. The relationship between terrorist groups and territory is intimate, multifaceted and complex. In order to shed light on such complexity, we will distinguish two variables: "effective control over a territory" (hereafter ECOT) and "sovereignty claim over a territory" (hereafter SCOT), which clearly challenges the principle of *uti possidetis* which stipulates that "borders are to remain intact, except where changed by mutual consent" (Buchanan 2004: 340). Interestingly, this norm tends to be rejected by secessionist groups while they are unsuccessful, albeit is promptly endorsed as soon as they achieve their statehood objectives (Castan Pinos 2015: 222). Both variables do not always occur simultaneously. That is, a group may enjoy the former without claiming the latter and, vice versa, it may have a sovereignty claim without having the ability to control territory. In order to illustrate this, it is necessary to consider historical examples of organizations engaged in political violence (Figure 7.1).

In the second half of the twentieth century, a multiplicity of national liberation movements, categorized as terrorist organizations by their respective host states, had as their ultimate aim to obtain independence[2] for their particular

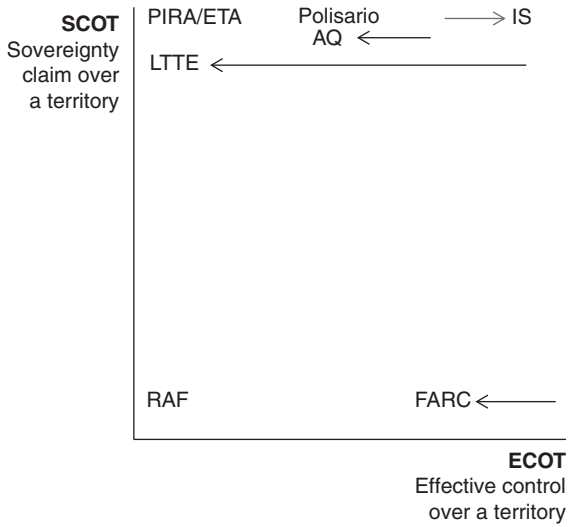

Figure 7.1 The complex relationship between groups engaged in political violence and territory.

Source: author.

territories. In the European context, organizations such as the *Front de Libération Nationale Corse* (FLNC), *Euskadi Ta Askatasuna* (ETA) and the (Provisional) Irish Republican Army[3] (PIRA) resorted to violence in order "to hurt the authority of the State […] to such an extent that the authority withdraws from the territory under dispute, or at least makes concessions […] to the nationalist community" (Sánchez-Cuenca 2007: 291). In other words, even if they did not control territory (ECOT), their aims were indisputably of a territorial nature (SCOT). Those aims did not emerge *in vacuo* but, as Neumann (2009: 22) asserts, they reflect "a given society's radical ideological currents" and are therefore rooted in social and political activism and narratives. Other groups such as the Marxist-inspired Revolutionary Army Forces of Colombia (FARC), which announced a permanent cessation of hostilities in August 2016 and are engaged in a peace process with the Colombian government, may not have had secessionist goals[4] but they controlled large swathes of the Colombian territory, where they have exerted their authority and control for decades.

Organizations may have both secessionist aims (SCOT) as well as control (partial or total) over the territory they claim (ECOT). This is the case of the Liberation Tigers of Tamil Eelam (LTTE), a group which, until they were militarily defeated by the Sri Lankan armed forces in 2009, controlled parts of the areas in northern Sri Lanka claimed by Tamil nationalists. The case of Al Qaeda is particularly useful, since it illustrates that this model is dynamic, especially the ECOT variable. The SCOT variable is much more stable. Even when a

violent group declares a permanent or unilateral ceasefire, such as the ETA or the PIRA, the sovereignty claim remains; what changes is the means to achieve it. As pointed out above, the U.S.-led intervention in Afghanistan reduced the capabilities of the group to control territory, although it did not reduce its will to do so, as will be argued below. It is also possible for a group with a SCOT to control a very limited amount of the total area they claim. The Polisario Front, for instance, controls only the eastern strip (10 percent of the territory) of western Sahara while the rest of the territory is under Moroccan occupation.[5] Organizations in this category, in which we could also include the Islamic State, are the most susceptible to potentially becoming a state, or at least a para-state, since they have the will (SCOT) as well as the capabilities (ECOT).

At the other end of the spectrum we find groups engaged in political violence that do not exert control over territory nor claim sovereignty rights over it. This is the case of generally small, revolutionary groups of a non-separatist nature. Their aims may be ideologically driven, such as in the case of Marxist-oriented groups: for instance, the Red Army Faction (RAF) in Germany or the Red Brigades in Italy. However, we can also encounter religious-oriented organizations such as Japan's Aum Shinrikyo. Consequently, the connection between terror and territory is not always straightforward nor self-evident, since the latter plays a variable degree of importance for different groups depending on their goals and capabilities. Shapiro (2013) claims that most terrorist groups lack the power to take and hold territory. This, however, only tells us half of the story; that is, it only addresses the capability variable, ignoring the "aim" dimension. The distinction between goals and capabilities is, consequently, tremendously crucial to shedding light on the complex relationship between terror and territory.

Most of the groups mentioned in the preceding paragraph belong, arguably, to the *old terrorism* category. One of the core points of this chapter is that for *new terrorist* organizations, territory continues to play a significant role and, as a result, it is essential to include the sovereignty and territorial dimensions as crucial vehicles for understanding and explaining contemporary terrorism. As is argued below, contemporary terrorist organizations, deliberately or not, develop structures, institutions and arguably even behaviors that dramatically resemble those of sovereign states. The inherent difficulty for analysts lies in the fact that these groups are recurrently "caught in their political or religious dogma to notice the underlying ambition to dominate geography" (Rock 2006: 2). This is the case with many groups adhering to an extreme interpretation of Islam. Very often their religious zeal and particularly their tendency to use religious semantical decorations mask territorial objectives. Rock's (2006: 9) notion that the motivations of these groups are "firmly rooted in terra firma and the desire to possess it and the resources it contains" is very much in conjunction with Elden's (2007) argument that terror and territory share common roots. Inevitably, this desire to dominate geography entails a more or less explicit sovereignty claim over a territory, i.e., a desire to become a political actor that is able to act free from outside interference. Currently, a terrorist organization embodies these attributes: the Islamic State.

Al Qaeda and the Islamic State vis-à-vis territorial issues

For the sake of the argument, it is essential to note that the creation of an Islamic state (caliphate) for the *Ummah* based on Islamic (*Sharī'ah*) law is not new. The idea has been entertained by scholars and prominent militants to the extent that this project may be considered an organic concept "shared and deeply espoused by most modern political Islamic organizations" (Jabareen 2015: 54). One of these prominent militants is the General Emir of Al Qaeda, Ayman al-Zawahiri, who, in a 2005 letter to the Emir of Al Qaeda in Iraq Abu Musab al-Zarqawi, claimed that "victory of Islam will never take place until a Muslim state is established in the manner of the Prophet in the heart of the Islamic world, specifically in the Levant, Egypt, and the neighboring states of the Peninsula and Iraq" (cited by Stratfor 2013).

The importance of this letter lies not so much in the fact that the expansion of IS bears significant resemblances to Zawahiri's roadmap, but in the fact that the leader of Al Qaeda, the same organization that is considered the epitome of deterritorialized terrorism, had envisioned a master plan which included the creation of a state. Perhaps the explanation for this is that, as Elden (2007) argues, Al Qaeda's territorial issues have been systematically underplayed. This argument is epitomized by Osama Bin Laden's (1996) first *fatwa*, where the first Emir of Al Qaeda constantly refers to the occupations of Muslim lands by crusaders (Christian nations), Israel and traitors (Saudi government). The main aim of the organization, according to Bin Laden (1996), was

> to push the enemy – the greatest *Kufr* [infidel] – out of the country [Saudi Arabia] […] Utmost effort should be made to prepare and instigate the *Ummah* against the enemy, the American–Israeli alliance occupying the country of the two Holy Places [Saudi Arabia].

Ben Laden envisions a forthcoming Islamic State and repeatedly uses the terms *occupy/occupation/occupier*, which appear up to 26 times in the *fatwa*. In his second *fatwa*, written two years later, he employs much more violent language and is more focused on threatening the U.S.A., but he continues to use the language of "occupation" of "Muslim lands" in order to foster his narrative (Bin Laden et al. 1998). In conclusion, given that the primary concern, the chief goal and the semantics used are all eminently territorial, it seems to challenge the idea of Al Qaeda as a post-territorial organization. As Rock (2006: 3) points out, "terrorism is by nature intrinsically directed at dominating geographic space." Al Qaeda seems to be no exception.

Originally, the Islamic State of Iraq (ISI) was established in 2006 as the result of a merger between Al Qaeda in Iraq (AQI) and other extremist Sunni groups. The fact that the origins of the Islamic State may be found in Iraq is not coincidental but rather perceived as a logical consequence of the power vacuum generated by the U.S. invasion of Iraq and the subsequent fall of the Saddam Hussein government (Underhill 2014). Shortly after the intervention, Sageman (2004)

anticipated that Iraq had the potential to become a hub for global jihad and a site where the Salafi ideology could gain momentum. The creation of the Islamic State in Iraq in 2006 is currently celebrated by IS as the most memorable moment after September 11 (Islamic State 2015f: 17) and it was reluctantly supported by Al Qaeda's Central Command, which nevertheless did not approve its expansion into Syria in 2014. In fact, the Islamic State's – at that time known as the Islamic State of Iraq and al-Sham, or ISIS – triumphal entrance led to the schism between the two groups on February 2, 2014 (Novenario 2016: 954). On June 29, 2014, the rift between the two organizations escalated when the flamboyant and yet secretive leader of ISIS, Abu Bakr al-Baghdadi, announced the (re)establishment of the caliphate, renaming the organization simply "Islamic State" and appointing himself Caliph Ibrahim (Stansfield 2014). It is common for the Islamic State to slander Al Qaeda and his current leader, Ayman al Zawahiri. Among other denunciations, IS accuses its franchise in Syria, formerly known as Jabhat Al Nusra and recently renamed Jabhat Fateh al-Sham, of the siding with nationalists and groups that advocate "for the implementation of the pagan religion of democracy" (Islamic State 2015f: 13).

Despite Zawahiri's irate rejection of IS expansion into Syria and its consolidation as a territorial entity through a state/caliphate, Baghdadi's move is very similar to what the leader of Al Qaeda had advocated a decade earlier in his letter to Zarqawi:

> The first stage: Expel the Americans from Iraq. The second stage: Establish an Islamic authority or emirate, then develop it and support it until it achieves the level of a caliphate – over as much territory as you can to spread its power in Iraq, i.e., in Sunni areas. […] The third stage: Extend the *jihad* wave to the secular countries neighboring Iraq. The fourth stage: […] the clash with Israel, because Israel was established only to challenge any new Islamic entity.
>
> (Cited by Stratfor 2013)

Indeed, Zawahiri suggested establishing a caliphate (stage 2) and expanding this state "to secular countries neighboring Iraq" (stage 3), steps that have been reproduced by the organization led by Baghdadi.

This chapter argues that far from behaving like a diffuse, de-territorialized network, the Islamic State not only focuses on dominating physical space but also, by doing so, has rapidly developed institutions, attributes, practices and a system of governance that very much resemble that of a state. The defeats inflicted upon its Salafi/Wahhabi rivals of the Jabhat Fateh al-Sham and other Syrian Islamist groups as well as those upon the Iraqi and Syrian armies have allowed this group to accumulate and concentrate coercive means and this, according to Tilly (1990), is the main condition for producing states. It may be argued that this constitutes rather a precondition that should be accompanied by imperative conditions, which will be discussed in the following section, such as population, territory and recognition by other states. Domestically, through

coercive means, the group has also managed to consolidate its control and, to put it in a Weberian manner, its "monopoly of the legitimate use of violence in the enforcement of its order" (Weber 1964: 154) in the territory it *governs.* The choice of the word "governs" is not coincidental but deliberate since, as is argued by Zelin (2016), IS has managed not only to systematize, bureaucratize and formalize its governance structures, but also to standardize this practice in all its provinces, which it refers to as *wilayats.*

It therefore appears evident that we are dealing with a terrorist organization which is swiftly metastasizing into a state. For starters, it calls itself a state: the original name of the group is Dawla al-Islamiyya. The term *Dawla* translates literally as "state" in Arabic. In addition, IS views itself as a state, and perhaps more significantly, it is often perceived as a state by its enemies. Ollivant and Fishman (2014), two counter-terrorist experts, do not hesitate to call a spade a spade:

> [T]he Islamic State […] is no longer a state in name only. It is a physical, if extra-legal, reality on the ground. […] It is now a real, if nascent and unrecognized, state actor. […] The group does not have safe haven within a state. It is a de facto state that is a safe haven.

In contrast to Al Qaeda which prioritizes attacking the far enemy while adjourning the creation of the caliphate (Novenario 2016: 955), the Islamic State's main concern is state – or rather Caliphate – building. Attacking the enemy, often labeled as crusader, that is, acting globally, is only encouraged as a secondary alternative, only in those cases where migration to the Caliphate is not an option because "this life of jihād is not possible until you pack and move to the *Khilāfah*" (Islamic State 2014c: 31). In an even clearer manner, the organization sets up the priorities in *Dabiq* 9:

> [e]ither one performs *hijrah* to […] the *Khilāfah* or, if he is unable to do so, he must attack the crusaders, their allies, the *Rāfidah* [Shi'a Muslims], the *tawāghīt* [Arab/Muslim governments perceived as traitors], and their apostate forces, wherever he might be with any means available to him.
>
> (Islamic State 2015c: 54)

Even though IS effusively praised the attacks in Paris in November 2015 and the downing of a Russian civilian plane the same month, these terrorist acts constitute a secondary option, as the *Dabiq* 12 edition "Just Terror" claims: "let every such *muwahhid* [Salafi] barred from *hijrah* purify himself of the branches of lesser hypocrisy […] let him […] strike the crusaders and their pagan and apostate allies wherever he can find them" (Islamic State 2015f: 3). In brief, migrating to the Caliphate is the primordial obligation for IS supporters, whereas extra-territorial attacks may be understood as a mere epiphenomenon. In a perverse way, this strategy reproduces the old environmentalist slogan "Think globally, act locally," or, to be more precise, "Act nationally."

