

Where Rebels Dare to Tread: A Study of Conflict Geography and Co-option of Local Power in Sierra Leone

Journal of Conflict Resolution

2017, Vol. 61(6) 1230-1260

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DOI: 10.1177/0022002715603767

journals.sagepub.com/home/jcr



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Abstract

This analysis illustrates how violence patterns are shaped by local power concentrations. Disaggregated conflict analysis has led to major advances into understanding conflict trends, agents, and dynamics of violence but has not been matched by studies of disaggregated politics, in particular on the subnational level. This analysis details how conflict event location, frequency, and intensity is largely determined by levels of customary authority and development; while armed group bases and control networks are established in areas characterized by weak, co-opted local authorities, wealth generation possibilities, and proximity to other network nodes. This demonstrates that dominant opposition groups co-opt local elites and target those who cannot be easily co-opted or belong to alternative networks. Manifestations of conflict are therefore not well explained by the typically static resource, poverty, or state capacity measures. Local politics and customary authority determine where government, rebels, and militias dare to tread. Sierra Leone Local–Location Event Dataset—a new disaggregated data set on the Sierra Leone war and local source feature of Armed Conflict Location and Event Data—provides substantial evidence for our subnational conflict explanations.

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Keywords

civil wars, conflict, internal armed conflict, civilian casualties

Many conflict scholars consider the wars in Western Africa during the 1990s to be emblematic of the devastating effects of state failure and greed. These wars had high civilian death rates, extreme brutality, resource capture, diffuse violence within and across countries, and occurred within a context of central state collapse and the dominance of “warlords”/“conflict entrepreneurs” in local fiefdoms (Reno 1998). Sierra Leone’s conflict specifically supported the presumption that civilians are the primary targets of attack in wars that pitted violent elites against each other for resource control. For example, Kaldor (2006) and Kaplan (1994) use Sierra Leonean and Liberian conflicts as examples of the “new war” thesis, wherein the immense brutality of nonideological combatants represented the aims of rootless youth. Collier and Hoeffler (2002) build on this theme in their dichotomy of modern warfare: in a study of whether greed or grievance creates conditions for the onset of political violence, the Mano River wars are presented as examples where financial opportunities and incentives are far more powerful predictors than poverty and marginalization. The suggestion is that the wars in West Africa, the Democratic Republic of the Congo, Somalia, and Sudan are proof of the rise of a particularly brutal form of economically motivated conflict.

However, the new war thesis application to the Mano River Wars is not without detractors: case studies of Sierra Leone and Liberia strongly emphasize that the social and political conditions in both prewar states included youth and urban marginalization, a distorted distribution of power based on elite resource capture, and the general cessation of governance and public good access (Liberia and TRC 2009; Bøås 2005; Utas 2003). As the state receded, inherited modes of governance at the subnational level became increasingly perverted as a result of the internal and external pressures. In Sierra Leone, problems emerged in the chieftaincy, while in Liberia local religious collectives became vehicles of exploitation and a co-determinants for violence (TRC 2009: Vol. 4, 9; Ellis 1999). In short, case studies purport that greed or new wars are superficial explanations for violence in the Mano River Region and suggest that conflict arose from the worst cases of post–Cold War Africa governance.

Our focus is to discriminate between idealized explanations of conflict onset by testing the spatial and temporal implications and patterns of each. The type, frequency, intensity, and goals of violence should be shaped in discrete and identifiable ways depending on whether the collapse of the state and a large youth reservoir either created the environment for resource capture and widespread brutality or generated a desire and provided opportunities to address social economic inequalities.

A specific test of how greed and grievance contributed to the onset and duration of war is possible through the most thorough assembly of conflict event information for Sierra Leone (De Bruijne 2014). Using primary source data from the No Peace

Without Justice (NPWJ) project, information on who, what, where, and when events happen illustrates several aspects of conflict left undetected by more aggregated information, and also demonstrates the complexity of ongoing conflicts. These data are systematically coded into the format of the Armed Conflict Location and Event Data Project (Raleigh et al. 2010), disaggregated by agent and type and reaggregated to the monthly chiefdom level.

The availability of disaggregated conflict data is a challenge for many existing explanations of conflict onset. Our puzzle is to determine which forms of violence emerge from systematic brutality and greed on the elite level, and which from exposure to elite mismanagement and exclusion.¹ While “bottom-up” grievance theories purport that poor areas should incite and experience violence, “top-down” greed theories imply that resource areas should demonstrate repeated contests as competing agents vie for control.

We find that prewar networks of control both explain the intensity of violence and the emergence of new networks of control during conflict. We develop this idea on the basis of bottom-up and top-down theories that each assume central state failure creates anarchy throughout a conflict, limiting the capacity of states to suppress opposition while increasing the abilities of local elites for local power and resource capture. Our analysis of the local level underscores how authority vacuums rarely exist in practice. In Sierra Leone and many other intractable conflicts, local agents assume control of localities and build alternative governance networks. We find that local competition between conflict agents is the dominant explanation for spatial and temporal characteristics of violence and show how networks of opposition control evolve in spaces with disparate underlying patterns of resource wealth, customary authority, and contestation. Our analysis bolsters nascent theories regarding how “contentious politics” emerge within fragile states (McAdam, Tarrow, and Tilly 2001; Tilly and Tarrow 2006) and how the geography of conflict is built on prewar local authority contests that assume new importance after the collapse of the central state. It fundamentally contradicts research relying on low state capacity and ungoverned territory as contexts for conflict by emphasizing the scales of local control and parochial rule present in varying degrees across developing African states (Acemoglu and Robinson 2010; Mamdani 1996).

This study aims to breach the gap on local authority present in this case and post-Cold War African civil conflict in general. This article therefore argues that governments, rebels, and militias develop networks of control and areas of contestation that reproduce a geography of authority, and the parameters of the national conflict on a local level. More so than explanations of political-economic deprivation or physical geographies, networks of control explain the spatial and temporal patterns of violence throughout the war and by different agents. Extensive networks are the physical representation of authority in states without central governance, structuring the sequencing of activity, the interrelationships between and the respective capacity of groups. This narrative suggests that strong rebels² should attack spaces of centralized customary authority in order to upset the networks of control and exploitation

built in lieu of the state, and the key nodes of rebel networks should be concentrated in areas where contested local authorities are co-opted as agents. The dynamics of violence in, around, and distant from nodes of control differ substantially and consistently. Instead of chaos, destruction, or greed, spatial control logic pervades the extensive civil conflict in Sierra Leone and other African contexts with similarly intractable violence.

This article proceeds as follows: a brief description of the complex Sierra Leonean war follows, a review of the literature and suggested hypotheses precedes a data and methodology section. Results and a discussion close the piece.

Brief History of Sierra Leone's War

In March 1991, the Revolutionary United Front (RUF) entered Sierra Leone from neighboring Liberia, intending to overthrow the regime populated by members of the All Peoples Congress. Neither party proved strong enough to decisively defeat the other, and mid-level army officers captured power in a coup by April 1992. The subsequent "collusive" war period (Keen 2004) was characterized by changing tactics, new alliances, disloyal soldiers, and force additives (executive outcomes, local hunters [Kamajors], and Liberian insurgents). In 1996, the military rulers handed over power to Ahmed Tejan Kabbah, a politician from the Sierra Leone peoples party (SLPP).

