Territorial Control in Civil Wars^{*}

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Books Reviewed

- Daly, Sarah Zukerman. 2016. Organized Violence after Civil War: The Geography of Recruitment in Latin America. Cambridge University Press.
- Baczko, Adam, Gilles Dorronsoro, and Arthur Quesnay. 2018. Civil War in Syria: Mobilization and Competing Social Orders. Cambridge University Press.
- Idler, Annette. 2019. Borderland Battles: Violence, Crime, and Governance at the Edges of Colombia's War. Oxford University Press.
- Biddle, Stephen. 2021. Nonstate Warfare: The Military Methods of Guerillas, Warlords, and Militias. Princeton University Press.
- Jentzsch, Corinna. 2022. Violent Resistance: Militia Formation and Civil War in Mozambique. Cambridge University Press.

Modern and historical conflicts are often defined by competition over territory. In these wars, belligerent parties prioritize seizing land and natural resources, and influencing populations that reside within contested spaces. The fight to establish political legitimacy, extract and leverage economic assets, and promote standing within the international community

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largely begins from within; hence, territorial control is a cornerstone of the statebuilding enterprise, and a central aim for combatants engaged in violence to establish and cement their authority. By taking and holding territory–and the population and resources within it–combatants boost their resilience and fighting capacity. Control also defines the nature of insurgent relations with the civilian population in a war zone, and hence bears on important conflict processes: recruitment, informing, tactics, governance, and development. The Taliban's sweeping campaign across Afghanistan in summer 2021 highlighted these dynamics concretely. Because control shapes critical conflict processes, it is a topic of paramount importance for scholars of conflict across social scientific disciplines and political science subfields. Understanding civil wars, peacebuilding, and state formation and consolidation fundamentally requires understanding the dynamics of control.

In this review article we survey five recent books that have reinvigorated the academic study of territorial control during civil wars. Each of the texts we review shares a common theme: how the fight to establish control shapes the course of war. We highlight the major theoretical and empirical contributions of the books we review, and synthesize their various contributions to theory and measurement. Of course, the works we consider build on a large existing literature. Taking stock of this extant scholarship, we position the reviewed books within the broader agenda on territorial control. We characterize three generations of thinking about control in the extant literature, trace the evolution of thought across these waves, and underscore key theoretical and empirical developments of each generation. We argue the books we discuss represent an exciting, third wave of research on territorial control. To guide future work, we review the innovations of each advance in the study of territorial control, emphasizing the theoretical and empirical challenges that remain to be addressed.

The remainder of this article proceeds as follows. First, we begin by tracing the emergence and development of a research program on territorial control in civil war. We identify three major waves of scholarship within this program.¹ Next, we describe recent advances in the conceptualization and measurement of control by distilling the major contributions of five books, and charting theoretical and empirical innovations these texts make. The books we review, and the research they will spawn, mark a key contribution to our understanding of important conflict dynamics in international relations and comparative politics. Finally, we identify remaining challenges and issues in the study of territorial control during civil wars, and outline future avenues for research. The directions we highlight mark opportunities for scholars to expand and grow our understanding of the causes and consequences of control, and to hone the measurement tools we use in empirical studies of the topic.

1 Three Waves of Scholarship on Territorial Control

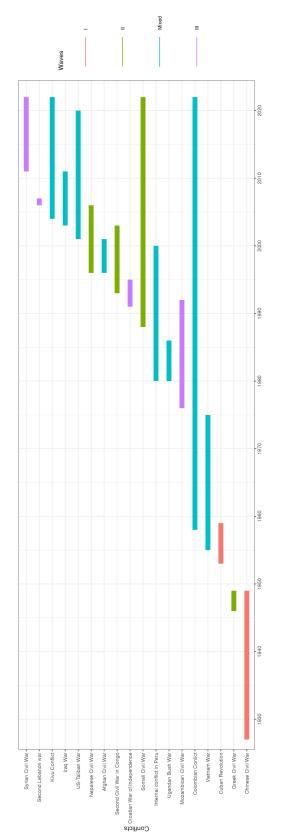
In the large literature on irregular conflict, scholars and policymakers have long recognized the centrality of territorial control for insurgent and counterinsurgent warfare. As Mao Tsetung observed in his classic writings *On Guerrilla Warfare*, rebel success hinges on the ability of insurgents to establish and sustain influence, and conquer new territories: "activities must be extended over the entire periphery of the base area if we wish to attack the enemy's bases and thus strengthen and develop our own."² Building from this observation, thousands of academic texts and policy documents have been written on the nature and consequences of territorial control in civil wars. Indeed, a Google Scholar search returns 19,000 articles and books referencing "territorial control" in "civil war." We identify and trace three major waves of this scholarship, and map them onto prominent conflicts over the last century. In particular, Figure 1 identifies how key conflicts have inspired and shaped literature on the study of territorial control during civil wars. Appendices A and B offer more detailed

¹This parallels Staniland (2023), who identifies three waves of research on civil wars broadly.