Traces of territory and statehood in *Dabiq*

For the purpose of this chapter, it is important to highlight that territoriality and statehood are central elements in *Dabiq* in particular, and for the Islamic State in general. Indeed, it is commonly accepted by scholars that the priority for the Islamic State is Caliphate building (Jabareen 2015; Novenario 2016; Zelin 2016). With the aim of understanding how this state-building process works, it is useful to break it down into four different subcategories: ensuring a stable population through migration (*Hijrah*); territorial expansion; governance and policies (*Dawla*); legitimacy of the state, and leadership (*Imamah*). Far from being arbitrarily chosen, these four subcategories go some way toward corresponding with the four qualifications for statehood laid out in Article 1 of the Montevideo convention; "a) a permanent population; b) a defined territory; c) government; and d) capacity to enter into relations with the other states" (League of Nations 1936: 25).

IS builds on the Islamic concept of *Hijrah*, a term used to describe the exodus of Prophet Muhammad and his followers from Mecca to Medina in 622. *Hijrah*, which may therefore be understood as migration or exodus, is employed by the Islamic State to encourage the migration of its followers from the *lands of the infidels* to the territories it controls. As Figure 7.2 shows, the concept plays an

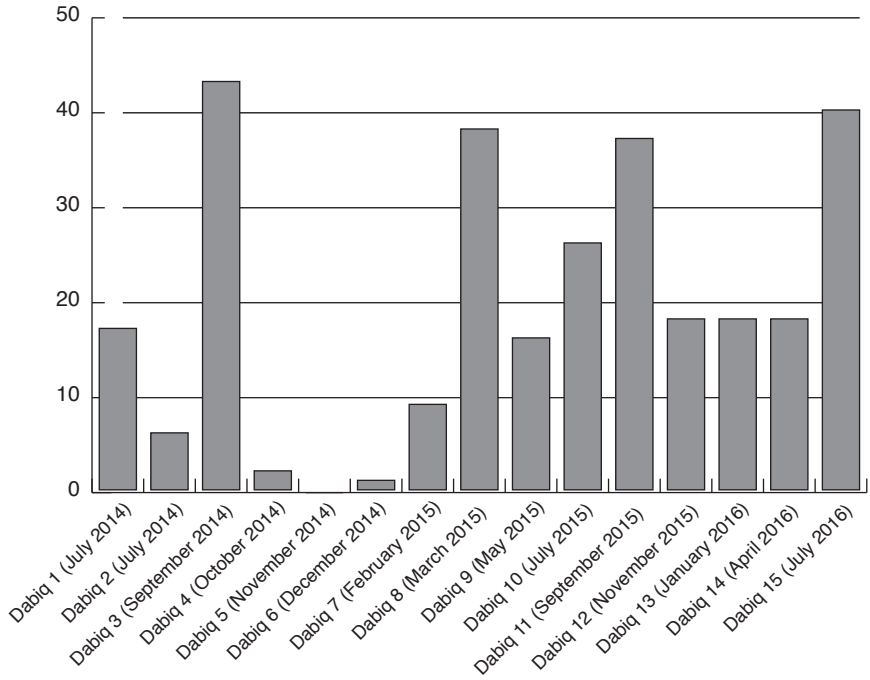

Figure 7.2 Number of times the word *Hijrah* is used in *Dabiq*, 2014–2016.

Source: author, based on *Dabiq*.

important role in *Dabiq*, particularly since March 2015. It is common for this propaganda magazine to dedicate entire articles to call for extremists to move to the territories controlled by the Islamic State. The latent aim of this apparently religious obligation is none other than the construction and consolidation of a state. The rationale is straightforward; a stable population is the core element for any project aimed at establishing a successful state. It is therefore not surprising for unborn states or recently born states to encourage populations to move to the particular territory a state aims to rule. In the very first edition of *Dabiq*, the magazine stresses: "rush O Muslims to your state. Yes, it is your state. Rush, because Syria is not for the Syrians, and Iraq is not for the Iraqis […] the [Islamic] State is a state for all Muslims" (Islamic State 2014a: 11). Unsurprisingly, in a pattern that is repeated throughout *Dabiq*, the national allegiance is replaced with a religious affiliation as the main driving factor and therefore Muslims are encouraged to move to the Caliphate irrespective of their origins.

The call to emigrate is not only for fighters but also for their families as the magazine calls on followers to "rush to the shade of the Islamic State with your parents, siblings, spouses, and children" (Islamic State 2014b: 3). It is important to note that far from being an option, *hijrah* to the Islamic State is presented as an inescapable obligation: "No life without *jihād*, no *jihād* without *hijrah.* […] This life of *jihād* is not possible until you pack and move to the *Khilāfah*" (Islamic State 2014c: 28). This compulsoriness perhaps explains the significantly high numbers of indoctrinated Europeans (and others) who have left their countries of origin and have attempted in a more or less successful manner to reach the Islamic State. According to a recent report by the International Centre for Counter-Terrorism, there are at least 30,000 foreign combatants fighting for IS and other terrorist groups in Syria and Iraq. The report estimates that up to 4,300 of these are citizens from EU member states (Van Ginkel and Entenmann 2016). Generally, the organization uses positive persuasive techniques to lure supporters into performing the *hijrah*. For instance, it guarantees accommodation and financial stability: "do not worry about money or accommodations for yourself and your family. There are plenty of homes and resources to cover you and your family" (Islamic State 2014c: 33), and it assures potential travelers that the "Islamic State provides the Muslims with extensive healthcare by running a host of medical facilities including hospitals and clinics in all major cities" (Islamic State 2015c: 25). It is also common for *Dabiq* to include interviews or testimonials from foreign militants who have made it to the Islamic State and who provide direct accounts of their trips and experiences from countries as diverse as Finland or Trinidad and Tobago (Islamic State 2016c). There is, however, a coercive/punitive element which is seldom mentioned: what happens to those who want to leave? This is perceived as a "major sin that can reach the level of apostasy" (Islamic State 2015e: 23), and apostasy is punishable with death.

In addition to population, territory is another statehood factor that is deemed pivotal for the Islamic State. In the triumphalist first edition of *Dabiq*, the group boasts that it has abolished the Sykes–Picot Agreement demarcations and announces the "further construction of the Islamic State and expansion of its

territory" (Islamic State 2014a: 13). It should be noted that this 1916 agreement (also known as the Asia Minor Agreement) between the United Kingdom, France and the Russian Empire was determinant in shaping the borders of what would later become the future states of Syria and Iraq. This aggressive policy encapsulates a double overlapping aim: on the one hand, it destroys the states that emerged from colonial rule; on the other hand, it advocates the creation of a Caliphate, based on the *Ummah*. Territorially speaking, this entails a double logic of de-territorialization and re-territorialization. According to Jabareen (2015), the territorial concept of IS resembles empires and expansionist totalitarian regimes rather than contemporary nation-states. At any rate, it is essential not to ignore the re-territorialization dimension of IS strategy and ideology. Interestingly, the actions and strategies of IS do not seem to be connected to the transnational idea of the unbounded Muslim community, but rather to a territorially bounded project, which engages in territorial frictions with its neighbors and rivals who have been disempowered by the expansion of this terrorist group and whose borders and territorial integrity have been challenged by it. Thus it is not uncommon for the Islamic State to refer to territorial battles with its numerous enemies in *Dabiq:* "[t]he Islamic State did not hesitate to wage war against the communist […] PKK/YPG, while simultaneously continuing their fight against the *nusayrī* [Syrian] regime and the [Sunni groups opposed to IS] *sahwāt*" (Islamic State 2014b: 12).

The seemingly imperialist dimension of the group's behavior is illustrated by various editions of the magazine, particularly the earlier editions. In some cases, the language of IS appears to be exceptionally hyperbolic, for example, when the group claims that "the shade of this blessed [IS] flag will expand until it covers all eastern and western extents of the Earth" (Islamic State 2014e: 33). The organization has even made specific claims in relation to the territories it aims to reach by, for instance, vowing that it will fight until "the banner of the *Khilāfah* is raised high above Istanbul and Vatican City" (Islamic State 2015e: 9). This statement seems to be aligned with the notion of elastic territoriality (Jabareen 2015: 54) or perceptual space (Medina and Hepner 2013); that is, an understanding of territory that, far from being fixed, is subjective and dependent on people's minds. This elastic view of territoriality, however, is accompanied by a much more bounded dimension. Indeed, IS tends to highlight the importance of particular areas, which are significant in the history of Islam. This is the case with many areas in Syria that are perceived as some sort of Holy Land (the land of fierce battles) and are often referred to in a prophetic manner: "Allah's Messenger has informed of battles that will occur in places within Shām [Syria] and its vicinity, such as al-Ghūtah, Damascus, Dābiq […], the Euphrates River […] Shām is the land of congregation and dispersal" (Islamic State 2014c: 9). Damascus is specifically mentioned as a city of great historical importance, "the camp of the Muslims" that needs to be liberated by "the armies of the *Khilāfah*" (Islamic State 2015c: 73). Hence, for the Islamic State, the dimension of elastic territoriality appears to go hand in hand with a purely bounded one, where attachment to particular areas is quite emotional, and historically and religiously driven.

The third qualification for statehood mentioned in the Montevideo Convention is the existence of a government. Novenario (2016) highlights the fact that the Islamic State uses soft power through governance and through the provision of social services. In turn, this soft power is instrumental for IS to gain legitimacy and to present itself as an actor concerned with the needs of the population it rules. Thus it is imperative for the organization to point out that "[T]he soldiers of Allah do not liberate a village, town or city, only to abandon its residents and ignore their needs" (Islamic State 2014d: 27). In order to become a service provider, the group has engaged in a process of institution building so that it can satisfy the social needs of its citizens and, by doing so, it has created a relationship of dependence and reliance between the rulers and the ruled. The group was able to set out this system due to its large oil revenues, private donations and ransoms as well as with Zakat or taxes paid by individuals living under IS rule. The Islamic State is eager to show both rhetorically and through graphic evidence that it cares for the orphans and the education of children in general, it provides decent accommodation and food for the elderly, and it has developed an all-encompassing, free and first-rate health system. As shown above, the alleged quality of hospitals is one of the appealing instruments used to attract followers from abroad so that they perform the *hijrah*. These friendly-looking pictures depicting the virtues of life under the Caliphate are in stark contrast with the vast majority of images in *Dabiq*, which are overwhelmingly bellicose and, in many cases, gruesome (including beheadings, amputations, burning of bodies alive, etc.).

In addition to these welfare state-inspired policies, the Islamic State has also engaged in infrastructural projects such as repairing and paving new roads, reconstructing destroyed bridges, restoring electricity networks and building irrigation systems (Islamic State 2014d: 18). According to Zelin (2016: 4), the objective of these actions is, as in the case of social programs, "to demonstrate its ability to provide for the local population." In an effort to seek financial self-sufficiency and independence from the U.S. dollar, IS issued a new currency (the Golden Dinar) "based on the intrinsic values of gold, silver, and copper" (Islamic State 2014e: 18). This development shows, once again, the commitment of the organization to adopting attributes of statehood. The Islamic State has also endowed itself with classic coercive mechanisms in order to ensure the monopoly of force in the territories it governs such as Islamic Courts and an Islamic Police. These institutions allegedly tackle, among other issues, organized crime dealing with drugs, cigarettes and counterfeit money (Islamic State 2014b) as well as "deeds of misguidance" and "any form of sexual deviancy or transgression" (Islamic State 2015a: 43). Needless to say, *Dabiq* regularly highlights the fact that the *state* can provide the most pivotal function ascribed to states: security.

The final element related to governance worth considering is the administrative function carried out by the Islamic State. Like ordinary legal states, IS has implemented policies aimed at decentralizing its administration. In early 2015, for example, it decided to restructure its internal territorial institutions by creating two new provinces (*wilāyāts*) in the area of Mosul with the purpose of

organizing "the areas encompassed by these two new *wilāyāt* in a manner more practical for governance. This new division allows the Islamic State to more easily tend to both administrative and military affairs in the region" (Islamic State 2015b: 27). If we translate this assertion to contemporary institutional parlance, we could probably claim that the Islamic State has carried out an administrative provincial reshuffle aimed at increasing public efficiency. Despite this *sui generis* model of decentralization, the Islamic State is sometimes compelled to emphasize who calls the shots. The organization used a 2006 letter intended to provide advice to the militants and written by the deceased former leader of AQI, Abu Ayyub al Masri, to remind its subjects where power ultimately lies: "[pacts are] only to be done by Amīrul-Mu'minīn [the leader] and his deputies, for he is typically more aware of, and better capable of determining the interests of the State" (Islamic State 2014f: 7). In addition to being a reminder for its soldiers, this statement also epitomizes a very classic and even realist concept of the notion of national interest.

Unlike the other three Montevideo Convention qualifications, the Islamic State does not seem very concerned with the fourth: entering relations with other states. This represents a fundamental difference with other para-states, such as the Western Saharan Arab Republic, Kosovo or Taiwan, for whom international recognition is pivotal. The only reference in *Dabiq* related to the recognition of IS by states is this rather vague statement:

> [As] uncomfortable as it may be for many in the West, there's little reason why the [Islamic] State shouldn't be considered a country. […] At some stage, you're going to have to face the Islamic State as a country, and even consider a truce.
>
> (Islamic State 2015b: 65–66)

This statement is significant because IS does not view itself as a non-state actor fighting states but as a fully legitimate state in conflict with other states. More importantly, in a very implicit manner, the Islamic State is pointing out that it would be open to the idea of considering a truce with its enemies; in other words, to establish diplomatic relations with *fellow* states. This is, however, a drop in the ocean, as the vast majority of statements issued by the Islamic State are aimed at demonizing and delegitimizing states, due to their Crusader (the West and Russia), Shi'a (Iran, Iraq and Syria) or treacherous (most governments in the Arab/Muslim world) nature.