After months of negotiations and the ensuing Abidjan peace agreement in November 1996, a second coup took place. The successful Armed Forces Revolution Council (AFRC) invited the RUF to co-rule from the capital Freetown in May 1997. International involvement increased as the Kabbah government in exile received support from the United Kingdom and Nigeria, the latter of which dislodged the AFRC/RUF combination from Freetown and reinstalled Kabbah in February 1998. The AFRC transformed itself into an insurgency movement and split with the RUF, attacking Freetown, which enabled the RUF to regain its grip on large parts of the country.

In July 1999, the Lome power-sharing agreement failed to stem violence, as RUF's disgruntlement with the agreement resulted in renewed conflict that included attacks on United Nations peacekeepers/observers. In response, the UK intervened to shore up UN deficiencies, retrain the Sierra Leone Army, and provide over-the-horizon security. Finally disillusioned, the RUF signed a ceasefire agreement Abuja in late 2000 and accepted disarmament on 2001.

Sierra Leone demonstrates the complexity of war and the inability of conflicts to conform to single and simple it also provides insights into mechanisms linking local conditions to the outbreak of violence and its continuation. The conflict reflects and informs analysis into a large cluster of ongoing African conflicts (e.g., Central Africa Republic, Congo, Liberia, Libya, Sudan, and Somalia). High poverty levels, the presence of natural resources, a recruitable, underemployed youth, networks of extraction and looting, and poor or absent state capacity are clearly contributing

elements to the war in Sierra Leone and are hardly unique in Africa more broadly. Moreover, Sierra Leone represents a class of conflicts often referred to as “sons-of-soil” contests (Fearon 2004), involving lengthy episodes with tenacious insurgency movements generated by local socioeconomic conditions. But it differs from sons-of-soil conflicts in the extreme levels of violence against civilians (VACs),³ the absence of ethnic and religious cleavages, and a relatively coherent insurgency movement. Indeed, the broad categorization of conflicts based on singular characteristics often obscures more than it illuminates: for example, “resource” or “capacity” conflicts often exhibit marginalization of various groups, a crisis of traditional authority and rural and/or urban tensions; greed or capacity arguments tend to simplify ground-level experiences, including how state power vacuums are replaced, and resources can be the foundation of local economies (see Seay 2014; Vogel 2014). We advocate for explanations to consider a broader range of political and local causes and dynamics, as these may better fit ongoing conflict across Africa and beyond.

Explanations for Violence Patterns

A central debate in African conflict literature is whether opportunity or grievance can best explain the onset of political violence. Conclusions from a large body of literature on civil conflict suggest it is more likely in areas of poor government control and high resource wealth (Fearon and Laitin 2003), yet ethnic heterogeneity, marginalization, political exclusion, and poverty are present in cases where violence erupts and as motivators to engage in violence (Cederman, Gleditsch, and Weidmann 2011). Increasingly, researchers abstain from polarizing this debate and observe ways that the structure of governance and economic positions underlies the production of collective action based on both legitimate grievances and opportunities (Stewart 2002; Boas, 2001; Keen 2003, 69). Yet, the Sierra Leonean conflict shaped the interpretation of African conflict for over a decade through research suggesting that greed was the primary motivation and determinant of conflict (Berdal and Malone 2000). The warlord emerged as a central figure in greed-based narratives, where they engage in brutal and economically lucrative actions and benefit from civil violence. Yet explanations that focus on rent-seeking opportunities, the “prize” of the central state and extractive economic behavior tends to largely downplay the failure of the central state, the local authority structures, and the growing competition between political agents.

Grievances in Sierra Leone

When expressed by coordinated groups, long-standing grievances remain a central explanation of civil conflict. Grievances are often characterized as “urban” or “rural,” in line with different assumptions, motivations, manifestations, agents, and resulting types of violence. While difficult to parse and measure, urban/rural

grievance structures allow for an examination of how marginalization concepts and measures can be interrogated and deepened. Urban and rural grievance motivations are distinguished in the Sierra Leonean context through “urban youth disgruntlement” (Mkandawire 2002) compared to “rural youth” grievances as a source for revolt (Cramer and Richards 2011). The underlying grievance causing youth to “take up” arms is rooted in repressive social hierarchies (Fanthorpe and Maconachie 2010; Boas 2007; Hoffman 2006). In particular, the distinction is based on who, how, and where recruitment occurred for and the agenda of the movement. Abdullah (2002) argues that the conflict in Sierra Leone stemmed from a socially deviant and violent youth culture in urban Freetown that combined revolutionary student groups and “an inchoate mass of thugs, hoodlums, pickpockets, transients, vagabonds, pan-handlers and discharged jailbirds” (Kandeh 1999, 356).

Case studies suggest the RUF engaged in various strategies to build on urban discontent, albeit this explanation differs from the widespread acknowledgment that urban and populated areas attract violence (Raleigh and Hegre 2009). In Sierra Leone, the spatialized distinction is the basis of an ideological distinction: rural youth were targeted to be inducted in the urban ideology, and early RUF focused specifically on “infected” urban centers in chiefdoms and diamond mining areas across the country to generate willing recruits. Within the urban areas under control, the RUF appointed young civilian collaborators to spread a lumpen ideology based on overthrowing a repressive government and unfair wealth generating systems (Abdullah and Muana 1998). In an attempt to reverse social order, these areas were characterized by high levels of wanton acts of violence, without cultural, familial, or moral restraints (Kandeh 1996, 1999; Gberie 1997). More generally, the urban explanation suggests that the war in Sierra Leone and West Africa more broadly have a distinct urban imprint expressed as a military pattern of roving banditry and complex collusion reflecting the deviant criminal urban culture of the lumpen proletariat (Mkandawire 2002; Abdullah 2002; Kandeh 1999; for a critique see Ellis 2003). The urban explanation leads us to formulate the following two hypotheses.

Hypothesis 1a. Higher rates of violence by rebels are found in urban and diamond areas.

Hypothesis 1b. Higher levels of rebel VACs are found in urban and diamond areas.

An alternative rural explanation is based on customary institutions and patrimonial tensions “endemic to an agrarian order that emerged in the West-African social world” (Peters and Richards 2011, 377). In Sierra Leone’s prewar period, the predominantly rural population faced double exploitation through a faltering state involving a breakdown in public goods (e.g., health care and educational provisions) that coincided with a widespread tax on agriculture (Richards 1996; Reno 1998). The lack of the central state presence allowed for increased exploitation by local elites and chiefs. Chiefs misused their authority over land to favor local elites,

control tenants, and by demanding communal labor from rural youth (Fanthorpe 2001, 2006; Richards 2005; Mokuwa et al. 2011; Peters 2011; Peters and Richards 2011). Traditional authorities represented and reproduced rural hierarchies based on exclusion and marginalization.