²Tse-tung (1989, p. 111).

Scholarship onto Important Cases	
ontrol	
Waves of Territorial C	
Mapping	
Figure 1:	

Third Wave	2010s	Reviewed Authors	Non-Exclusive Control and Multi-Party Conflicts Varieties of Control: Territory vs. People vs. Resources Role of Civilians and Social Dimension of Control	Mixed Methods Evidence Context-Informed Measurement Economic and Social Consequences of Control Implications of Control for Marginalized Groups
Second Wave	2000s-2010s	Kalyvas (2006); Weinstein (2006) de la Calle and Sànchez-Cuenca (2012); Arjona (2016) Sexton (2016)	Control as a Granular Spectrum Explaining Variation in Rebel Violence Geographic Determinants of Rebel Behavior	Quantitative Indicators of Control Cross-National and Subnational Data Survey, Interview, and Expert-Based Coding
First Wave	1930s-2000s	Tse-tung: Guevara: Galula (1964) McColl (1967, 1969) Leites and Wolf (1970)	Focus on Revolutionary Warfare Territorial Conquest as a Multi-Stage Process Rebel Success is a Function of Control	Qualitative Indicators of Control Descriptive Patterns within Individual Conflicts Daytime vs. Nighttime Control
	Period	Major Authors	Conceptual Features	Measurement



Note: Mixed cases are conflicts studied by authors from multiple generations of the research program on territorial control. For instance, both first- and second-wave scholars have studied control during the Vietnam War. descriptions of key concepts and measurement strategies from across these waves; appendix D offers an annotated bibliography.

First-wave scholarship largely prioritized understanding revolutionary insurgent warfare, with a focus on Cold War-era conflicts involving left-wing and communist rebels. This literature developed important qualitative strategies for researching territorial control, and offers rich description of important, individual cases. Beginning in the early 2000s, second-wave scholarship sought to build quantitative measures of territorial control for cross-national and subnational research. While reassessing prominent conflicts studied in first-wave scholarship, second-wave scholars highlighted more granular variation in the extent and quality of control. Applying their approach to prominent post-Cold War civil conflicts of the 1990s and early 2000s, second-wave scholars also began to empirically disentangle how wartime control shapes civilian victimization. The books reviewed in this article represent the third, most recent wave of research on territorial control. These works advance the agenda on control by conceptually distinguishing the complex and nuanced forms of wartime influence that exist in modern conflicts, and by developing new, mixed-methods research strategies. Focusing largely on civil wars that have broken out in the post-2001 period, third-wave scholarship represents the maturation of the research program on territorial control, and underscores important avenues for future inquiry.

1.1 First-Wave Scholarship

An initial, pioneering strand of scholarship on territorial control emerged from the writings of two prominent, 20th century insurgent ideologues—Mao Tse-tung and Che Guevara. Literature in this tradition gained prominence during the early Cold War, and inspired several generations of scholars and practitioners writing about, waging, and countering insurgent warfare between the 1940s and the early 1990s. As noted above, the forerunner of this first generation was Mao Tse-tung, whose writings *On Guerrilla Warfare* represent the definitive guide to revolutionary insurgent strategy. For Mao, territory lay at the heart of irregular warfare. In the ideal-typical Maoist formulation, guerrilla war is three-stage process culminating in rebel victory. Guerrillas' ability to take and hold territory is a defining feature of combat capacity in this model, and the imperative of maintaining defined base areas grows in importance as a rebel movement progresses through the successive stages of conflict.