What clearly emanates from *Dabiq* is the self-perception that the Islamic State is fulfilling an imperative mission because "there is no place on the face of the Earth where the *Sharī'ah* of Allah is implemented and the rule is entirely for Allah except for the lands of the Islamic State" (Islamic State 2015d: 50). This element of ontological necessity often leads to delusionary buoyant remarks: "this state […] is a marvel of history" (Islamic State 2014c: 5). Since it sees itself as a non-contingent but essential entity that is accomplishing a religious obligation, the Islamic State also makes constant references to the *baqiyah* or

need to remain (Islamic State 2015f), reminding its supporters and its enemies that: "[T]he Islamic State is here to stay, even if all the Christians, Jews, *mushrikīn* [polytheists], and apostates despise such" (Islamic State 2014e: 33). In order to visually mark its will to stay, the Islamic State resorts to a very state-like strategy: the use of its flag. According to the Norwegian anthropologist Michael Billig (1995), flags are a powerful symbol that operates unconsciously, and therefore powerfully, and they constitute a banal reminder of nationhood. Knowingly or unknowingly, by using such a national instrument to boost its symbolic power, the Islamic State is behaving like the nation-states it terrorizes and aims to eliminate.

Conclusion

One of the central arguments of this chapter has been that territory plays a fundamental role for terrorist organizations. An analysis of *fatwas* and other propaganda documents has shown that even those groups perceived as de-territorialized, such as the recurrent example of Al Qaeda, aim to acquire, control and influence geographical space. The fact that in some instances they do not happen to be able to exert control over a territory has more to do with their weak capabilities than with a principled ideological rejection. In fact, as soon as they are powerful enough to do so, groups affiliated with Al Qaeda (in Syria and Yemen, for instance) have resorted to the strategy of dominating territory. For this reason, it is crucial not to underplay the role territory plays for terrorist organizations.

There is a tendency to contrast the physical with the virtual space, the territorial with the de-territorialized network. Perhaps it is necessary to study terrorism beyond binary oppositions and with a more encompassing approach, acknowledging that the different (and apparently contradictory) dimensions can, and in most cases do, harmoniously cohabitate. The case of the Islamic State appears extremely illustrative in this regard. The group's strategy stems from a balanced approach that combines de-territorialized actions (terrorist attacks in the West and other states perceived as enemies) with an unmistakably territorial project which involves the creation and development of a territorial entity that, by all means, resembles a state. Even if the group seems currently to be losing ground and is retreating from many areas in both Syria and Iraq, its determination to control territory and aim for statehood remains.

At a more general level, for terrorist groups, as well as for national liberation organizations, controlling territory is not a capricious choice but, as Rock (2006: 6) points out, it is connected with the fact that by doing so, they are able "to increase their social, political, economic and military might." Needless to say, the territorial character of terrorist groups, such as the Islamic State, has tremendous consequences in terms of counter-terrorism, since the fight against terror needs to be fully suited to the nature of the threats. Novenario (2016: 963) claims boldly that "an appropriate counterterrorism response requires a presence on the ground […] [which is] needed to clear and hold territory and to bolster law enforcement in

order to challenge any of the group's attempts to regain social control." Provided that the appetite for these types of actions is not at its highest point among the public and that this strategy necessarily requires relying on and coordinating with local actors, this response appears to be difficult to implement, to say the least. Academically speaking, however, this conundrum involving territory, terror and ways to tackle the latter appears as a unique window of opportunity for researchers focusing on borders, security and extremist organizations.

Notes

1 In September 2016, the Islamic State, through its al Hayat media center, began publishing a new magazine, *Rumiyah*. Due to time and space constraints, this publication will not be included in this chapter's analysis.
2 The aim of the (P)IRA was reunification with the Republic of Ireland, which was perceived as a culmination of Irish independence.
3 These three groups are no longer active. The (P)IRA declared an end to its armed campaign in July 2005 and dismantled its military arsenal some months later, culminating in the peace process that began with the Good Friday Agreement in 1998. Despite the lack of a peace process in the Basque Country, the ETA declared a permanent ceasefire in 2011. Likewise, in 2014 the FLNC issued a statement which, emulating their Basque and Irish counterparts, declared the end of their struggle.
4 Their goals were revolutionary: to replace the Colombian government with a Marxist-Leninist regime.
5 Although this term is controversial and contested by the Moroccan Kingdom, it is widely used by the United Nations (1980). Since 1963, Western Sahara has belonged to the UN non-self-governing territories list.

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8 Public perceptions of violent extremism in Mali

Bruce Whitehouse

Introduction

Since the end of the Cold War, social scientists and security analysts have devoted increasing attention to the role of "extremist groups" and "violent non-state actors" in driving political instability. These categories today encompass organizations from religious fundamentalists to ethnic nationalists to criminal gangs which may have radically different aims and agendas. Whether a group's orientation is categorized as religious or secular, or as national or transnational, is crucial to how it and its activities will be regarded. A group's self-representation as well as its perception by various publics with respect to these same categories may vary significantly between the areas in which it operates on the one hand, and the rest of the world on the other. Understanding this variation is essential to anyone seeking to situate contemporary conflicts in their proper context. In this chapter I illustrate this fact by examining one such conflict occurring in the West African country of Mali.

Since 2012 Mali has been gripped by its most serious security emergency since independence from France in 1960. Early that year, a loose alliance of secular separatist rebels and armed jihadist groups took over the country's three northernmost regions (accounting for more than half of Mali's territory and 10 percent of its population), while a putsch by government troops in the capital ousted Mali's democratically elected president. The separatist insurgents, dominated by ethnic Tuareg fighters, declared the independence of a new state they called "Azawad," drawn within the existing boundaries of the Malian state.[1] They flew their movement's green, black, red and yellow flag from their vehicles and outposts. Many of these insurgents were in Mali for the first time, having spent their lives in exile in Libya. The *mujahideen*, operating under the black banner of militant jihad, had little immediate interest in statehood; in the areas they controlled, their priority was enforcing a harsh version of Islamic law. These jihadist groups had varying degrees of integration on Malian soil. Al Qaeda in the Islamic Maghreb (AQIM), although it recruited from throughout North and West Africa, was primarily led by Algerians. An organization known as Ansar Dine was dominated by Malian Tuareg and headed by former Tuareg separatist leader Iyad Ag Ghaly, who had broken off from his secular separatist

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brethren the previous year. And the Movement for Oneness and Jihad in West Africa (MUJAO) framed itself as a regional Islamist group but recruited especially from among non-Tuareg young men in Mali's Gao region.

By July 2012 the *mujahideen* had fallen out with their separatist allies and ejected them from the cities and towns under their control. Cut off from the Malian state, inhabitants of the north were subject to the jihadists' purported Islamic rule for several months before French military forces drove them out early the following year (Lecocq et al. 2013; Boeke 2016). Although in 2013 Malians elected a new president and a United Nations (UN) peacekeeping mission (known as MINUSMA) arrived to provide security, Mali's security situation remains alarming: armed Islamist groups have not only continued to mount terror attacks throughout the country's north but have also extended their operations into central and southern Mali, into neighboring states, and into Libya (Whitehouse and Strazzari 2015; Sangaré 2016).

These developments touched off intensive soul searching among Malians anxious to diagnose the root causes of their nation's woes. How had a society once celebrated for its tolerance and political stability become so disrupted? How had the country so quickly lost the reputation it had earned during the 1990s as a successful case of transition from authoritarian to democratic rule? Why did the Malian state, its administration and security forces, remain mostly absent from the country's northern regions, particularly the separatist stronghold of Kidal, even after the French Army and MINUSMA had fully deployed? Why had these foreign forces only targeted jihadist groups for suppression while leaving separatist rebels alone? In short, why was the international community unwilling to deal with extremist groups that presented themselves within a national rather than a transnational framework, even if they posed a significant danger to the stability of the Malian state?

Despite Malians' considerable public and private debate over these questions, there has been little consensus on the answers; yet many Malians regard the threat of Islamist terror in Mali with skepticism. One conspicuous public figure, imam Mahmoud Dicko, has tended to speak about terrorism only in reference to what he alleges to be an international plot to destabilize the country. Dicko described the UN and French military intervention on Malian territory as part of "a process of recolonization of this country, aiming to return it to subjugation and slavery [*mara ni jonya*]" during a mostly Bamanan-language sermon he delivered at Bamako's great mosque in August 2016.[2] He spoke of outsiders' sinister efforts to pit Mali's people against each other and to partition the country. Dicko contended that the threat of jihadist terrorism had been created by these same foreign forces. The specter of religious extremism existed only because foreign troops, he said, "have not yet finished what they have to do here. They have not yet achieved their ultimate aim." He went on to classify militant jihad in Mali as a Western media lie, trumped up specifically by Radio France Internationale. "It's hard to say it but we must have the courage to say it," he told a vocally appreciative audience of several hundred men. "The pretext of the colonizers chased out by our founding fathers to return [to Mali] is this business

of jihadists. […] And the primary objective is to take away this country's dignity, its religious faith, its values and morals." In his view, Mali's present insecurity stems neither from religious fanaticism, nor from local factors such as ethnic tensions, growing criminality, nor even the endemic weakness of the Malian state. The presence of armed Islamist groups on Malian territory is, to Dicko, an epiphenomenon best explained with reference to the sinister intentions of the international community, most notably France.

Such ideas are not surprising coming from Dicko, who heads Mali's High Islamic Council and is generally recognized as the most prominent leader of the country's reformist or "Wahhabi" Muslims. When faced with an outbreak of violence perpetrated in the name of Islam, he has often shifted the discussion away from the subject of extremism. After jihadist groups claimed responsibility for an assault on Bamako's Radisson Blu hotel that killed 20 civilians in November 2015, he described terrorism in Mali as a form of divine punishment, telling an interviewer on Malian television: "God is angered. Men have provoked God. They asked for and even required the promotion of homosexuality" (Broulard 2015). Following the same terrorist incident, Dicko described Mali as victim of a plot "organized by the West" in complicity with alleged jihadists (Procès Verbal 2015).

Dicko's remarks sparked public controversy in Mali and even led Mali's chief prosecutor to warn against offering apparent apologies for terrorism. But how widespread have similar interpretations of Mali's insecurity been inside the country, and how do Malians perceive the threat to their communities posed by extremist groups? I seek to answer these questions by analyzing discourse in the Malian media as well as surveys conducted since the crisis began in 2012. My selection of Malian media sources, while not random, is intended to represent a larger current of opinion within the country's élite – a current which dominates the private newspapers of the capital city, Bamako, in which these selections were originally published.

Loyalist threat perceptions

Imam Dicko's views of his country's present emergency fit into a long-standing pattern of opinion in Mali, particularly among intellectuals. One legacy of Mali's early postcolonial years has been a generation of Malian scholars, professionals and administrators who received university training in the former Soviet Union and Eastern Europe. Members of this generation tend to hold strong anti-imperialist views, and they acutely distrust Mali's former colonial ruler and its intentions on the African continent. Nationalist sentiment runs high for these Malians, and Malian national identity has been defined in part by Malian efforts to limit or curtail French influence over their country, as I will show below. I will henceforth refer to this group and its discourse as "loyalist" due to their opposition to Tuareg separatism and their desire for a strong Malian state, and I will discuss loyalist views on two issues: the classification of extremist groups and the role of France in Mali's crisis.

"Azawad" or jihad: which is more dangerous?

Loyalist views of jihadist groups in Mali have been complex. Since independence, leaders of this majority-Muslim country have upheld the "republican vision of the state as '*laïque, démocratique, et sociale*' [secular, democratic and social]," just as leaders have done in neighboring Senegal and Niger (Villalón 2010: 383). Yet even as armed Islamist terror groups, most notably AQIM, expanded their presence in the desert zones inside Mali's borders with Mauritania and Algeria from approximately 2006, officials in Bamako did not perceive this presence as a clear and present danger to the Malian republic. In fact President Amadou Toumani Touré, who ruled the country from 2002 until his ouster in March 2012, is widely believed to have struck an informal non-aggression pact with AQIM: as long as the *mujahideen* concentrated their aggression on non-Malian targets (e.g., by holding Westerners for ransom or attacking Algerian interests), the Malian state would turn a blind eye to their activities on its soil (Lasserre and Oberlé 2013; Moyar 2015). This pact seems to have ended in mid-2009, when Malian forces captured some AQIM personnel and AQIM responded by assassinating a senior officer of the Malian intelligence services in Timbuktu (Filiu 2010). Nevertheless, dealing with AQIM remained a low priority for the government. The fact that AQIM emerged in the wake of Algeria's civil war of the 1990s and still sought the establishment of an Islamic state in Algeria (Harmon 2014) led Malian officials to misjudge the threat it posed: instead of viewing the group as a transnational problem liable to destabilize governments throughout the region, they viewed it as a minor spillover of an Algerian problem.

The far greater security problem in the eyes of Malian officials was another Tuareg revolt. By the end of the first decade of the twenty-first century the Malian republic had already faced three waves of rebellion in the north: from 1962 to 1963, from 1990 to 1995, and again briefly in 2006 (see Lecocq 2010). The chiefs of several high-status Tuareg clans, as well as those of a few Arab tribes, had long chafed against Bamako's control. For those loyal to the central government – and this includes virtually every member of the educated postcolonial élite mentioned above – the Tuareg have been and remain the primary enemy of the nation, and Tuareg insurgents constitute the real terror risk. This fact has led to divergent security priorities for Mali's government and its Western partners: "When Paris warns Bamako about the rising threat of 'terrorists,' it's thinking of AQIM and its allies," observed Notin (2014: 41). "When Bamako complains to Paris about the threat that 'terrorists' pose for the country, it's thinking of the Tuareg." Mali and its partners abroad weighed national and transnational threats very differently.

Since the crisis began, recurring epithets for the Tuareg adversary in Bamako's francophone press have included the term *apatride* (literally, "stateless") and the phrase *les enfants gâtés de la République*, "the republic's spoiled children" (see, e.g., Dembélé 2012). This language denotes the enemy's supposed ingratitude toward, inherent opposition to, and perhaps even irreconcilability with, the modern

Malian state. Such enemies are viewed as unfit for inclusion within the republic because they oppose its core values and are ungrateful for its supposed sacrifices on their behalf. "For centuries, the Tuareg minority in Mali has applied violence or the threat of violence to get what they have wanted from their Black neighbors," wrote Malian anthropologist Kassim Koné (2013). "French colonialism and independence did not change that. Successive Tuareg rebellions followed independence and each time, the Tuareg requested resources and recent governments have rewarded them." The fact that neighboring Niger, with its own Tuareg minority, its own history of Tuareg rebellion (see Grégoire 2013) and a border with Libya, has *not* erupted into conflict since 2012 suggests that Mali's latest Tuareg uprising was and remains largely a national rather than a transnational phenomenon.