The spatial implication the rural grievance argument is that a fertile base of recruitment from the pool of marginalized rural youth is found in areas without public goods but with a repressive customary authority system. Hence, opposition activities—and especially RUF actions—should target areas with high populations of uneducated, young men who suffered marginalization, unemployment, and lost opportunities due to the absent central government and exploitative local authorities. The rural explanation suggests that wars in West Africa have a distinct rural imprint expressed as responses to exclusionary politics (Cramer and Richards 2011; Chaveau and Richards 2008). The grievance literature suggests the following hypotheses.

Hypothesis 2a. Higher violence rates are found in the poorest areas with low state capacity and low development.

Hypothesis 2b. Higher violence rates are found in areas with accumulated abuses of power from exploitative local authorities.

Greed and Agents of War

An alternative reading of the Sierra Leone conflict suggests that grievances are secondary influences to resource extraction potential. Competition for resource areas shapes the geography of conflict and perpetuates the levels of violence and civilian abuse during the war. Different resources require alternative organization and violence strategies: Collier and Hoeffler (2002) argue that oil requires control of the state, and hence if the prize is lucrative enough, a civil war will be fought to wrestle for state dominance; diamonds and “lootable” wealth (e.g., drugs, timber, etc.) acquisition demand a more localized and market cooperation strategy. Le Billion (2001) argues that such situations of diffuse and distant resources give rise to “warlordism,” and indeed Sierra Leone is situated within this category of resource-linked armed conflicts.

Warlords are frequently referenced in Liberia and Sierra Leone, but which actions constitute those of a warlord are loosely defined. Examples of this concept in literature include the presence of an agent benefiting from an ongoing conflict (see Le Billion 2008), rebels with established “liberation zones” (Jackson 2003), agents arising from “disorderly globalization” and the failure of the state (Cerny 1998), a personal and elite leader of militia (Hills 1997), or often, simply undefined (see Duffield 1998, 2007). Whereas a warlord in Keen’s terminology refers to an agent able to use and perpetuate an ongoing war for personal wealth generation, and someone who has a specific role in the political economy of wars (in Berdal and Malone 2000, Keen 2004), in Reno’s definition, they are agents who use their powers both in

and out of war for personal enrichment (1998, 2003). Key features in both definitions include engaging with resource extraction and the creation and use of personal armies in contexts where national security is limited. But a missing dimension is how the landscape of conflict evolves to support the activities of these agents. Resource-based theories of conflict privilege contexts in which local elites fight for extraction rights and local power, where informal, private networks based on individual entrepreneurs and corrupt officials emerge to siphon resource wealth into elite hands (Mueller 2002; Reno 1998, 2003; Ismail 2008). Agents—or “violent entrepreneurs”—are driven by material gain and therefore settle in economic lucrative areas and protect these zones with private militias.⁴ Although believed to act autonomously, they depend on networks (traders, elites, and buyers) for economic benefit. Le Billon (2001) argues that these agents are nodes in a political economy network characterized by an “aggressive symbiosis” between resource providers and buyers. To maximize their extractive benefits, individual warlords are likely to be situated in areas of dense, extractable resources with little to no state control. A loose arrangement of multiple, local centers of power emerge with no overarching authority, an anarchic system through which a political economy of war, extraction, and corruption evolves through “enclaves” of power. Violent competition for lucrative resource areas should characterize relations between warlords. The interrelated warlord, greed, and conflict resource literature argues the following hypothesis:

Hypothesis 3. High violence rates are found in areas of precious resource abundance.

Networks of Control

Another perspective suggests that local agents are not autonomous warlords but belong to a hierarchy of power wherein they act as nodes that control space for dominant fighting forces. Indeed, in Sierra Leone very few, if any, violent events and bases can be attributed to unaffiliated agents; there is a distinct lack of conflict agents who are not members of the dominant fighting forces. Local strongmen are part of a system of control that projects power in environments without a central state authority where they collectively create an alternative “governance” system that replaces traditional power structures and authority demarcations to pursue profit, control space, or implement a social agenda. For example, a RUF hierarchy of power and control was ensured via a commander structure. Area commanders such as Bockarie, Kallon, Mingo/Superman, Tarawalli, and Sessay were responsible for separate localities and operated with relative autonomy within the meritocratically organized RUF (Peters 2011). An alternative hierarchy came from government-like units tasked with civilian welfare (G-5 in particular but also the agriculture unit, Organization Safety of Mankind and to a lesser extent the People’s Court and the Internal Defense Unit) all reporting directly to high command (RUF Judgment 2009; Peters 2011).⁵ Hence, networks of control can be viewed as both ideologically

and strategically critical to fighting forces replacing the reach and capacity of the state, limited as it was.

The political networks of control are a possible explanation for the landscape of violence as the state before and during the war was severely restricted, intermittently present and supporting individual elites rather than a national program of security management and public goods delivery. In state absence, multiple governance networks may emerge, leading to a situation of “new medievalism” whereby overlapping spheres of authority exist (state, nongovernmental, and private), and in association, contested property rights, rule(s) of law; fluid territorial boundaries; and increased isolated marginalized groups and fragmented identities (Cerny 1998). In Sierra Leone, the role of the chiefs was critical as the vacuum left by a withering weak state effectively allowed customary authorities to operate as a replacement for the central state after the mid-1980s (Peters 2011, 45). But local authority strength ranged considerably in Sierra Leone, from highly centralized and exploitative to more decentralized and contested, depending on how many families vied from the position of “Chief” (Acemoglu, Reed, and Robinson 2014).⁶ In areas with more contested local authority structures, opposition groups may easily take advantage of internal competition by providing military support for co-opted elites. This, in turn, will allow those elites to dominate in their local spheres, hence benefiting both parties. There are some indications that it was RUF and government strategy to tap into local disputes. Richards (1996, 8) claims that “losers in [...] chieftaincy disputes might sometimes side with the insurgents.” Fanthorpe (2006, 31) similarly notes, “occupying RUF forces revived chieftaincy as an instrument of civil-military liaison in northern areas later in the war.” The overall RUF military police commander noted how the movement specifically tried to co-opt the paramount chief in Kissi-Tongi (a very competitive chiefdom) but targeted and killed in Mandu (a highly centralized chiefdoms).⁷ Fithen (1999) details how the SLPP government shifted focus from Kono to the Zimmi fields in early 1997 as it could more easily co-opt its own patronage network for control. The civil defense forces (CDFs) likewise co-opted those associated with the *Ndogboyosoi* uprising in Pujehun (1982) who had initially joined the RUF (Gberie 2005). These events highlight how an accumulation of local elites can secure spaces across a state for diverse and interlocking aims.

In terms of the spatial implications of this interpretation, rebel organizations, governments, or militias can become established in an area that they then allow to be controlled by co-opted local representatives. Multiple scales and factions of politically violent groups typically exist, and indeed in Sierra Leone, a common attribute of the RUF, CDFs, and even the government forces were the presence of local nodes— as opposed to roving bands.⁸ Instead of assuming that wars totally replace local authority structures, it is far more likely that they are integrated and co-opted by groups to shore up support and control of areas. In return for holding an area for a government, rebel, or militia force, local strongmen access significant local power, extractive abilities, and a key position in the hierarchy of power that may emerge during and after the war.

Nodes or co-opted “bases” should therefore be established in areas of importance to violent groups. Resource areas, towns, and areas of low or contested customary rule are sites in which violent groups actively try to capture and hold in order to control. There are several advantages to network association for local strongmen: the associated logistics and economic networks allow for the extraction of several types of resources (e.g., mined resources) which require coordination as they are located in specific areas and proximate to government strongholds; networks can support agents, leading to less overt conflict between nodes and less conflict due to accumulated strength from outside networks. For violent groups, a political network serves to challenge opposition organization through holding territory, controlling significant populations, and accessing local wealth generation possibilities. This alternative reading of the Sierra Leonean conflict environment suggests the following hypotheses.

Hypothesis 4a. Network nodes (i.e., bases of violent organization) are more likely in populated, resource wealthy areas with low or contested customary authority.

During a complex and intractable civil war, it is likely that multiple, overlapping spheres of authority may co-exist with tight and organized networks in ethnoregional areas, resource areas, or zones of strategic control. Contrary to assumptions that these areas will experience more conflict, they should experience less violence, as the support from violence organizations should limit their access and competition with other groups.

Hypothesis 4b. Network nodes should experience lower levels of targeted looting, battles, and VACs compared to surrounding areas.

To summarize, three alternative logics suggest how the geography of violence, its intensity, targets, and motivations should emerge in conflicts such as the war in Sierra Leone: the first contends that grievances over the inability of a central state to provide resources and local authority exploitation should result in higher violence. The second, that resource extraction possibilities attract competition in contexts of state failure. The third, proposes that contrary to assumption of autonomous agents taking advantage of resource possibilities, the creation of network bases/nodes serves as the physical representation of political hierarchies constructed by violent organizations to control territory, resources, and populations to further diverse aims.

Research Design

Our main interest is in determining how events and “nodes” or bases differ in their geographic distribution. Testing hypotheses about the spatial-temporal characteristics of civil war onset requires systematic data on the nature, location, and timing of political violence and information on chiefdom characteristics. This article draws on

our newly constructed Sierra Leone Local–Location Event Dataset, which is based on local source data (de Bruijne 2014). Our unit is chiefdom-months from January 1991 to December 2001. One hundred forty-nine chiefdoms and five units in the Western Area are included and average fifty-nine conflict events per chiefdom. Each chiefdom has an acknowledged chiefdom capital and a local authority structure based on the rule of a chief. We incorporate local characteristics such as diamond mines, land use measures, prewar socioeconomic data, population density, roads, and measures of local control. For robustness checks, we use dependent variable variations on the group and type of violence, and alternative controls. Details of variables are available in Table 1.

Conflict Data

Reliable data on the number, nature, actors, and locations of violence in Sierra Leone are rare.⁹ Our set includes an unrivalled number of events ($N = 8,786$), actors (77), cooperations/collusions (>100), and unique locations (756) and covers the entire Sierra Leone war (January 1991–December 2001). The RUF dominated the violence of Sierra Leone’s war –with a role in over 54 percent of events– and the violence predominantly occurs in rural areas rather than in urban settlements. Contradicting the traditional story of a battle-characterized conflict forwarded by data sets such as the Uppsala Conflict Data Program, or the one-sided story of civilian targeting and exploitation from human rights data sets such as the TRC, our data narrate a different story. We present a conflict with a staggering number of unopposed takeovers of territory (35 percent), pointing to a largely absent state–military battles amount to 20 percent of constituent data; this offered non-state actors the opportunity for both looting (21 percent) and VACs (24 percent).¹⁰

Our data make use of a preliminary conflict monitoring report issued by NPWJ based on local information compiled in 2002 and 2003 (L. A. Smith et al. 2004). The report is generated from information provided by over 400 carefully selected “key persons” to 136 conflict mapping recorders. NPWJ compiled data from open source material to expand and, where necessary, add precision to the recollected events. Few open source events are in the report. The final undisclosed data were admitted into evidence in the special court trial of the RUF commanders Sessay, Gbao, and Kallon.¹¹ Unlike previous uses of the report (Bellows and Miguel 2009; Peters and Richards 2011; Sundberg and Melander 2013), our coding rules were cross-checked with NPWJ to increase precision.¹²

Some important caveats to this novel data source apply: as the report did not provide start and end dates for bases, we use secondary source material to create duration dates for main bases. For smaller bases, we have conservatively assumed a three-month presence. Due to resource limits, some chiefdoms were not covered by NPWJ. Five chiefdoms are absent and sixteen had fewer than ten events (outside 99 percent confidence interval [CI]). As suggested by the local nongovernmental organization campaign for good governance, exclusion was based on least affected

Table 1. Summary Variables.

Variable name and time coverage		Description	Scale and time	Source
Conflict				
1.	Event occurrence	1. Dummy variable with 2,133 positive units at 10.66%	All variables are from January 1991–December 2001 and located in within	De Bruijne 2014/ NPWJ ACLED 2014
2.	Violent event occurrence	2. Dummy variable with 1,351 positive units at 6.75%		
3.	All events	3. Continuous variable, mean: .427; SD: 2.02; and range: 0–65		
4.	All violent events	4. Continuous variable, mean: .185; SD: 1.01; and range: 0–24		
5.	All violent events with RUF	5. Continuous variable, mean: .138; SD: .859; and range: 0 to 19		
6.	Proportion of violent events in chiefdom capital	6. Continuous variable, mean: .027; SD: .150; and range: 0–1		
7.	VAC events	7. Continuous variable, mean: .100; SD: .746; and range: 0–19		
8.	All bases	8. Dummy variable with 3,100 positive units at 15.46%		
9.	Main bases	9. Dummy variable with 1,603 positive units at 8.01%		
10.	RUF base	10. Dummy variable with 1,321 positive units at 6.60%		
Population		Logged, continuous variable, mean: 9.83; SD: .823; and range: 6.05–12.33	Aggregated to 2.5 minutes from years 1990, 1995, and 2000	CIESIN
Infrastructure		Continuous variable, mean: 101.9; SD: 61.7; and range: 0–328		
ESRI				

(continued)

Table 1. (continued)

Variable name and time coverage	Description	Scale and time	Source
Resources			
1. Diamond mines	1. Dummy variable with 2,210 positive units at 10.66%	Point data	Diadata et al. 2005 USGS
2. All mines	2. Dummy variable with 3,900 positive units at 19.48%		
3. Distance to diamond mines	3. Continuous variable, mean: 19.4; SD: .332; range: .0–1.4		
Public goods			
1. Health (lower than national average)	1. Dummy variable with 8,862 positive units at 44.2%		Annual Statistical Digest (ASD)
2. School (higher than national average)	2. Dummy variable with 9,099 positive units at 45.4%		
Customary authority			
1. Family number	1. Continuous variable, mean: 3.81; SD: 2.21; range: 0–12	Aggregation of customary authority Static	Acemoglu et al
2. Herfindahl index	2. Continuous variable, mean: .527; SD: .254; and range: 0–1		
Environment			
1. Upland crops	1. Dummy variable with 9,230 positive units at 46.1%		USGS

Note: RUF = revolutionary united front; VAC = violence against civilian; CIESIN = Center for International Earth Science Information Network; USGS = US Geological Survey; ASD = annual statistical digest.

chiefdom. Finally, it is likely that a substantial amount of key persons interviewed had been associated with the CDFs due to the selection criteria including “being present in the chiefdom throughout the war” and “respect in the community.” Nonetheless, we found no clear CDF bias when compared to other data collection efforts. This comprehensive conflict data set based on local sources enables a detailed examination of civil war theories.