The blurry distinctions Westerners make between various categories of violent non-state actors – rebel insurgents, criminal gangs, jihadist militants – usually fall away completely in loyalist Malian discourse. "We don't know who is who," complained an anonymous high-ranking Malian official to *Jeune Afrique* (2016). "Certain members of these groups have three ID cards: rebel in the morning, jihadist in the afternoon, and narcotrafficker at night." This trend toward amalgamation is reflected in and magnified by Malian media, which since the early 1990s have included dozens of privately owned newspapers and radio stations competing with state-run outlets (one newspaper plus national radio and television broadcasting). Opinion in these outlets, especially in private media, elides over the distinction between separatist, Islamist and criminal organizations operating in northern Mali. Thus another common label for the separatists is "armed bandits," since loyalist discourse does not differentiate between political and criminal violence committed by Tuareg in the north. The same has applied to official discourse in Niger regarding Tuareg rebels (see Grégoire 2013). As Boeke (2016: 916) points out, "labelling a group as ordinary criminals […] belittles the underlying grievances, ideologies, and motivations, attributing their actions to solely personal, often material gain."

The common cause that Tuareg separatist groups, most notably the National Movement for the Liberation of Azawad (MNLA), found with jihadists for several months in 2012 led many Malian editorialists to question the separatist movement's ostensibly secular/nationalist orientation. "The fact that [the MNLA] is secular yet close to Al-Qaeda is surprising, since its men fought alongside Ansar Dine and AQIM from January to March 2012 to claim the independence of northern Mali," wrote Tamboura (2015), wondering why French troops could tolerate and even work alongside the MNLA following their intervention in northern Mali in light of the group's dubious associations.

Loyalist discourse in Mali contests the decision by the UN and France to treat Tuareg separatists not as a threat to be eradicated but as a legitimate negotiating partner. Under the umbrella movement known as the Coordination des Mouvements de l'Azawad (CMA), the MNLA and the allied Haut Conseil pour l'Unité de l'Azawad (HCUA), an allegedly nationalist/secular group formed by defectors from Iyad Ag Ghaly's jihadist Ansar Dine group in early 2013, have become interlocutors in Mali's peace process and the de facto rulers of the Kidal region,

where the French military ultimately initiated joint patrols with CMA fighters (RFI 2016). How, ask loyalists, can one oppose the jihadists without also opposing insurgents so closely linked to them?

"It is time for the international community, MINUSMA and French forces finally to open their eyes to the game played by the CMA's armed groups," wrote the editors of the Bamako newspaper *L'Aube* (2016).

> These movements are in fact in tight complicity with Iyad Ag Ghaly, the instigator of everything that happens in the north. He is simultaneously the mentor of the HCUA, the godfather of Amadou Kouffa [jihadist leader in central Mali] and the partner of AQIM. The current situation in the north results from the combined action of the CMA-AQIM-Iyad trio.

Iyad's standing as a former separatist leader himself during the rebellion of the 1990s further blurs the boundaries between the secular and religious categories of armed extremism.

Some loyalist voices show more sympathy for jihadists, who as international pariahs are excluded from Mali's internationally brokered peace process, than for the separatists who have a seat at the bargaining table. "It would be more practical for the Malian government to talk with the HCUA or MUJAO, labeled jihadists, than to talk with the thieves of the MNLA," opined one critic of peace accords negotiated between the Malian government and separatist rebels (Aliou 2014). This sentiment was shared by many Malian officials: as a former French ambassador to Mali told an interviewer, "In the eyes of the leaders in Bamako, the Tuareg threatened the stability of the country, while [the leaders] believed they could reach an understanding one day with the jihadists since, deep down, they were Muslims too" (Notin 2014: 187). This view persists within Mali's political class: in late 2016 a letter from Iyad Ag Ghaly announced a unilateral ceasefire brokered by Mahmoud Dicko, a deal supported by a number of Malian opposition figures despite the Malian state's official refusal to negotiate with armed jihadist groups and despite Ag Ghaly's designation by Western governments as a terrorist (Diakité 2016).[3] The following year, support for negotiations with Ag Ghaly and Kouffa resurfaced at a high-level national dialogue for peace organized by the Malian government in Bamako.

By contrast, loyalist discourse represents the Tuareg as the most dangerous category of violent extremist facing the Malian republic. It paints them as essentially irredeemable, untrustworthy and faithful only to themselves. In doing so it resonates with a set of racial tropes that have long been used to mobilize members of sedentary black communities in northern Mali against a perceived nomad/light-skinned threat (Hall 2011).

A hidden French agenda?

The January 1961 decision by Modibo Keita, Mali's founding head of state, to order the withdrawal of French troops from Malian territory set the tone for

contentious Franco-Malian relations for many years, especially with regard to military cooperation (Joly 2013). Millions of Malians today continue to find inspiration in President Keita's ardent nationalist politics. By contrast, it would be difficult to overstate the depths of suspicion toward France among Mali's loyalist intelligentsia. Although official criticism of France tends to be muted in state media and by government spokespersons, it is a fixture of private newspapers and radio stations, and frequently colors editorialists' analysis of Mali's situation.

Wariness of French motives in Mali did not take long to reassert itself following Malians' initial displays of public gratitude for the January 2013 launch of Operation Serval, an operation subsequently deemed a political and military success (Chivvis 2016). As French troops drove jihadists from northern Malian towns and from their desert hideouts a political vacuum appeared, into which the MNLA quickly reinserted itself. French officials tried to portray the conflict between Tuareg separatists and the Malian government as an internal Malian matter in which France remained impartial, and Serval's field commanders initially took pains not to appear to be coordinating or collaborating with the MNLA on the ground (Barrera 2015). Malian loyalists, however, remained dubious: French intelligence services were known to have maintained relations with the MNLA for months, ostensibly to help locate French citizens held captive by AQIM in the region (Halifa-Legrand and Jauvert 2013; Notin, 2014). The mere fact that France did nothing to combat the separatists – and, indeed, encouraged Bamako to negotiate with them – made Serval more than suspect in loyalist eyes.

A narrative emerged among loyalists that France, not Islamic militancy, nor even the weakness of the Malian state, had brought war upon Mali. This narrative hinged on multiple purported motives, among which was an economic one: France wanted to claim mineral and other forms of wealth in the region. "Some think that the terrorists are not the focus of this war, merely the pretext," wrote one Bamako journalist (Sylla 2016). "They believe that French intervention in Mali hides an attempt to grab the country's natural resources. Mali's north is considered by many specialists of the matter as an extremely rich zone in uranium and other mineral resources." The true extent of mineral deposits in northern Mali has never been proven but remains the subject of considerable speculation.

Another suspected French motive in Mali was regaining the military hegemony it lost over Mali (and, by extension, the wider Sahel) following independence. The remote airfield at Tessalit, not far from the Algerian border, often appears in loyalist discourse as a coveted strategic facility that holds the key to controlling the entire Sahara/Sahel region. The mention of Tessalit is not coincidental, since it was among the last bases the French relinquished in 1961, when it was useful to support French forces fighting in Algeria. Whether it remains useful today is not in doubt for loyalists. "What everyone knows today and what nobody can doubt any longer is that France was seeking to build its military stronghold for the entire Sahel in Tessalit in the north of our country," wrote journalist Fodé Keita (2016). "This has been a dream of French rulers since the end of the colonial era, but the nationalist government of Modibo Keita blocked

such a cynical dream." When France negotiated a military cooperation agreement with Mali more than a year after launching Serval, many Malians predicted that it would include a provision ceding the Tessalit base permanently to the French. "Tessalit is again attracting interest from France which plans to remain perpetually on Malian soil as part of its anti-terrorist fight," read one editorial preceding the agreement's signature (Maliactu 2014). That the eventual agreement contained no such provision did not dampen speculation over French motives.

Amid such suspicions, views have emerged that France has actively supported Tuareg rebels as well as jihadist fighters on Malian soil as a means to weaken and divide the nation for its own selfish interests. Imam Dicko's sermon, mentioned above, insinuating that French forces had not truly come to Mali to counter the threat from jihadist groups, is very much of a piece with these views. Many loyalists have reached the conclusion that their misfortunes stem from Mali's former colonial ruler. Jihadist terror and separatist insurgency are at best, to their minds, secondary issues unrelated to the postcolonial state's own failings. For many loyalists, these security threats have been either passively or actively encouraged by neocolonial meddling in Mali's affairs and cannot be adequately addressed as long as this interference continues. "It is thus absolutely apparent that France cannot be the solution to the problem of peace in Mali," wrote Fodé Keita (2016); France, he claimed, "constitutes the problem which Malians must resolve without delay."

It is difficult to know how widely such views resonate in Mali. Dicko's remarks about France and foreign plots to subdue Mali have generated many harshly critical responses from Malian public figures and Malian readers online, and readers' hostile comments may be found posted on many of the press articles cited above. One should keep in mind, however, that the channels of loyalist discourse and their critics reviewed here pertain to a relatively narrow élite: Mali is one of the world's poorest countries, and most Malians do not read newspapers or have internet access. Social surveys in Mali seldom ask questions that articulate directly with the issues reviewed above, but one exception is worth noting: when pollsters asked Bamako residents in May 2014 whether France was neutral, was helping Mali or was helping MNLA separatists in Mali's present crisis, 72 percent responded that France was helping the MNLA; 83 percent were dissatisfied with the role played by Serval, and 69 percent were dissatisfied with the role played by MINUSMA (GISSE 2014). Among Bamako dwellers, at least, loyalist discourse fuels perceptions of sinister French and wider international designs on their country. Surveys carried out closer to the conflict zone, however, reveal a somewhat different picture.

Popular threat perceptions

In mid-2012, a few months after Mali was violently split into areas of government and jihadist control, a team of researchers canvassed villagers in the northern Mopti region. Their survey area, just south of the Niger River, lay in a

no-man's land between government- and rebel-held zones; at that time, the zone had been spared the violence and dislocation that had raged further north. A few months prior to the coup, the researchers had asked members of their random sample of 600 rural dwellers to identify their own policy priorities for the nation, and to choose from a list of news topics to listen to. In June and July, with the crisis fully underway, they asked them to articulate a message to President Obama (Bleck and Michelitch 2015).

As evidenced by their responses to these questions, these Malians' top post-coup concerns were not immediately related to the country's nascent crisis. More than three-quarters prioritized public services – agriculture, education, health and social welfare – as the area of greatest need. Only 14 percent addressed the ongoing insurgency. These priorities had scarcely shifted since the period immediately preceding the rebellion and accompanying insecurity. From these villagers' perspective, the crisis did not significantly alter the challenges faced in their everyday lives: they felt neglected by the state beforehand, and were still abandoned afterwards. "The coup and insurgency merely exacerbated state abandonment that had been ongoing," concluded Bleck and Michelitch (2015: 10) from their review of these data.

Of the 531 messages to President Obama recorded by respondents in mid-2012, only 15 (2.8 percent of the total) sought America's help fighting the rebellion; four of these specifically mentioned Tuareg rebels, and none referred directly to jihadist militants. Another 31 messages (5.6 percent) spoke of the need to restore peace and national unity in Mali. The vast majority, however, asked for assistance in meeting basic needs, especially for food and basic livelihood. "It is true that today the country is experiencing an unusual and uncertain situation due to the rebellion and the insecurity we face," one villager said, "but we also do not have enough to eat and we want to work but there are no opportunities, nothing to match our aspirations" (Bleck 2012).

Other segments of Mali's population have appeared to be more concerned by the problems of insecurity and insurgency. One year later, another team surveyed a sample of several hundred Internally Displaced Persons (IDPs) from northern Mali who had taken refuge in Bamako and Mopti. These respondents had all been uprooted from their homes; some had lost everything they had, and many had personally encountered abuse from separatist and jihadist fighters. Seventy percent of these IDPs had left during the period from the beginning of the rebel occupation in March/April to the jihadist/MNLA confrontation in early July. When asked why they had left home, 56 percent said it was due to "rebels," 13 percent said to escape the MNLA, and another 13 percent cited "Islamists." Asked about the causes of the crisis, 61 percent blamed the MNLA while 16 percent mentioned other rebel groups; another 44 percent cited poor governance and corruption.[4] Asked about the two biggest problems confronting Mali, 78 percent cited the crisis in the north. Asked to record a message to Malian and foreign leaders, a few requested support to fight the MNLA or the Tuareg, but most spoke of their desire for assistance to return home. Of those who mentioned France, most expressed gratitude for its intervention in their country (Bleck et al. 2014).[5]

Some of the contrasts between these two samples are reflected in larger scale sample surveys conducted by Afrobarometer during the same period. In December 2012, when Mali was still divided and French and UN forces were not yet present, Afrobarometer surveyed a sample of 1200 respondents in the parts of the country still under central government control. Asked about the reasons for the occupation and conflict in the north, these respondents were most likely to cite "Lack of patriotism of the leaders," followed by "Weakness of the State"; "Foreign terrorists" was only the third most cited reason, followed by "Incompetence of the political class" and "Desire for natural resources" (Afrobarometer 2013). One year later, in the wake of Serval and the deployment of MINUSMA, Afrobarometer drew up another sample of 1200, this time incorporating all of Mali's regions, including those in the north that had previously been under jihadist occupation. Asked the same question about the reasons for the occupation and conflict, northerners cited "Foreign terrorists" first, followed by "Corruption," "Weakness of the state," and "Lack of development in the north." Respondents *outside* the formerly occupied zone also listed "Foreign terrorists" as the first cause, followed by "Corruption," "Desire for natural resources" (that fixture of loyalist discourse) and "Weakness of the state." In sum, Malians in areas that had experienced jihadist rule had a different perspective on the conflict than those elsewhere in the country; moreover, views in southern Mali had shifted in the course of 2013. Southerners were less concerned by their leaders' incompetence and lack of patriotism, and more concerned by terrorism, corruption and geopolitical factors than they had been before (Afrobarometer 2014).