Chiefdom Characteristics

To capture “grievance,” we use development indicators from Annual Statistical Digests of the Sierra Leone government. To attenuate likely manipulation, we chose the number of clinics and schools in districts as of 1985–1986 and checked for robustness with an educational variable from a postwar study (Decentralization Secretariat 2007).¹³ Grievance variables are transformed into dummy variables based on higher or lesser distributions of medical and educational facilities by chiefdom over mean country rates. Many studies use public good distribution as a reliable indicator of relative grievance experienced by populations (Stewart 2002).¹⁴ Resource variables include several variations in precious mineral deposits (including diamond mines in chiefdoms, distance to diamond mines, the presence of gold mines, and other precious minerals and metals). In addition, physical and agricultural variables consider the alternative economic geography of the state.

Customary authority measures are from Acemoglu, Reed, and Robinson (2014) who construct a measure of centralized chiefdom authority in Sierra Leone referred to as the Herfindahl index (ranging from 0, or no central authority, to 1, indicating complete authority held by a single person). They find that competition tends to reduce the influence of chiefs over land use (p. 27). Therefore, we take high concentrations of chieftain power as a potential measure for exploitation of land and/or abuse of power; we assume a low concentration of power means that the chief was restricted from exploiting power. In Sierra Leone, the position for chief is determined by a competition between “ruling families,” and the number of potential families that can vie for the position is an indicator of competition. Both measures are separately employed here, although the Herfindahl index incorporates the number of competing families.

In each model, a standard suite of control variables is incorporated, including a log of annual local population over time by chiefdom, a measure of infrastructure to proxy, the ease and accessibility of a location, and diamond mines as conflict attractors. We develop measures of adjacent conflict events in surrounding chiefdoms, including total violence, select group violence, and distinct violence types (De Bruijne, 2015). We also include lagged values of conflict (conflict_{t-1-4}) as an additional exogenous variable to account for clustering and time dependence (Arezeki and Hasanov 2009) and to address the potential problem of autocorrelation in the time-varying data set (Wilson and Butler 2007).¹⁵ We also include dummy variables for each year and test the model with dummy variables for month (using

January as a reference category) to control for any remaining seasonal effects on violence. These had little effect on the overall results.

Model Types

Two model types are used to test hypotheses: a negative binomial models for count-based hypotheses such as 1a to 3 and a logit model for dichotomous-dependent variables for use in Hypotheses 4a–c. Chiefdom random effects are used in both model types to control for unobserved cross-chiefdom characteristics.

Results

Our results confirm that patterns of violence in Sierra Leone are strongly influenced by traditional authority geography and concentration. Table 2 presents negative binomial model results for urban and rural variations in violence, the effect of grievances, resources, and customary authority on conflict. Model 1 considers the proportion of violence within a chiefdom having occurred in the capital of that region.

In actively violent chiefdom months, 39 percent of all violence occurred within chiefdom capital areas. Of those active capital regions, half had more than 50 percent of all chiefdom violence occurring within capital areas. The rates of capital-based violence vacillated considerably throughout the war rather than displaying a clear downward slope, indicating that the initial intent to spread an urban ideology is not strongly confirmed. The rate of VACs is substantially lower in capital regions: 85 percent of all VACs occurred outside of capital regions. Similarly, 14 percent of all violence occurred within chiefdom-months with active diamond mines (which account for 11 percent of the data). The difference in VACs within and outside of diamond mines is not statistically distinct from zero. The results in models 1 and 2 are inconsistent with Hypotheses 1a and 1b: there is neither more violence nor more attacks on civilians within “chiefdom capitals” or diamond mining chiefdoms over others, when controlling for population and event dependency lags. The “urban ideology” explanation cannot be confirmed, and therefore Hypotheses 1a and 1b are rejected.

Models 3 and 4 address Hypotheses 2a and 2b: 2a considers whether higher grievances, measured as access to public goods by the central state, create a conducive environment for violence. The RUF is believed to have cultivated a sense of grievance against centralized government among its supporters and followers, and therefore may have chosen marginalized places to engage in violence as a show of strength and retribution against the central state. However, as demonstrated in model 3, lower levels of public goods are significantly associated with fewer violent events, and, consequently, there is more violence in areas of higher public goods, even when using alternative educational proxies and controlling for the Freetown capital region (which is highly insignificant, so removed from models). Hypothesis 2a can be rejected, grievances toward the central state do not appear to have significantly shaped the violence patterns during the war.

Table 2. Continuous and Count Models for Conflict Event Patterns.

	Model 1	Model 2	Model 3	Model 4	Model 5
Specifics	All events in capital	VAC capital	All violent events	All violent events	All violent events
Population	.000 (.001)	.000 (.000)	.070 (.047)	.097 (.048)**	.086 (.049)*
Road	.000 (.000)	.000 (.000)	.002 (.000)***	.002 (.000)***	.002 (.000)***
Diamonds	.002 (.005)	.000 (.000)	.260 (.108)**	.230 (.109)**	.230 (.109)**
Lower health average			-.135 (.076)*	-.135 (.077)*	-.123 (.077)*
Lower school average			-.228 (.079)**	-.253 (.080)**	-.233 (.079)**
Centralized customary authority				.348 (.156)**	.396 (.155)**
Family number					
Interactions authority × diamonds					
Interactions authority × crops					
Adjacent events	.001 (.000)***	.000 (.000)***	.050 (.001)***	.050 (.001)***	.050 (.001)***
Event lag 1	.003 (.000)***	.001 (.000)***	.053 (.004)***	.053 (.004)***	.050 (.001)***
Event lag 2	.001 (.000)***	-.000 (.000)	.028 (.005)***	.027 (.005)***	.053 (.004)***
Event lag 3		.000 (.000)	.029 (.007)***	.028 (.007)***	.028 (.005)***
Event lag 4			.041 (.005)***	.041 (.005)***	.041 (.005)***
Mines					.218 (.091)**
Constant	-.003 (.013)	-.000 (.005)	-4.08 (.463)***	-4.51 (.505)***	-4.46 (.505)***
Number of observations	19,583	19,430	19,277	19,277	19,277
Number of groups	153	153	153	153	153
Log likelihood			-6,371	-6,368	-6,367
R ²	2.4%	1%			
Type	OLS with RE	OLS with RE	Nbreg with RE	Nbreg with RE	Nbreg with RE

Note: OLS = ordinary least square; RE = random effect; Nbreg = negative binomial regression.

* $p < .1$.

** $p < .05$.

*** $p < .01$.

Hypothesis 2b considers a variant of the grievance question, did customary authority, which replaced state authority prior to the conflict, contribute to the geography and frequency of violence? Customary authority without the checks and balances of the central state is reported as exploitative as power is highly locally centralized where chiefs found it possible. This far more “local” form of repression may have attracted insurgents eager to overthrow governing orders, take advantage of resources available in chiefdoms, or possibly to encourage defection by those considered under exploitative governing terms. Whatever the motivations, the impact of central authority is strong in explaining the variation in violence: consistent with Hypothesis 2b, chiefdoms with more centralized customary authority experienced more violent events than those with more diffuse authority. The impact of full centralization compared to almost no central authority is a difference of 0.4 events per chiefdom month. Over the course of the conflict, this would result in fifty-three violent events. In areas with the mean rate of customary authority, the increase in violent events over low levels is a more modest twenty-six violent event increase. Hypothesis 2b is robustly confirmed.

Model 5 considers the additional influence of resources on conflict patterns. Each of the previous “all violent events” models incorporate a “*diamond mines*” control variable that is both positive and significant. However, model 5 includes multiple other resources into an aggregate variable called “*mines*.” This too is also positive and significant indicating that chiefdoms with mines for various resources experienced thirty conflict events over those without, during the entire course of the conflict. Since the effect is highly correlated with diamond mines, and largely influenced by these mines as opposed to gold and so on, diamond mines remain in all models as a crucial control.¹⁶ It is possible that exploitative, centralized authority is more likely in areas with lucrative tradable resources including diamonds and upland crops which require significant labor. Other physical factors including land type or crops are not significant in these models. Hypothesis 3 is confirmed.

Turning to bases and network nodes as the dependent variables, Hypotheses 4a argues that organizations will set up nodes in areas that have an ample potential support base (population), possibilities for resource extraction (diamond mines), and crucially, areas where they can co-opt local authorities to control territory in the name of the organization. In effect, although areas of centralized authority may experience more violent events, more bases and established zones of control will be in areas of less centralized authority, specifically due to how groups can take advantage of competition for customary authority to co-opt local agents. Indeed, Hypothesis 4a is robustly confirmed in model 6, there is an 82 percent reduction in the likelihood of a base if centralized authority is very high compared to it being very low (see Table 3). Overwhelmingly, both temporary and main bases are found in areas with lower levels of centralized authority, the effect being considerably stronger for the fewer main bases but consistent across all bases. Results do not rely on bases set up in relative remote areas during the guerrilla phase of the conflict and are robust for temporal variation. In both cases of main and temporary bases,

Table 3. Logit Models for Conflict Event Patterns.

Specifics	Model 6	Model 7
	All bases	Main bases
Population	.204 (.071)**	-.019 (.107)
Road	.013 (.002)***	.009 (.005)*
Diamonds	.727 (.576)	2.55 (1.41)*
Lower health average	-.483 (.164)**	3.89 (.900)***
Lower school average	-.160 (.375)	-3.82 (.969)***
Centralized customary authority	-1.82 (.743)**	-4.46 (2.54)*
Family number		
Interactions authority \times diamonds		
Interactions authority \times crops		
Adjacent events	.352 (.035)***	.227 (.063)***
Event lag 1	.153 (.011)***	.062 (.015)***
Event lag 2	.113 (.010)***	.039 (.015)**
Event lag 3	.084 (.010)***	.062 (.015)***
Event lag 4	.077 (.010)***	.066 (.014)***
Constant	-5.38 (.890)***	-11.52 (1.77)***
Number of observations	19,277	19,277
Number of groups	153	153
Log likelihood	-5,137	1,893
Type	Logit with RE	Logit with RE

Note: RE = random effect.

* $p < .1$.

** $p < .05$.

*** $p < .01$.

population is insignificant and diamond mines are positive and significant only for main bases.

Hypothesis 4b suggests that the activities within areas categorized as bases should differ from those that are not, specifically regarding their rates of looting, VACs, and battles. Models 8–10 show that VACs, looting, and battles are more common in “base” areas compared to nonbase areas. Base areas have 1.5 more battles per month, resulting in 180 more battles if a base is active over the entire war; 1 more act of VACs and looting per month, leading to 130 more acts of both if a base is present over the entire war. Hypothesis 4b is not confirmed, indicating that once an area is a base, it becomes an active zone of competition both within an organization as it fights to retain control and between organizations to usurp control (see Table 4).

Discussion and Conclusions

Using unique local source violence data, our statistical evidence from Sierra Leone demonstrates how the logic, geography, and dynamics of violence during the civil

Table 4. Continuous and Count Models for Conflict Event Patterns.

Specifics	Model 8	Model 9	Model 10
	All VAC events	All looting	All battles
Population	.052 (.060)	.010 (.067)	.080 (.082)
Road	.000 (.000)	.001 (.000)**	.001 (.001)
Diamonds	.183 (.133)	.344 (.135)**	.028 (.185)
Bases	.917 (.089)***	1.03 (.094)***	1.38 (.112)***
Lower health average	-.225 (.097)**	.499 (.099)***	.165 (.129)
Lower school average	-.071 (.098)	-.090 (.102)	-.602 (.134)***
Centralized customary authority	.011 (.194)	.004 (.202)	.545 (.259)**
Adjacent events	.048 (.002)***	.042 (.002)***	.042 (.002)***
Event lag 1	.049 (.005)***	.042 (.005)***	.038 (.006)***
Event lag 2	.019 (.007)**	.015 (.008)*	.021 (.008)**
Event lag 3	.024 (.008)**	.023 (.009)**	.019 (.010)*
Event lag 4	.039 (.006)***	.013 (.009)	.023 (.009)**
Constant	-4.52 (.624)***	-4.75 (.697)***	-5.19 (.858)***
Number of observations	19,277	19,277	19,277
Number of groups	153	153	153
Log likelihood	-3,948	-3,597	-2,428
Type	Nbreg with RE	Nbreg with RE	Nbreg with RE

Note: RE = random effect; VAC = violence against civilian; Nbreg = negative binomial regression.

* $p < .1$.

** $p < .05$.

*** $p < .01$.

war are largely driven by local politics and variation in customary authority. This occurred through the co-optation of local power brokers in order to hold territory, extract economic benefits, and represent violent group interests across the state. This result is consistent across all groups: violence levels and settlement patterns are similar for government armies, CDFs, insurgent groups, and international (armed) forces. Our findings have implication for conflict theory, the complexity of testing greed and grievance and disaggregated studies of war.

Conflict Theory, Subnational Governance, and Operational Considerations

Our explanation makes two unique empirical contributions to conflict theory. First, conflict theory has often focused on central state power, capacity, and legitimacy to explain the onset and dynamics of political violence. For example, Zartman's (1995) classic argument is that state failure creates absent authority structures. But our findings suggest alternatively that when the state fails, local agents replace state authority (see also Reno 1998). Rather than acting in a power vacuum, belligerents become one of the competing power brokers in contests for ensuring local allegiance. Ultimately, this suggests that the mode and depth of governance within a state, and the

competition of violent groups for local power and representation, can explain how groups use violence selectively and deliberately to build power bases to further diverse aims.

With the exception of Kalyvas (2006) and Autesserre (2010) who take local levels manifestations of situated and bounded politics within larger periods of violence, conflict literature has overlooked how agents of local politics structure rebellions, conflict dynamics, and consequences. This analysis of Sierra Leone supports the interpretation that not only are local cleavages an insightful scale of study but also nationally active groups—such as the RUF in Sierra Leone—depend on manipulating local dynamics in order to pursue their national campaigns.