From July to September 2015, a research team funded by the World Bank carried out a baseline survey of inhabitants in Mali's three northernmost regions (Timbuktu, Gao and Kidal). Five hundred households were included in the sample. The survey's assessment of basic needs included the question, "Who is responsible for your lack of security?" Responses were divided among multiple categories of violent non-state actors as well as some violent state actors, and respondents could specify more than one answer. Far and away the most listed category was "Bandits, thieves, criminals"; more than one in five people in the survey reported having been a victim of theft during the month preceding the survey. "Terrorists and jihadists" constituted the second most cited category overall (though this response came in third place for Timbuktu respondents). Slightly lower in their ranking came "Armed separatist groups (MNLA, HCUA etc.)." This response was lowest in Kidal, where Tuareg separatism has enjoyed its strongest support, but was nevertheless cited by nearly four in ten Kidal residents. Kidal inhabitants blamed "Smugglers" twice as often as separatists for causing their insecurity. With respect to state actors, nearly one in five northern respondents listed the Malian army. In Gao, which has seen the greatest number of terrorist incidents in recent years (suicide and roadside bombings, rocket attacks, etc.), often targeting Malian, French and UN forces, 26 percent cited Malian troops as making their lives more dangerous, and another 18 percent cited "MINUSMA/other international forces" and "Malian police" (World Bank 2016; see Table 8.1).

Table 8.1 Security perception in northern Mali, July to September 2015 (%)

Q: Who is responsible for your lack of security?	*Gao*	*Kidal*	*Timbuktu*	*Total*
Bandits, thieves, criminals	92.3	100	97.4	95.1
Terrorists and jihadists	74.3	92.7	67.0	71.3
Armed separatist groups (MNLA, HCUA, etc.)	66.1	39.1	74.8	69.5
Smugglers	64.2	85.4	58.3	62.0
Malian army	26.0	30.7	13.0	19.7
MINUSMA/other international forces	18.0	7.8	7.8	12.6
Malian police	18.3	15.1	5.2	11.7

Source: World Bank (2016).

These responses make it clear that inhabitants of northern Mali assess the security threat posed by jihadist and separatist groups as very real, but not necessarily the most immediate. Criminal bands are seen locally as more dangerous, and many residents perceive the forces meant to provide security against such threats as actually contributing to the problem. Such perceptions resonate widely across the country: surveys of 1870 residents in Mali's eight regional capitals as well as Bamako, found that 32 to 40 percent of respondents saw MINUSMA as "complicit with the armed groups," while 36 to 60 percent expressed dissatisfaction with French efforts to combat terrorism (Friedrich Ebert Stiftung 2016 and 2017; see also Sabrow 2017).

Globalized and localized paths to violence

As Mali's insecurity worsens, jihadist groups operating on Malian soil continue to adapt and evolve. Until a few years ago, these groups were thought to have limited appeal and reach south of the Sahara, with "virtually no popular traction capable of translating into sustained political action in the region" (Villalón 2013: 144). It remains true that West Africa's majority-Muslim societies, including Mali, show high degrees of religious tolerance.[6] Yet the pervasive lack of security throughout Mali, and particularly the north, has facilitated the expansion of a variety of violent actors, including ethnic separatists (Lecocq and Klute 2013), criminal syndicates and drug smugglers (Bøås 2015), self-defense militias often working with covert state support (Boisvert 2015), and, not least, jihadist terror groups (Boeke 2016). While some of these actors are transnational with respect to their agenda and grievances, others are emphatically nationalist or localist or at least prefer to be perceived as such. All of them, however, have profited from the relative weakness of the Malian state and the political and economic upheaval generated since 2012, and have recruited followers by exploiting local-level conflicts.

Consider the case of Mali's newest jihadist threat, a shadowy group known as the Macina Liberation Front (MLF). This organization has garnered considerable international media attention since 2015, when it launched sporadic attacks

against Malian government installations in the central Malian regions of Segou and Mopti (Zenn 2015). These attacks occurred in a context of heightened insecurity and inter-community tension. In the words of Jean-Hervé Jézéquel (2016), analyst for the International Crisis Group,

> Most incidents of armed violence occur in rural zones that are neglected by the state and riven by powerful tensions over the management of natural resources [most notably rights to grazing areas and water]. People of the center have gained access to combat weapons as a means of protecting themselves and sometimes of contesting local hierarchies. On this fertile ground, jihadist groups have reimplanted themselves. They fill a security void [linked to] the absence of the state from people, mainly nomads, who are regularly threatened or robbed.

This raises the question: Do the incidents of violence attributed to and claimed by the MLF have anything to do with global jihadist ideology (e.g., opposition to secular rule and to Western political hegemony)? Malian anthropologist Boukhary Sangaré (2016: 1) argues that these fighters have adopted jihad "as a simple instrumental option for objectives other than the dissemination of rigorous faith." Many inhabitants of central Mali interviewed by Sangaré think the MLF lacks a transnational or even a national agenda, and attribute the recent surge in violence to score settling and frustration at the local level. The Malian military's aggressive response to the perceived MLF "threat," they argue, has been counterproductive, alienating local populations and exacerbating already high levels of public resentment toward the Malian state.

Research on the motivations of those recruited by jihadist groups in Mali lends credence to this argument. Lori-Anne Théroux-Bénoni and colleagues (2016) interviewed 63 young men previously involved with these groups, many of them in Malian government custody. By their own accounts, these youths joined groups such as MUJAO and Ansar Dine to counter local-level security threats posed by other violent actors such as the MNLA or the Malian Army, and to help provide for their families; they did not represent their decisions as influenced by radical Islamic ideology. "The absence or weakness of the state, experienced by the population as a sign of neglect or disinterest, often motivates young people to get involved in those groups that attempt to replace the state by providing certain basic social services," the researchers found (Théroux-Bénoni et al. 2016: 5). "Yet the return of the state alone will not necessarily resolve the issue. A corrupt administration and biased law enforcement can make its presence harmful."

If these authors are correct, what must be urgently counteracted in Mali is less the threat posed by militant jihadist ideas and more the decline of the state as an entity able to guarantee some minimal level of security and justice. By capitalizing on this decline, extremist groups can win the support of populations that would not otherwise be receptive to their message. Securitization on its own will not address this underlying problem, nor will efforts directed at stemming radicalization on religious grounds.

Conclusions

In coming to grips with the complex dynamics of Mali's conflict, we must recognize that different segments of the Malian population can interpret the multiple threats they face and prioritize their response to those threats in quite divergent ways. As we have seen, the perspectives of rural dwellers who were not uprooted by jihadist occupation in 2012 differ dramatically from those of the internally displaced; likewise, members of Mali's political class, strongly influenced by loyalist discourse and historical perspectives, are likely to classify the threats posed by various extremist groups very differently than a Western government official or analyst would. Whereas Western governments and specialists prioritize the fight against transnational groups (especially AQIM and its offshoots) that attack Western citizens and Western interests, Malian leaders and loyalists very often consider separatists and their continuing struggle against the central government to pose the gravest security threat. In short, the Malian élite has been, and perhaps remains today, less concerned by global or transnationally oriented extremists operating on Malian soil and more concerned by those espousing a local agenda. This should not be surprising: from Morocco to Turkey to India, national governments frequently give the fight against breakaway movements at home precedence over the fight against transnational terrorism.

Moreover, these different segments of the popualation may diagnose the fundamental causes of Mali's current crisis in very different ways. Following recent high-profile terrorist attacks in several Malian cities, including the capital, there is surely increased public concern among Malians over the dangers posed by groups like AQIM. Nevertheless, as evidenced by the views of public figures like Mahmoud Dicko and voices in the Malian press, many Malians – especially members of the urban, educated élite – remain skeptical about the risk posed by religious extremism in their country, and attribute rising insecurity to neocolonial interference rather than to extremism or to any internal weakness of the Malian state. When told of French or international intentions to help "stabilize" Mali and the wider Sahel, they wonder, "Stabilize it for whom, and to what purpose?" One may well challenge loyalist interpretations of the roots of Mali's insecurity on a factual basis, but "consensual reality" is more important than facts; understanding the collective narratives which people construct to account for their misfortunes is of vital importance to anyone wishing to assist in overcoming those misfortunes.

Mali's crisis highlights an obvious contrast in how the international community deals with different categories of violent non-state actors. Those who represented their cause as distinctly nationalist and secular, challenging the central government's sovereignty while expressly not claiming territory in any neighboring states or adopting the rhetoric of global jihad, cannily avoided making enemies abroad, and only had to face off against the comparatively weak forces of Mali. Those who represented their cause as transnational and religious, however, found themselves facing the full might of the French military, the opposition of the United Nations, and exclusion from peace negotiations. Given

the porosity of the boundaries between the region's national/secular groups on the one hand, and its transnational/religious groups on the other, with fighters and leaders shifting strategically from one category to another, we should understand why loyalists might see a double standard in the way France and the UN have chosen to respond to these groups.

Ultimately the Malian state cannot be bypassed by any long-term security solution, whether at the national or regional levels. A state that has never been particularly strong or able to police its boundaries constitutes an attractive space for violent non-state actors of many types. Strengthening this state should be the highest priority of Malian leaders and their international partners. In any future cooperation with Mali, those international partners must be sensitive to the divergent perceptions of the country's present difficulties if they wish to avoid repeating past mistakes.

Notes

1 Although Tuareg nomads have long roamed over the territories of Algeria, Mali and Niger, these rebels claimed only Malian territory in 2012, and the name "Azawad" corresponded to no prior chiefdom, kingdom or other polity in the region (Bourgeot 2013).
2 For video footage of these remarks see SumatTV, "Discours de Imam Mahmoud Dicko en Bambara" (August 5, 2016) available at https://youtu.be/SCdi6C7s0vE; for a French-language synopsis in the Malian press see "Mahmoud Dicko: 'Le processus de recolonisation de ce pays est en cours […] même le chef de l'État ne peut se rendre ni à Gao ni à Tombouctou sans l'autorisation de Barkhane et de la MINUSNA' [*sic*]," *La Sirène*, August 6, 2016. This synopsis later appeared on the Mali Link email forum under the subject line "The Undisputed Truths of Mahmoud Dicko."
3 This source quotes opposition leader Tiébilé Dramé as saying, "We have today [people named] Coulibaly, Mamadou, Tounkara, Konaté in jihadist groups; these are our Malian brothers." By drawing attention to the ethnically Mandé (as opposed to Arab or Tuareg) patronyms of these fighters, Dramé casts them as part of the Malian fold.
4 These IDPs were mostly of Songhay ethnicity and were strongly opposed to Tuareg separatism. A survey of predominantly Tuareg refugees who had fled to neighboring Burkina Faso and Mauritania might find that most of them blamed the crisis on misrule by the Malian government.
5 A few IDPs, however, expressed views echoing the "loyalist" discourses outlined above. Consider this message from respondent 2411:

> If the rebellion grew so serious it's also the Westerners who are behind it, if the Westerners like you in America, France and elsewhere got engaged there would not be all these problems; the Tuareg are just a minority in Mali, a handful of people in the population and you maintain them, they're there with your forces, your weapons, your bulldozers, even the money they spend is your money, you deliver their passports […] you control the borders […] you watch them destroy the country and when they're done you intervene, when you could have ended the problem before it began. […] You come in later and say it's free but that's false, it's because Mali's north has loads of gold, oil, and many other minerals which is why you want a minority to gain the upper hand over us. I say enough, stop, the fragile Muslims of the north want to live out their lives in peace.
>
> (Bleck et al. 2014: 81–82)

6 See survey data from Afrobarometer (2008–2014; http://afrobarometer.org/countries/mali-0) and Mali Mètre (2012–2015; www.fes-mali.org/index.php/mali-metre).

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9 Jihads and borders

Social networks and spatial patterns in Africa, present, past and future

William F.S. Miles

Introduction

Pairing analysis of social networks with spatial patterns to better understand the relatively new phenomenon of extremist, religiously based violence in Africa has been the leitmotif of this volume. We maintain that it represents a significant step forward in the application of social scientific research and methodology in ways that both students and scholars of, as well as professionals working in, counter-terrorism will increasingly come to appreciate. Contrary to usual custom, however, I shall use this final chapter to take a step back in time and ask: How really "new" *is* this phenomenon? Does its novelty really lie in a newfound understanding of the intersection between social networking and spatial patterns in a "disordered" Africa? Or is it because the space–bond paradigm is arising in an era in which African international borders – an artifact of colonial superimposition – are blithely taken for granted and are perceived to be the norm?

A magisterial work recently released by the Sorbonne University of Paris – Historical Library of Countries of Islam puts our current work into perspective. Authored by Camille Lefebvre (2015), *Borders of Sand, Borders of Paper* is at heart a spatial analysis of the violence which a large swathe of the West African Sahel/Sudan (Niger) underwent from "the jihad of Sokoto," as the subtitle puts it, "to French colonization."[1] Beyond its contribution to French colonial history, Lefebvre devotes much fine attention to the epistemological implication of culturally disparate (Western versus African) notions of space and time. For our purposes here, and mindful that our volume also treats non-Islamist political violence (such as in the Congo and Uganda), I will focus on the geography of jihad.

Jihadists did not first arrive in Africa with Al Shabaab, Boko Haram and Al Qaeda in the Islamic Maghreb (AQIM). They did so two centuries prior – well before the erection of the colonial borders across which the contemporary manifestations of jihadism now evoke such counter-terroristic attention. And then they re-emerged again, during the colonial era, as anti-colonial jihadists. After a brief summary of these two previous jihadist waves, I shall discuss their spatial and networking dimensions in terms of "jihadist geography" and then join them

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to the prior chapters' analyses of contemporary African jihadism. Such theo-historical contextualization of Africa's current border disorders provides an additional lens through which we may speculate on the future.

Pre-independence sub-Saharan jihads

First wave

The first wave of jihadists in Africa aimed chiefly to purify and extend the religion and law of Islam in their part of the continent. This was before the onset of European colonialists and their partitioning of the continent into zones of separate sovereignty. The second-wave jihadists invoked Islam as a basis for opposing non-Muslim/colonial regime domination. Colonial borders were then alternately disdained and ignored. Contemporary jihadists in Africa invoke the symbolism and heroes of both prior waves of jihadism.