A second contribution relates to well-known explanations of civil war onset and participation. Rather than various motivations for fighting (resource extraction, urban or rural grievances), our findings suggest that the operational environment supersedes the ultimate agendas of opposition groups and governments. We believe that debates of civil war onset and participation may substantially benefit from including the tactics used, strategies employed, and political environments in which belligerents have to operate. Rather than determining significant co-occurrences between hypothesized war-causing variables and violence levels, this research agenda can deepen and—where necessary—move beyond well-known conflict onset dichotomies.

Our argument emerges from an analysis of a single case, but across Africa, the power of ruling regimes is grounded in elite power on the local level, and the forms and depth of central–local relationships (Boone 2003). Local political elites and their areas of control are significant loci of power, capacity, influence, and support. Crucially, political relationships on this scale are mutable, unlike national political elites whose fate is closely tied to regimes (Chabal and Daloz 1999). At the faltering of the central state, these authority structures—including chiefs (in Sierra Leone), clan leaders, traditional monarchs, and so on—wield considerable political power across Africa. While the nature of local authorities differs, conflicts like that in the Chad Basin (Roitman 2001), the Ituri conflict in Congo (Vlassenroot and Raeymaekers 2004), and the Northern Mali precrisis in 2011 all have a similar logic: the withering away of the state allowed local elites to replace state authority. Relatedly, we know from conflicts where the state has ceased to exist (e.g., Somalia) that in the course of fighting, alternative networks of control emerge (e.g., Islamic courts). This strongly suggests that our finding regarding local authority and settlement patterns applies to a whole class of African conflicts.

Local Politics, Greed, and Grievance

While our primary contribution is that local politics determined violence in Sierra Leone, we also test traditional accounts of civil war onset and participation and our analysis allows for two observations.

Like most detailed studies on the Sierra Leone conflict, we find partial support for both grievance and “greed” explanations (Humphreys and Weinstein 2008; Keen 2004; Peters 2011). This indicates such goals are not mutually exclusive to participants and supporters within a conflict (see also Zartman 2011). In testing resource extraction theories, we find positive results for mines but many alternative extraction variables (palm oil, upland crops/rice, swamps/rice, rubber plantations, and timber) are not significant. Regarding rural grievances, we find support for proxies of “misuse of customary authority” but also the contradictory result of higher violence levels where the state was most present and provided the “best” public goods.¹⁷ In addition, according to typical “rural explanations” for the Sierra Leone conflict, networks of control should primarily emerge in areas where the misuse of power was highest; we find them in areas where the proxies for misuse are lowest. Our analysis suggests that single theoretical frames are unsubstantiated and proposes a review and reinterpretation of grievances and resource explanations.

In addition, the interpretation of subnationally induced violence levels and varying degrees of support of idealized conflict theories may be conceptualized in two ways. The crucial differences concern discontent, resource predation, and political network explanations. Greed and grievances may be components in creating an alternative political network within a failing state. The ultimate goal of violent entrepreneurs may be to obtain power and resource extraction and tapping into resentment may be means toward that goal. Alternatively, the construction of a base and control network facilitates pursuing overall aims such as resource extraction or addressing local misdemeanors. Both conceptualizations imply that the abuses of local authorities and their ability to control access to economic areas within chiefdoms create symbiotic relationships between violent groups and chiefs. The crucial distinction is whether this symbiotic relationship is an end in itself or a means toward a temporarily suppressed goal.

In supporting the latter conceptualization, the challenge is to rethink how motivations are translated to, or determined by, the tactics and strategies actors choose within a conflict environment. Interactions between measures of control networks and variables associated with motivation may be a way forward. Our data allow for a preliminary analysis of interactions in Sierra Leone such as those between customary authority and resources related to different motivations.¹⁸ Both motivations have some merit, indicating that groups have to engage in a multitude of strategies to remain legitimate to supporters but also viable as a violent group. Literature on conflict, generally, and Sierra Leone, specifically, should further consider the intricate ways by which local politics affect and determine belligerent goals.

Disaggregated Conflict Analysis and Ecological Inference Problems

Our analysis also makes several advancements to the literature on disaggregated war studies using local-level data and spatial methods. We find that locally gathered data

present a markedly different portrayal of violent dynamics within the Sierra Leone conflict. In particular, this war largely occurred in rural areas, while many recent violence campaigns occur in more urban spaces.¹⁹

In addition, we find a mismatch between generalized theories of conflict onset, participation, and dynamics, as there is little reflection as to where and when particular forms of violence takes place. Similarly, conflict literature is equally unclear where to expect violence to address grievances (surrounding loci of power, proximate to, or in recruitment areas). The availability of disaggregated, local and geocoded conflict data challenges conflict theorists to think about the spatial dimensions of their theories. Our solution was to apply subnational theory to conflict dynamics using the heretofore unobserved “chiefdom” unit scale to explain conflict dynamics. It allows us to examine how violence is incentivized and disincentivized by local political relationships.

Finally, the increasing availability of disaggregated conflict data forces researchers to rethink the choice of appropriate proxies. On the one hand, consistent collection of disaggregated violence data allows for causal mechanism across cases to be compared, and therefore warrants the use of similar proxies in each. On the other hand, fine-grained conflict data enable the use of alternative proxies based on case-specific constellations. For example, our choice for disaggregated *absence* of public goods to proxy grievances derives from academic convention but case specialists alternatively suggest that the *availability* of public goods generate discontent (Kandeh 1999).²⁰ While we reject this particular suggestion on empirical grounds (see note 20) and because it may potentially lead to ecological inference problems, we acknowledge the opportunities offered by fine-grained conflict data for in-depth exploration of causal patterns.

We intend on extending our analysis to how local conflict dynamics change within different stages of violent campaigns. Our theoretical framework for this article asserted that the patterns of violence vary over space, and the determinant of those patterns is local politics. However, we did not consider how the goals of opposition and government groups change over time, to reveal patterns and preferences that confirm or refute different conflict explanations. Analysis of temporal conflict patterns is also relevant in the context of our focus on the operational environment and military strategies that are used to further goals and tap into local politics. For example, there is a clear difference between the nature and intensity of violence and base settlement before and after December 1993 (often considered as “phase 2” of the conflict; see TRC 2005; Peters 2011; Richards 1996; Keen 2004). Similarly, there are indications that the role of local politics changed when the chieftaincy supported the creation of “protective” militia groups (CDF units in Sierra Leone; Muana 1997). Our purpose has been to assess the extent to which dominant explanations of conflict geography and patterns are viable, despite their lack of explicit reflection on time-variant violence dynamics. We find that irrespective of time, local politics and customary authority determined where government, vigilantes, and rebels dared to tread.

Table A1. Alternative Model Specifications.

Specifics	Model 1	Model 2	Model 3	Model 4	Model 5
	Interaction 1	Interaction 2	All events	RUF events all	RUF events all (2)
Population	.097 (.049)**	.103 (.051)**	.057 (.046)	.013 (.043)	.028 (.044)
Road	.002 (.000)***	.002 (.000)***	.003 (.000)***	.003 (.000)***	.003 (.000)***
Diamonds	.173 (.263)	.220 (.109)**	.229 (.108)**	.457 (.091)***	.441 (.092)***
Lower health average	-.136 (.077)*	-.151 (.077)**	-.072 (.078)	-.017 (.066)	-.019 (.066)
Lower school average	-.251 (.081)**	-.249 (.080)**	-.300 (.081)***	-.140 (.068)**	-.154 (.069)**
Centralized customary					
Authority	.332 (.169)**	-.069 (.240)			.214 (.134)*
Family number			-.069 (.017)***		
Interactions authority*					
Diamonds	.101 (.422)				
Interactions authority × crops		.694 (.302)**			
Adjacent events	.050 (.001)***	.050 (.001)***	.050 (.001)***	.047 (.001)***	.048 (.001)***
Event lag 1	.053 (.004)***	.053 (.004)***	.055 (.004)***	.050 (.004)***	.050 (.004)***
Event lag 2	.027 (.005)***	.028 (.005)***	.030 (.005)***	.035 (.005)***	.034 (.005)***
Event lag 3	.029 (.007)***	.028 (.007)***	.029 (.007)***	.024 (.007)***	.024 (.007)***
Event lag 4	.041 (.005)***	.041 (.005)***	.043 (.005)***	.025 (.007)***	.025 (.007)***
Upland crops		-.364 (.174)**		.025 (.007)***	
Constant	-4.49 (.508)***	-4.33 (.524)***	-3.77 (.467)***	-3.99 (.423)***	-4.24 (.455)***
Number of observations	19,277	19,277	19,277	19,277	19,277
Number of groups	153	153	153	153	153
Log likelihood	-6368	-6365	-6363	-7603	-7601
R ²					
Type	Nbreg with RE	Nbreg with RE	Nbreg with RE	Nbreg with RE	Nbreg with RE

Note: RE: random effect; RUF = revolutionary united front.

*p < .1.

**p < .05.

***p < .01.

Declaration of Conflicting Interests

The authors declared no potential conflicts of interest with respect to the research, authorship, and/or publication of this article.

Funding

The authors disclosed receipt of the following financial support for the research, authorship, and/or publication of this article: Clionadh Raleigh's work is part of the 'Geographies of Political Violence- GEOPV' project, and funded by the European Research Council's Young Investigator Project No. 283755. Kars De Bruijne was partially funded by the same source.

Supplementary Material

The supplemental materials are available at <http://journals.sagepub.com/doi/suppl/10.1177/0022002715603767>.

Notes

1. There are multiple explanations for the Mano River wars. Here, we present two dominant explanations that are largely generalizable to other conflicts across Africa. Additional explanations, including Keen's (2002) discussion of "shame" as an explanation for extreme violence or strong ideological reasons (Richards 1996), are not covered but remain important alternative narratives in explaining the particular violence environment that emerged in Sierra Leone and Liberia.
2. Throughout this article, "rebels" refers to organized, armed groups seeking to replace central government authority. "Strong rebels" are those groups who dominate in the conflict environment, representing a major cleavage and/or engaging in a significant proportion of all violent events.
3. Although the rate of civilian attacks are similar in Burundi, Central Africa Republic, Congo, Rwanda, Sudan, and Uganda.
4. During periods and areas of state absence or decline, local elites and strongmen organize personal armies, which protect the security of both the warlord and those involved in the extraction of resources and control of a specific area.
5. Sometimes military and civilian hierarchies coincided and merged. For example, in areas under control of Superman (in particular in 1998 [Kono and Koinadugu]), G5 commanders reported only to him rather than to Revolutionary United Front (RUF) high command. The logic of a hierarchy underpins the legal concept of the Joint Criminal Enterprise invoked in the trial against Taylor (Meisenberg 2014). In this reading, Taylor was heading the RUF hierarchy when Fodah Sankoh was imprisoned in Nigeria (e.g., Adebajo and Keen 2000; Smillie et al. 2000; Smillie 2000).
6. Authority comes in two modes at the local level: governmental and traditional. Prior to the war, government authority had ceased apart from regional ministers with remote authority. Local councils to counterbalance traditional authority had effectively ceased to operate with independence (they were reintroduced in 2004). Traditional authority operates at three levels: at the "top" a paramount chief in control of the chiefdom, a section chief (appointed by elders but paramount chiefs sway votes), and town and village chiefs (elected out of the town's or village's ruling families).

7. Personal communication with an author, July 10, 2014.
8. Depending on the conflict “phase” such “local nodes” include for the, RUF: the G-5 structure and/or commanders of main (jungle) bases and areas. Civil defense forces: separate fighting groups based on ethnicity/tribe (Donsos, Gbethis, Kamajors, Organized Body of Hunting Societies, and Tamaboros) and local Kamajor groups within each district. Army: local battalions such as Cobra, Tiger, and Scorpion, supplemented later with bases like Camp Charlie near Mile 91.
9. Alternative data sets include the Uppsala Conflict Data Program, TRC data, Bellows and Miguel, and the precursor of this set Armed Conflict Location and Event Data (ACLED) v-4. For a comparison between Sierra Leone Local–Location Event Dataset (SLL-LED) and alternative data sets, and an in-depth introduction of these data see De Bruijne 2015.
10. The relative importance of unopposed takeovers potentially bears greater application across the continent and may require local source data for identification (see “troop presence” in Van der Windt and Humphreys 2014, 11)
11. Coding the preliminary report required a balance between gleanings significant information into a systematic coding procedure and protecting the identities of those who may possibly be identified as key persons since No Peace Without Justice (NPWJ) was purposefully vague about frequencies, precise locations, and dates.
12. Coding the report was carried out in two coding cycles by one author. To prevent coding bias, page numbers and signals to identify each (type of) event characterized the “working copy” of SLL-LED. The working copy, codebook, NPWJ-agreed-upon coding rules, and coding rules for bases are all available online. Events follow the established categories of ACLED.
13. Given the available data (school enrollment, number of nurses and doctors, and physical buildings), counts of physical buildings are more difficult to manipulate.
14. While we adhere to academic convention as to avoid ecological inference, we acknowledge that associations of public good provisions with violence levels may run through alternative causal pathways. See our discussion.
15. According to Burkhart and Lewis-Beck (1994), the inclusion of lagged-dependent variable may also help to capture the effects of omitted relevant variables.
16. No resources are discretely and significantly related to violence besides diamonds, which account for 68 percent of all mines in the data. The effect holds for both alluvial and artisanal mining. Tests for gold and multiple other precious and nonprecious metals and minerals were not statistically meaningful.
17. There is no support for an urban grievance explanation.
18. See models 1 and 2 in Appendix. After networks have been established, extraction and grievance agendas may yield different violence predictions for each resource.
19. This may support the notion of “urban bias” within conflict data (see Kalyvas 2004) but also underscores how underdeveloped Sierra Leone is in terms of infrastructure and demographic settlement.
20. Kandeh suggests that the Sierra Leone population was well educated but became frustrated as there were no jobs. The level of education among combatants is not a significant factor in the geography of conflict when using a survey (National Public Services Survey 2005–2008 or ICBRP 2007) documenting the highest grade of schooling achieved among combatants

and noncombatants and referencing the chiefdom in which that education occurred. Therefore, Kandeh's suggestion is without empirical support from these data.

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