Marking the jihadist waves in terms of colonialism (before, during and after) is itself a Western construct. The first chronicled jihads in sub-Saharan Africa ocFcurred in Senegambia (Futa Toro and Futa Jalon), from 1645 until 1786. Although of ethnic Fulani inspiration, these Senegambian uprisings are overshadowed by the jihad launched by Usman dan Fodio, also a Fulani (although of a different clan), in what today is north-central Nigeria. Shehu (or Shaykh) Usman dan Fodio began his religious-cum-political rebellion in Gobir, a Hausa polity whose leaders were nominal Muslims. It began in 1797 with *jihad al-qawl*, a "preaching jihad"; not achieving the desired outcome, in 1804 the Shehu ratcheted it up into an outright *jihad al-sayf*, a "jihad of the sword." In only eight years the Caliphate was basically established, with Sokoto as its capital. The feat was remarkable (or miraculous), given that the jihadist armies progressed by march and mounted horse. Dan Fodio's jihadists conquered the Hausa kingdoms (see Figure 9.1), "chang[ing] Islam from a tolerated minority religion to which rulers subscribed when it suited them into the official state theology" and thereby "enabl[ing] Muslim literates to seize supreme political power" (Hiskett 1984: 166, 170). For David Robinson (2000: 139), "Sokoto became the model of militant Islam for many West Africans."

Dan Fodio's Jihad of the Sword inspired two other important forms of jihad: that of Macina (most likely beginning in 1810) and that of the Black Volta. The Macina jihad led by Seku Ahmadu (Hamidou), a disciple of Dan Fodio (and fellow Fulani), was waged principally against ethnic Bambara. Macina is considerably to the west of Gobir and Sokoto, and this jihad reached as far as Timbuktu. Following in the path of Shehu Usman dan Fodio's conquest of Gobir and his founding of the Sokoto Caliphate, Seku Ahmadu's Macina jihad reaffirmed "the victory of […] militant Islam" over the "passive" stream of the "quietists" (Hiskett 1984: 168). It was also arguably "the most genuinely Islamic in West Africa" ever (Crowder 1968: 36).

The jihad that emerged from the (Black) Volta River was different in several significant respects. First, it was not led by a Fulani but rather by Dyula, in the

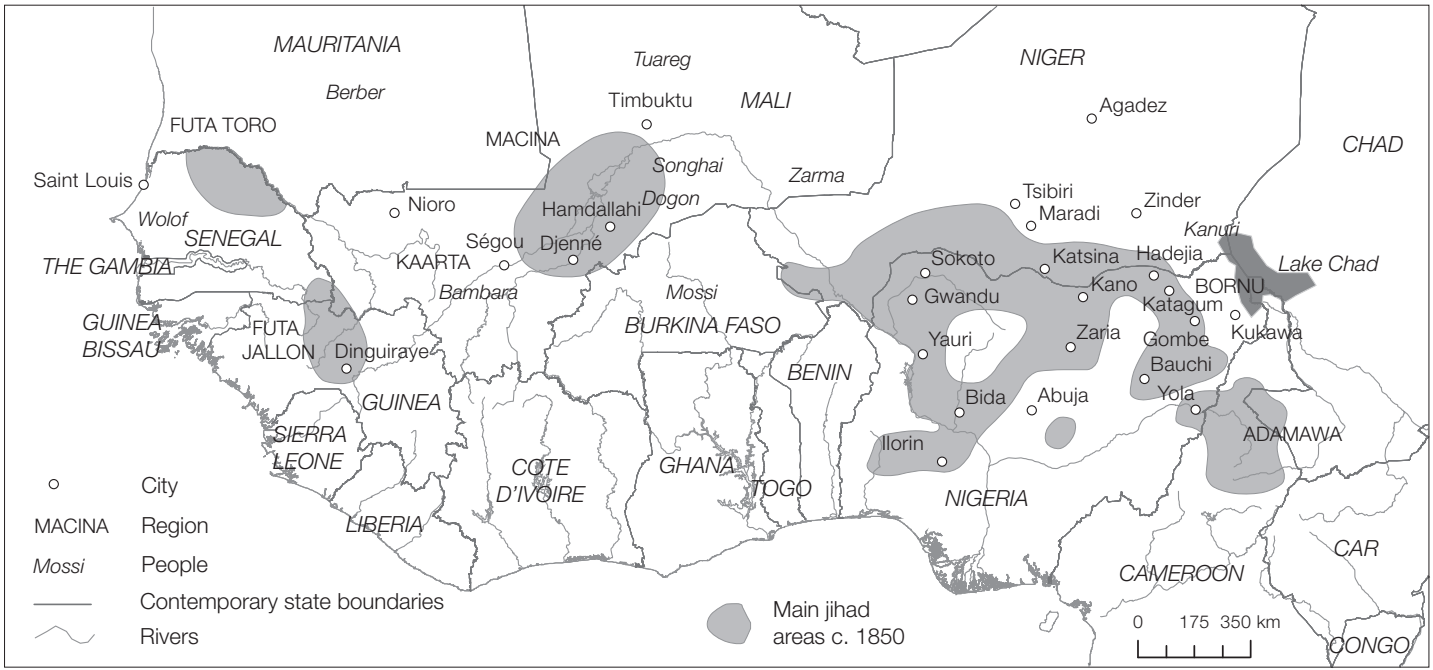

Figure 9.1 Main jihad areas, *c.*1850.

Source: Olivier Walther (2017), based on Ajayi and Crowder (1973).

person of al-Hajj Mahmud. Second, it was inspired by jihadist theology picked up in the course of Mahmud's pilgrimage to Mecca. (The Sokoto and Macina jihads were entirely of Sahelo-Saharan origin.) Third, while the major targets of the jihad were practitioners of polytheism (certainly unacceptable to monotheistic Muslims), their economic value as traders swiftly trumped their blasphemous profile as polytheists: the territorial conquests of this jihad shrank to a small area.

Second wave

The first wave of sub-Saharan jihadism aimed to make black African élites and their followers better Muslims, and to turn other Africans into Muslims *tout court*. The second wave was incensed that the *dar al-islam*, the Land of Islam, was falling into the hands of non-believers defined by another religion entirely. Even if it was not in the name of Christianity that Britain and France colonized the Sahara and the Sahel, religious leaders bristled at the notion of non-Islamic rule. (This is not to deny, however, that non-religious objectives also motivated jihadist movements.) Long before the rise of the Islamic State, also known as ISIS – indeed, even before Al-Qaeda made "9/11" a global reference date – "the mantle of holy war and *Islamic state*" (Robinson 2000: 143; emphasis added) was assumed by several leaders and ethnic groups in the Sahel, Sudan and Sahara (Figure 9.2 and 9.3).

The most famous of jihads against colonial Europeans occurred in the eastern Sahel, the Sudan, to be specific, and targeted the British who at that time oversaw the rule of Sudan by Egypt and Turkey. In the 1880s the Sudanese Muhammad Ahmad Ibn Abdallah declared himself the Mahdi, the Deliverer. Muhammad Ahmad's theology wedded Mahdism – an Islamic form of millennialism, complete with end-of-world eschatology – to jihadism, which he cast in terms of anti-colonial revolt. Mahdi's jihad reached its apogee with the defeat and killing of General Charles Gordon in Khartoum in 1881 and the annulling of Egyptian rule over the Sudan (Figure 9.4). Although the Mahdi died in 1885, he had established the foundations of an Islamic state ("powerful and militant": Ibrahim 1985: 77) that lasted 14 years. His successor, the Khalifa, Abdullah Ibn al-Sayyid Muhammad, continued to prosecute jihad until his eventual defeat by General Kitchener in battles in 1898 and 1899. But anti-colonial Mahdist uprisings continued to punctuate colonial "pacification" of the Sudan for at least a decade.

Although Mahdism in Sudan is the best remembered of anti-colonial jihadism, counterparts and precursors in West Africa also marked this second wave. On account of his unconventional (for religiously rudimentary) background, Samori Touré (the Almamy) was the least typical of these jihadists. But this contemporary of the Sudanese Mahdi did prove to be the most threatening, especially to the French, who captured and exiled him in 1898 following 16 years of on-and-off conflict. The Almamy's territorial reach toward the Gulf of Guinea brought him to British colonial attention as well (see Figure 9.5).

Shared apprehension by the British and French at the prospect of "a unified African Islamic state" – which Hiskett (1984: 233) also refers to as "an Islamic shadow state" – brought them together to quell Maba Diakhou's jihad in

Gambia. Maba was killed in 1867 by a French expedition led by the "strongly anti-Muslim" Pinet-Laprade. Sheikh Amadu Ba conducted his jihad in territory claimed by the French in today's Senegal from 1869 until 1875, when he was killed in battle by combined Wolof and French forces.

As the first West African jihadist to have performed it (in 1828–1830), Al-Hajj Umar al-Futi Tall exemplifies the influence of pilgrimage to Mecca in

Figure 9.2 Jihadists, then and now: Samori Touré (1830–1900), left; Abubakar Shekau (Boko Haram), right.

Sources: Samory Touré: old postcard, produced prior to 1906; Abubakar Shekau: www.youtube.com/watch?v=0S6Bos-rqQg (accessed 2017).

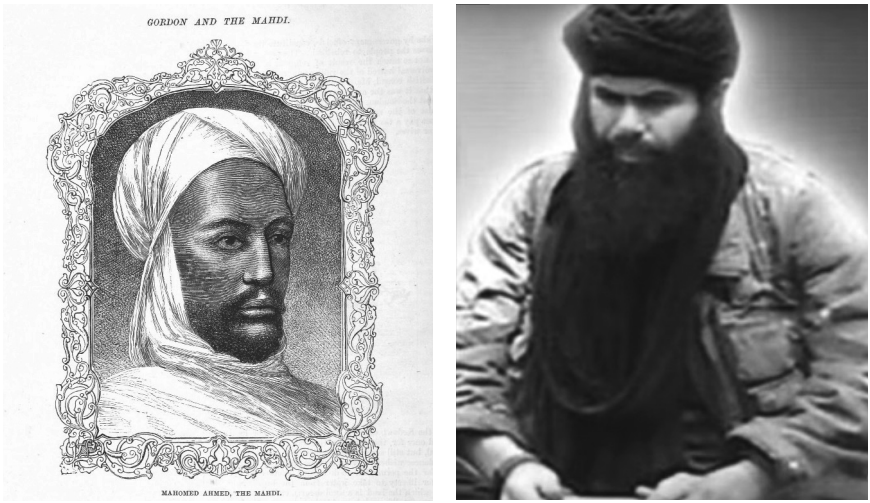

Figure 9.3 Jihadists, then and now: the Mahdi Muhammad Ahmad (1845–1855), left; Abdelmalek Droukdel (AQIM), right.

Sources: Muhammed Ahmed al-Mahdi: the British Library's open source collection. The original of the image is from Charles George Gordon's book, *Gordon and the Mahdi, an Illustrated Narrative of the War in the Soudan* (London, Vizetelly & Co., 1885). Abdelmalek Droukdel: www.youtube.com/watch?v=YWBTE7DrUO8 (accessed July 2, 2012).

legitimizing the transition from preaching jihad to achieving it by the sword. Umar Tall's theopolitics also evoke the multifaceted dimension of jihad that has characterized it in Africa from the nineteenth century until today. His primary enemies were "imperfect" Muslims and "misbelieving" polytheists who spiritually polluted his "homeland." Second were those local rulers complicit in those tolerating such abominations. In today's jihadist language, these would be

Figure 9.4 Extent of the Mahdi's jihad.

Source: Olivier Walther (2017), based on *The Mahdist State*, 1881–1898, modern Sudan from Wikimedia Commons (public domain).

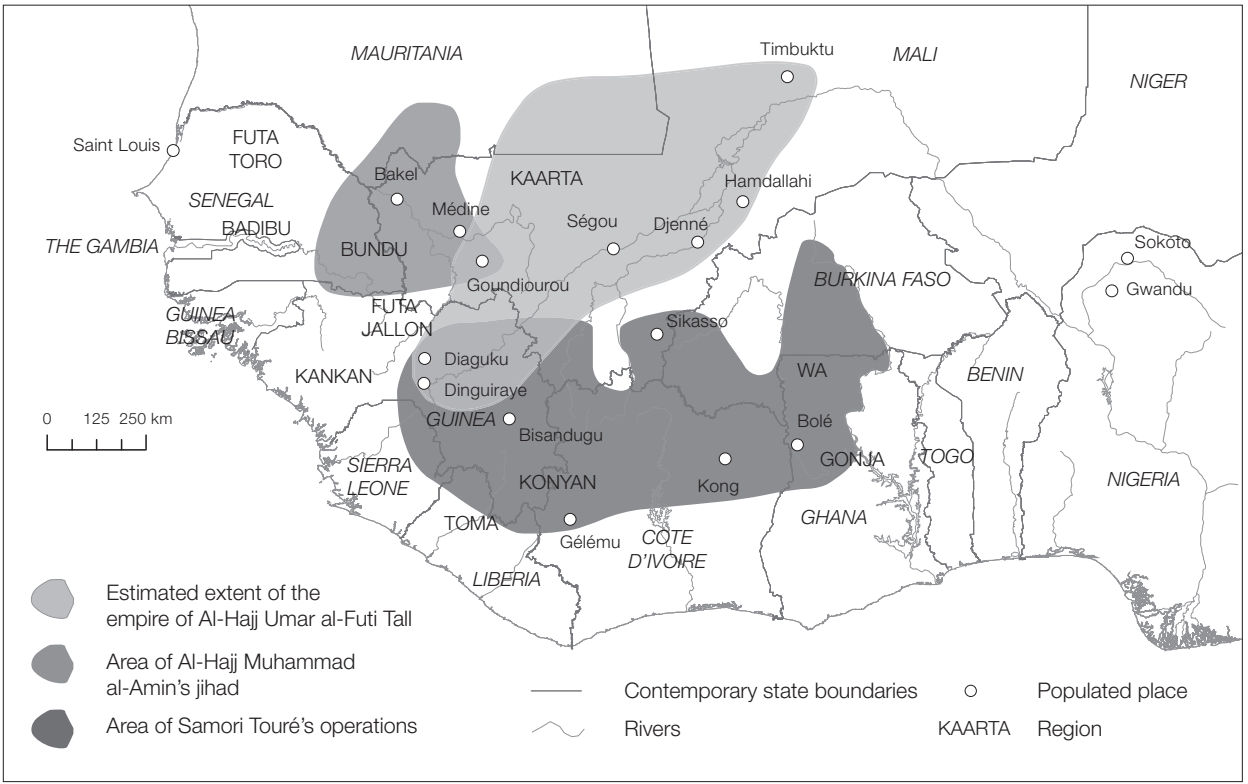

Figure 9.5 Extent of Al-Hajj Umar al-Futi Tall, Al-Hajj Muhamad al-Amin and Samori Touré's jihads.

Source: Olivier Walther (2017), based on Hiskett (1984).

referred to as the "near Satans." The "far Satans" would be the colonizing European ones. But they entered Al-Hajj Umar's orbit of adversaries "for incidental reasons, not because he set out to make war on them from the start" (Hiskett 1984: 227). It is a reminder that then, as now, the primary targets and victims of Islamic extremism (in Africa as elsewhere) are fellow Muslims.

Al-Hajj Umar Tall waged jihad by the sword from 1855 until his death in battle in 1864. Two years before he died he conquered and incorporated Sheikh Amadou's first-wave jihadist state of Macina. Umar Tall's empire, which at its peak stretched from Timbuktu to Dinguiray in Futa Jalon (see Figure 9.5), did not disintegrate with his death, however; it persevered under his son Ahmad for another quarter of a century, until it was vanquished by the French in 1891. Perhaps most importantly, "Umar Tal helped to provide the transition to a new understanding of Islamic obligation in the late-nineteenth century: as resistance to European intrusion" (Robinson 2000:143).

Jihadist geography

The first- and second-wave jihadist states in sub-Saharan Africa were notable not only for the social and theo-politically revolutionary changes they set into motion; they were also geopolitically significant. In terms of sheer scale they were "impressive in their size" in the words of Michael Crowder (1968: 36), "especially when compared with those established by the European powers."

From a spatial point of view, Lefebvre's (2015) analysis of the Sokoto jihad is particularly pertinent, if not emblematic. Jihad originally developed in "empty space," in a "peripheral region"[2] within a mental framework that did not strictly segregate temporal and spatial frames of reference. Maps sketched out in the immediate post-jihadist period reflect this mixing of space and time. Those of Dan Fodio's son Mohammed Bello and the scholar-scribe Mallam Moussa pictorially reflect not only spatial location but various levels of history – scriptural, family, jihadist (Lefebvre 2015:118). There are thus various types of borders and frontiers in the African "spatial imagination," some of them marking history as much as they do territory.

Once the Caliphate based on purified Islam had been established, fortified posts (*ribats*) were constructed to mark off jihadist space from infidel territory (Lefebvre 2015: 136). Such space was at the same time viewed demographically, since these otherwise empty spaces needed to be populated. A geographically parallel duality emerged between "lived space" and "foreign space." Contesting notions of space and territory also entered the conflict between Islam and animism (and polytheism). Sharia applied stricter norms of governing property (including land) than did "pagan" leaders.

Not all people who found themselves in jihadist space wanted to remain there; the Sokoto conquests triggered a mass wave of emigration for those (including Muslims) who equated jihad of the sword with imperialism. Rump states of conquered Hausa chiefdoms re-established themselves entirely in areas previously characterized as mere "bush."

Lefebvre (2015: 150) emphasizes that the spatial changes triggered by the Shehu's jihad were not ethnically colored. It was not a fundamentally Fulani versus Hausa struggle: some Hausa joined the jihadists; some Fulani eschewed or fled them. The borders that arose accordingly were not so much ethnic ones as political.

> While sharing the same religion, culture, history and populations, […] over the course of a century the regions [affected by] jihad divided themselves for political and ideological reasons […] [the ensuing boundaries were] not based on a sense of group identity but the wish, shared by different populations, to live together for political reasons [within the same political grouping].[3]

Who joined jihad? Who refused it? Earlier historians of West African Islam and jihadist movements there did not have the term "social network analysis" at their disposal, and few if any contemporary ones embrace it either. But historians of Islam in Africa have long been describing social networks through frameworks of trade and *tariqa* (Islamic brotherhood), paradigms that remain quite relevant for contemporary social science (see Vikør (2000), O'Brien (1971) and Villalón (2007) on the Mourides of Senegal).

Were the jihadists operating in the nineteenth century members of what Everton, Cunningham and Tsolis in Chapter 2 refer to as transnational rebellions? Second-wave jihadists of nineteenth-century Africa may not have been *transnational* in the postcolonial transboundary sense but they certainly did operate as religiously based *organizations* that were considered – both by neighboring Africans as well as by colonizing Westerners – to be *extremist* in their aims and tactics. Anti-jihadist operations in the Sudan by the French (in the west) and the British (in the east) were, in the language of Chapter 2, "kinetic." So was the pathological "pacification" campaign of Captains Voulet and Chanoine of France who, while not operating technically as a "dark network," functioned as terrorists (albeit in military uniform) as they slaughtered innocent villagers across Niger.[4] In late nineteenth-century Africa, it is not always clear who were the greater war criminals – the Muslim jihadists or the Western conquerors. Should not our retrospective views of the colonial anti-jihadist kinetic missions of yesteryear inform our approach to transnational rebels of today? Recommendations by Everton and colleagues to pursue non-kinetic anti-jihadist options in Africa are as appropriate now as they would have been in the 1880s, 1890s and 1900s. Even in those days, Islamic "anti-jihad scholars […] used the excesses and violence of the nineteenth-century movements to bolster their argument that all power was corrupting" (Robinson 2000:143).

In Chapter 4, Skillicorn, Walther, Zheng and Leuprecht in their discussion on political violence attempt to enter the heads of (mostly) jihadist leaders as these calculate where and whom to attack. The authors' focus is on Boko Haram, who claim to channel Shehu Usman dan Fodio (see below), and nine groups affiliated with Al Qaeda in the Islamic Maghreb. Space (qua distance) and time (including

that spent crossing borders) are factored into a spectral embedding model. The finding that "some of the most violent places in [North and West Africa] are situated virtually in the middle of nowhere" is one that would have resonated with General Kitchener as he hunted down Mahdi jihadists in the eastern Sudan, and Captain Marsh, pursuing to death the Caliph Attathiru of Sokoto, "Commander of the Faithful," in the Battle of Burmi (Nigeria) in 1903. Although much separates the tactical calculus of twenty-first- from nineteenth-century jihadists in Africa, the belief that the heart of *dar al-Islam* may be in a remote desert – as it was for the Prophet Muhammed himself – may very well be shared in an Islamist "group commander's mind" in both epochs. Another cross-epochal similarity, as Walther, Leuprecht and Skillicorn find in their chapter on transnational extremist organizations in the Sahel-Sahara, is that "foreign military interventions have profoundly affected the movement of Islamist groups." Colonial intervention displaced violent Islamism in time – for one century – but not in African space.

In Chapter 7, Jaume Castan Pinos reminds us that national affiliation and the associated nation-state are viewed by Salafists and Wahhabists as colonial constructs, lacking Islamic theological legitimacy. The *Ummah* (the greater Muslim nation) should accord no more legitimacy to African post-boundaries than it does to those in the Middle East. The second wave of nineteenth-century jihadists was the first to combat colonial sovereignty on theological grounds. Was its defeat definitive? Will the current wave be successfully suppressed? If so, for how long? Even as territory is overtly contested between African jihadists and their Western adversaries, time is more tacitly contested: a century-long victory for colonialists was understood by their successors to have buried jihadism; for jihadists, a century is but a blip in Islamic time. Pinos's distinction between effective control over territory (ECOT) and sovereign claim over territory (SCOT) also has a very strong nineteenth-century resonance: the ambiguous relationship between the Sokoto Caliphate and its lesser empires. Lefebvre (2015: 133–134) frames it in these terms: "recognition of dependence is neither exclusive nor necessarily constraining. This type of relationship" – which for Pinos would be SCOT – "may be described as an allegiance founded on reciprocal services rather than a form of integration. […] A tribute does not necessarily entail alliance or political domination." The negotiation of sovereignty within African space continues to inform politics and peace (or its absence).

The tension between ethnic (qua Tuareg) separatism and Islamism in Mali – the subject of Chapter 8 by Bruce Whitehouse – again underscores the long view of religion and political violence in this part of Africa. Whitehouse recounts the fracturing that followed the fraternization between the Islamist (but Tuareg) Ansar Dine and the nationalist (also Tuareg) MNLA resistance to the colonizing French. The latter promotes Azawad, a Tuareg state; the former, dar al-Islam. Imam Mahmoud Dicko's sermon recasting twenty-first-century fears of jihadist violence in Mali as a trumped-up neocolonial campaign to legitimize French reimposition of (de facto) sovereignty enjoys a certain resonance. It has fed, Whitehouse shows through surveys and reviews of media and literature, an

anti-imperialist outlook cultivated in intellectual and urban circles of the immediate post-independence generation. Yet it also obscures a more relevant ethnohistorical antecedent: those Tuareg Ineslemen (Muslim literati spanning several other Tuareg clans) who in the name of Islamic egalitarianism launched a proto-jihad in 1640 to 1650. Although that particular campaign foundered, it reflected "vigorous, activist and aggressive attitudes associated with Islamic reform and even *jihad*" among this branch of the Tuareg.[5] In the following century those same Ineslmen and their semi-Tuareg Zwaya allies embraced Mahdism (Hiskett 1984: 48–49). Contemporary "loyalist" discourse in Mali views jihadists as much less of a threat to the nation than it does Tuareg separatists; those Tuareg supposedly embracing jihadism are dismissed as opportunistic, lacking real theological commitment. Yet the militant ascendancy of Ineslemen/Zwaya (tied to the rather secular shift of the salt industry [!] to Taoudenni, in the Malian Sahara) is a reminder that, from its origins, there was no contradiction between Tuareg Islamism and nationalism.

Chapters 5 and 6 on Boko Haram, by Caitriona Dowd, analyzing the extremist group from a geographic perspective, and by Nikolas Emmanuel, focusing on the synergy of Western with regional counter-terrorist responses, resonate most clearly with Lefebvre's (2015) spatial analysis of earlier Nigerian jihadism. Before developing this line of inquiry, a digression with respect to the overt channeling of Usman dan Fodio's jihad by Boko Haram is in order.

Pieri and Zenn (2016) reveal this association most directly, while revealing a geo-historical paradox. The Fulani-led Sokoto jihad of Usman dan Fodio was opposed by the Kingdom of Kanem (also known as Bornu), in today's northeastern Nigeria (see Figure 9.6). Kanem/Bornu was of Kanuri ethnic dominance. Yet it is in the original core of Kanem territory – principally northeastern Nigeria, but also across the borders into Cameroon, Chad and Niger – that Boko Haram is attempting to establish its own Caliphate, with largely Kanuri support.[6]

Moreover, it is the jihad of Usman dan Fodio that Boko Haram holds up as a model; even tactically so, as they emulated the *hijira* of dan Fodio by withdrawing from Maiduguri to northern Yobe State just as the Shehu first fled Gobir before consolidating his jihadist forces in order to attack it. "Boko Haram leaders […] deeply admire Dan Fodio [and] see history repeating itself. […] [His] actions and lessons still bear important resonance for them and their followers in modern-day Nigeria" (Pieri and Zenn 2016: 75). As they quote Boko Haram's deputy, the Cameroonian Mohammad Nur:

> In those days, it was the *Shari'a* that was practiced in this country. Dan Fodio and other Islamic scholars carried out the *jihad* and ensured that Qur'anic law was implemented. Allah did not interfere with this situation until when our Muslim leaders accepted from the Europeans' secular constitution. Since that time, Allah took away the comfort and peace Muslims used to enjoy, replaced it with suffering and poverty.
>
> (Pieri and Zenn 2016: 75)

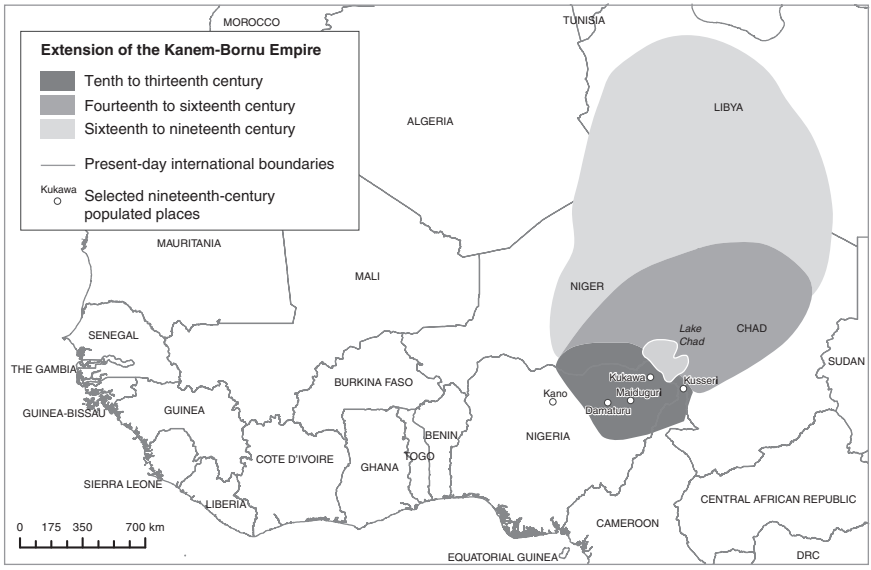

Figure 9.6 The Kanem-Bornu Empire.

Source: Olivier Walther (2017), based on SWAC/OECD (2014).

One of the injustices of colonialism, according to Boko Haram, has been the imposition of new political identities – Nigerian, Cameroonian, Chadian, etc. – according to Islamically illegitimate borders. Erstwhile empowered ethnicities and pre-existing polities – such as the Kanuri of Kanem/Bornu – were accordingly marginalized.

Paradoxes abound: the very name "Boko Haram" is of Hausa provenance, not Kanuri. Boko Haram fighters themselves embrace rituals that are *haram* (forbidden): use of charms, amulets, blood drinking (of victims). One of the main targets of these jihadist admirers of Usman dan Fodio is his direct descendant, the Sultan of Sokoto. While resurrecting the ethnic group over the nation-state, Boko Haram seeks pan-ethnic Islamic support. The social network of Boko Haram now also includes all those aligned with ISIS, to whom the jihadist group pledged allegiance in 2015 after declaring its own African Islamic State in 2014.

In less than a decade (it first appeared as such in 2009), Boko Haram has certainly transitioned from an extremist organization of national (qua Nigeria) concerns into a transnational one. In Chapter 5 Dowd uses spatial analytic techniques to quantify this transformation and to suggest that its supposed transnational turn may reflect tactics and strategy more than ideology: "relocation and evasion" rather than "expansion and escalation."

Be that as it may, "transnational" to Western analysts means something quite different than it would to jihadists. For the former, the frame (in this one case) is Boko

Haram's violence "spilling over" Nigeria's boundaries into Niger, Chad, Cameroon and beyond. For Boko Haram, however, the spatial frame is pre-colonial: not the Federal Republic of Nigeria or Niger Republic but rather the Caliphate of Sokoto and Kanem-Bornu Empire. In order to understand African extremists' views of rule over space we need not only think of violence that is "transnational" and "subnational" (as Dowd so usefully does) but also "trans-imperial" (in the jihadist sense).

Many of Lefebvre's (2015) discussions of boundary ambiguities and opportunism and intra-Muslim conflict during and after dan Fodio's quintessential jihad resonate for Nigeria (and elsewhere in the Sahelo-Sahara) today. Take the northwestern frontier zone between the Shehu's jihadist rebels and the emirate of Gobir. It was a no-man's land as contested (and dangerous) as that in the northeast today between Boko Haram and the Armed Forces of the Federal Republic of Nigeria. They were/are spaces "neither of fixed lines nor indeterminate limits," marked by "organized disorders" (Lefebvre 2015: 93) – and echo what we call in this collected work "border disorders." It is a place to which "flight can be a way to escape persecution, to withdraw from a power one judges to be coercive or simply too demanding. One can also flee [there] to escape justice" (ibid.: 92). Organized dissidence all begins by movement "to the margins of space controlled by the reigning power" (ibid.: 91).

With respect to internal theopolitical tensions, substitute "twenty-first" for "nineteenth" century and "Boko Haram" for "Usman dan Fodio" and the following passage fits without too much fine tuning:

> In the 19th century, the major political, territorial, and intellectual upheavals occasioned by the jihad of Usman dan Fodio occasioned intense diplomatic activity. […] The jihad is inaugurated by the dispatch of [communications] to the political authorities of the region [but their positions] on territories and borders reflect jihadist ambiguity between religious doctrine and the construction of political power. Actually, according to Islamic law, territory cannot be divided except between Muslim and non-Muslim. Only jihad can justify territorial conquest, but the reality is more complex.
>
> (Lefebvre 2015: 102)

In northern Nigeria today (as elsewhere in the Islamist-threatened Sahel), there is fierce disputation between establishment imams and jihadists. In many ways, it is a remake of the earlier (1808–1812) exchanges between the chief publicist of the Sokoto jihad, Mohammed Bello, and that of Kanem-Bornu, Mohammed El Kanemi. El Kanemi refers to the conflict between their respective polities as *fitna*, internal Muslim disagreement that does not rise to the level of religiously sanctioned violence. "We may be sinners," he says in effect, "but that does not make us infidels." Further, the moderate Muslim of Bornu accuses the jihadists of using scripture as mere pretext for political gain through territorial expansion. To this, the jihadist Bello responds that "the construction or reconstruction of an Islamic State (*sic*) necessitates a prior purging of all hypocrites and bad Muslims" (this quote is Lefebvre's (2015: 103) paraphrasing of the correspondence).

African jihads and borders today

When the Organization of African Union (superseded in 2002 by the African Union) was founded in 1963, African Islamist jihads had been consigned to distant memory. They were certainly not in the forefront of consciousness for Africa's nation-building, largely secular, élites. OAU framers were concerned about potential territorial overreach by disputatious bordering states and ethnic irredentist movements, not violations of sovereignty by jihadist or other religiously extremist organizations. Embedded in the founding charter was the acceptance – indeed, the inviolability – of inherited colonial borders. No African Muslims objected on the grounds (and how anachronistic it would have sounded then!) that the OAU charter thereby precluded the re-establishment of a Caliphate or violated the principle of *Ummah*.

Islamist extremism, often in the name of jihad, does just that. By re-imagining and expanding the transnational notion of Muslim identity, it challenges the legitimacy of postcolonial states and their colonially inherited boundaries. It also sheds light on the porosity of those borders, which it exploits (Figure 9.7). Its actions have provoked external interventions, also of a transnational nature: think French anti-AQIM-affiliated operations in Mali, American anti-Shabaab action (from Djibouti) and U.S. drone launches from Niger. African borderlands are turning into shatterzones.[7]

Affirming the legitimacy of colonially drawn boundaries had not merely been an OAU strategy to tamp inter-state disputes. It also provided a principle for constructing larger federations or confederations. These could function, went the

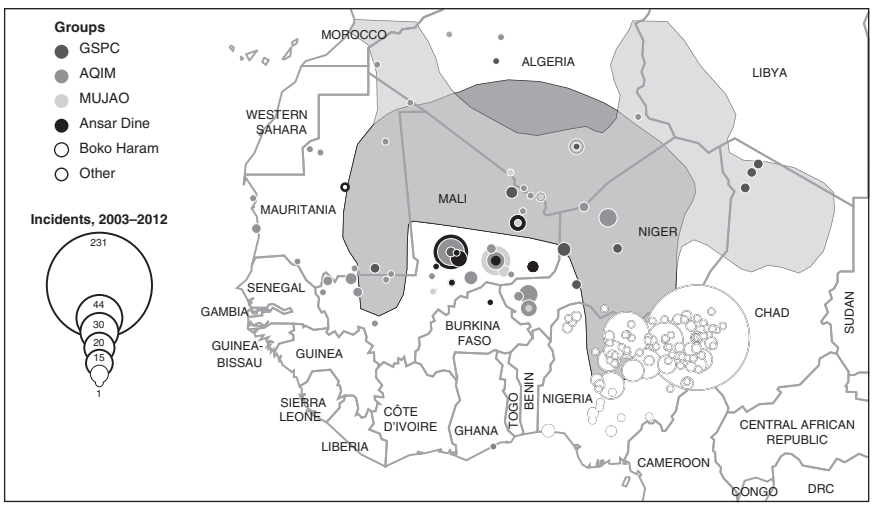

Figure 9.7 Violent incidents related to terrorist groups, 1997–2012.

Source: SWAC/OECD (2014), reproduced with permission from OECD. This map is without prejudice to the status of or sovereignty over any territory, to the delimitation of international frontiers and boundaries and to the name of any territory, city or area.

hopes of the 1960s, as more viable and efficient trading blocks in the regional and global systems. Early African regionalism was an incipient form of what by the 1980s and 1990s would be called globalization.

Globalization overlapped with another new paradigm, one that redefined the very meaning of defense. "Security" was recast from being a purely national preoccupation to one encompassing the welfare of human beings: "human security." States should shift their focus on defending sovereignty, as the Human Development Report put it, to "the security of people in their homes, in their jobs, in their communities and in their environment" (UNDP 1994).

Two years after the globalization paradigm was fully explicated in the 1999 Human Development Report, it was seriously shaken by the attacks of September 11, 2001. Momentum for an open-borders/security-as-development New World Order was severely challenged. No longer Westphalian artifacts to be transcended, state boundaries were now perceived as fixed spatial objects that had to be monitored and secured. African post-independence and globalization hopes were replaced by a "sclerosis, or hardening, of the boundary" (Miles 2008).

International development activities in Muslim Africa came to be newly legitimated on grounds of counter-terrorism (Miles 2012). On account of 9/11, even the most hitherto obscure spaces of the otherwise globalizing planet – obscure to the West, that is – were re-examined in light of the blow struck by transnational terrorists operating in secret and dark social networks.

The Sahara-Sahel is a case in point. NATO Commander General James Jones referred to the "large ungoverned spaces in Africa" – particularly its mostly empty desert, sparsely populated and encompassed by Muslim-majority states – as "tempting" to terrorists.[8] In 2003 the U.S. Department of Defense and the State Department established the Pan Sahel Initiative (PSI) to equip and train Chadian, Malian, Mauritanian and Nigerian security forces. After expansion and institutional metamorphosis, it has become the Trans-Sahara Counterterrorism Partnership (TSCTP), whose African partners include Senegal, Burkina Faso and Nigeria. AFRICOM (U.S. Africa Command) was established in 2008 as the sixth geographically defined division of the Defense Department. Examples of AFRICOM and TSCTP border activities in the Sahara-Sahel include assisting Mauritanian security forces in monitoring and patrolling their frontier with Mali and tracking Boko Haram movements in the Niger–Nigeria borderlands.

An equivalent to TSCTP has emerged in the form of the Partnership for Regional East Africa Counterterrorism (PREACT). The mandate of PREACT, established in 2009, includes "expanding border security." Much of PREACT's focus is on Somalia where the jihadist Al Shabaab organization arose and from which its militants have staged cross-border attacks in Kenya. The epicenter of United States counter-terrorism activities in East Africa, under the rubric of Combined Joint Task Force – Horn of Africa (CJTF-HOA), is Camp Lemonnier in Djibouti.

Conclusion: borders and jihad, globalization and Islamism

In Muslim Africa as elsewhere, tension has long existed between *Ummah*, the ideal of a single Islamic nation worldwide, and the reality of the nation-state. In postcolonial states with Muslim-majority populations, the tension has become increasingly acute. As arbitrary creations of European powers, goes the transnational Islamist critique, why should such states exist separately, riven by international borders? This is one of the few anti-colonial theses that have united such otherwise disparate actors as Saddam Hussein and his Baath Party (who went to war to "reunite" Iraq with Kuwait) and ISIS (who murder and terrorize also to "recreate" a single Islamic State). Ethnicity, particularly in borderlands, has also been a factor spawning transnational, transborder conflict (Onah 2015).

In their own ways, Benjamin Barber (1995) and Thomas Friedman (1999) have explained Islamist extremism worldwide as a response to globalization. Many Africanists (e.g., Charlick 2007) adopt some variation of this thesis, even if some, like Dowd (2015), emphasize rather local sources of Islamist violence in Africa. Most accept that inherited colonial borders that were previously dismissed by Africanists and globalists alike as "arbitrary" or "artificial" now represent corridors for Islamist extremists. Few, however, draw connections between pre-colonial jihadist conceptions of space, their use of violence, and transnational African jihadism today.

"Jihad of the Sword" is not a metaphor. In an age when the world is outraged (as well it should be) by ISIS beheadings by sword, the original instruments of African jihad should not be forgotten. In the case of the epitomic West African jihad of Shehu Usman dan Fodio, the most common weapons were narrow-bladed hatchets (also used for farming), butchering knives and clubs. Some Sokoto jihadists also carried "short stabbing spears and swords. […] Most were of the straight, double-edged variety, used for thrusting into the groin or belly" (Hiskett 1973: 86).

Throughout the almost unimaginably long arc of pre-colonial time, neither the Sahel nor the Sahara was free of violence. Far from it. Banditry, slave raiding, empire building, and jihad all occasioned, in their times and often contemporaneously, terror and bloodshed. The absence of defined borders and state sovereignty, as we understand those concepts today, were facilitators, if not causes, of such violence. If these are shocking statements, more students of Africa should be required to read Mary F. Smith's (1981 [1954]) phenomenal life story of an ordinary Muslim woman who lived through the transition from pre-colonial to colonial Nigeria.

Confronting the commonality of pre-colonial violence in the Sahel-Sahara is to acknowledge a cruel reality, not to make a value judgment. The history of African violence neither excuses nor minimizes its equivalent in the West: from the Crusades to Colonialism, from Inquisition to Holocaust, this should go without saying. In the (more recent) words of Albert Memmi (2006 [2004]: 22), author of the anti-colonial classic *The Colonizer and the Colonized* (1965 [1957]),

"Colonialism has committed enough crimes of its own; it would be pointless to attribute to it those it did not commit."

The hard question with which to conclude our book on African border disorders is whether these disorders are temporary and repairable. Or, rather, might they portend a return to an earlier and much longer standing norm than the one which cartographic colonialism disrupted in the late nineteenth century and which was more or less suppressed throughout the twentieth century? That was the norm of undefined boundaries, contested frontiers and fluid sovereign space. Decolonization did not confront the heritage of colonial cartography, any more than anti-colonialism envisioned religion as a future threat to postcolonial governments' legitimacy. Is it not conceivable that, for all the powerful techniques and predictive tools of social network analysis put to the counter-terrorist task, parts of Africa may nevertheless fracture along religious extremist, rather than colonial cartographic, fault lines? Or perhaps in geographical accord with some indigenous, pre-colonial polities (Miles 2015)?

Drilling down into the nineteenth-century jihads of what colonialists then called "the Sudan" may have once been a quaint pursuit reserved for scholars. Now, however, twenty-first-century jihadists hark back to those same outbursts against Muslim "moderates" and European colonizers as justification for their violent, albeit organized, actions today. It may therefore behoove us to reassess the potential long-term significance of those prior eruptions in African religious history. It may also force us to question whether the expectation of stability, especially in borderlands, channels an unconscious Pax Europa. For the momentum of transnationalism may just turn out to be with the jihadists, and not with the moderates, after all.

Notes

1 All translations of Lefebvre's work cited in this chapter are mine.
2 The specific example is the no-man's land, or borderland, between Gobir, against whose dynasty dan Fodio rebelled, and Sokoto, through which dan Fodio absorbed and superseded Gobir.
3 The longer quotation from which my translation is even more abridged is as follows:

> Les régions engagées dans le jihad et celles qui le refusent, bien qu'elle partagent une même religion, une même culture, une même histoire et des populations similaires […] se sont divisées au cours du siècle pour des raisons politiques et idéologiques. […] [L]a force des affrontements de ce siècle provoque la construction de frontières qui ne sont pas fondées sur l'appartenance identitaire, mais sur la volonté de vivre ensemble pour des raisons politiques, partagée par différentes populations au sein d'un même groupement politique.
>
> (Lefebvre 2015: 150)

To the "political" bases for migration and differentiation I would add "theological."

4 The most riveting account of the Voulet-Chanoine Mission massacres is interspersed among equally fine accounts of a different kind of peril in Niger today by Chilson (1999).
5 Ineslemen were joined by Kel Intasar, or Zwaya, who were part Tuareg, part Hassaniya Arab from present-day Mauritania.

6 Both Mohammad Yusuf and Abubakar Shekau, Boko Haram's two successive leaders, and 80 percent of their followers, are, according to sources cited by Pieri and Zenn (2016), Kanuri.
7 The term "shatterzones" deliberately echoes Bartov and Weitz's (2013) historical anthology on the violent borderlands of Eastern Europe.
8 For a challenge to the conventional Sahara-Sahel definitional dichotomy within the context of borders and terrorist networks, see Walther and Retaillé (2010).

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