In Mao's first stage of guerrilla war, rebel organizations privilege mobility at the expense of territorial control. In fact, as militant movements are driven underground at the start of a conflict, Mao argues rebels should allow areas of the country to be captured by enemy forces. The strategic choice to retain mobility but sacrifice territory is required because nascent rebels are too weak to effectively defend territory early in the struggle. As enemy territorial control is consolidated, mobile rebel forces must develop guerrilla resistance throughout the area, provoking government forces to divert resources to quell resistance in occupied regions. As Mao notes, it is the rebel's "task to develop intensive guerrilla warfare over this vast area and convert the enemy's rear into an additional front. Thus the enemy will never be able to stop fighting."³ In turn, guerrilla violence spurs counterinsurgent forces to engage in counterproductive civilian victimization in government-controlled areas. As government oppression increases, so to does civilian support for the mobile rebel force.

Territorial control becomes an increasingly important aim of militant movements in the second stage of revolutionary warfare. For Mao, this stage begins when a mobile rebel force starts capturing and consolidating its own base areas—strategically-important localities "in which the guerrillas can carry out their duties of training, self-preservation and development."⁴ Within these bases, rebels begin developing a political program aimed at organizing and training the civilian population behind revolutionary ideology. Governance plays a

 $^{^{3}}$ Tse-tung (1989, p. 107).

⁴Tse-tung (1989, p. 108).

particularly important role in this task, since rebel bands rely on civilians for succor.⁵ In exchange for shelter, food, and other logistical support needed to wage conflict, rebels offer civilians in base areas security, property rights protection, and dispute resolution, among other services.⁶ In general, rebels' initial bases areas will be remote and rugged hinterlands, in which geographical features like mountains, swamps, and forests afford opportunities for rest, re-supply, and military planning.⁷ Political considerations also shape insurgent selection of base areas. Of particular interest are territories near international borders,⁸ regions with histories of political opposition,⁹ agricultural hinterlands,¹⁰ and home or birth provinces of revolutionary leaders.¹¹

Of course, conquering and consolidating authority over defined physical space is the ultimate objective of successful rebel forces, and particularly those revolutionary groups that seek to fundamentally transform government and social structures. McColl refers to this as the "territorial imperative" of militant groups that progress to Mao's third stage of insurgent warfare.¹² Whereas in previous stages of insurgent struggle, territorial bases merely provided haven from government suppression, by stage three the function of territory is both material and symbolic. Materially, once rebels develop and build stable authority in key base areas, territorial control enables a transition from irregular to "regular" or conventional warfare. Breaking out from key base areas, rebel forces can leverage population support and political propaganda to project their authority into government-held territories

⁵Guevara (1998, p. 80-81).

 $^{^{6}}$ Stewart (2021).

 $^{^{7}}$ McColl (1969).

⁸Galula (1964); Blair (2023).

 $^{^{9}}$ McColl (1969).

 $^{^{10}}$ Scaff (1955, p. 31).

¹¹McColl (1967, p. 167).

 $^{^{12}}$ McColl (1969, p. 614).

in a "strategical counterattack" that envelopes the counterinsurgent rear.¹³ Resource endowments, including arms, recruits, and materiel, which rebels procure from base areas, enable more direct confrontations against counterinsurgent forces. Indeed, Guevara recognized how development of guerrillas' "[i]ndustries of war" depended on "control of territory."¹⁴ In this way, territorial control endogenously begets tactical shifts that further facilitate territorial conquest.¹⁵ At the symbolic level, rebels' growing territorial gains serve to build insurgent legitimacy and undermine civilian confidence in government capacity. Territorial control becomes an end in itself since rebel statebuilding emerges as a natural consequence of "the attrition of government control over specific portions of the state itself" and "the evolution of a territorially-based [rebel] political unit within politically-hostile [government] territory."¹⁶

Reflecting on Cold War-era irregular conflicts, first-wave scholars also grappled with the challenge of measuring territorial control. A few foundational observations emerged from this tradition. First, following Mao's canonical formulation, control was generally conceptualized as a three-category variable ranging from full insurgent control to contested control or full government control.¹⁷ First-wave scholars understood these broad categories as bearing important implications for civilian behavior—an observation that carries across successive waves of the literature. For instance, McColl observed that civilians should be most supportive of the rebels (government) in fully rebel- (government-) controlled areas, whereas contested areas should be characterized by civilian "fence-sitting" and rampant competition between belligerents over civilian loyalties.¹⁸

Second, first-wave theorists pioneered the field-defining concept of daytime versus night-

 $^{^{13}}$ Tse-tung (1989, p. 107).

 $^{^{14}{\}rm Guevara}$ (1998, p. 80-81, 103).

 $^{^{15}}$ Taber (1965).

 $^{^{16}}$ McColl (1969, p. 614).

 $^{^{17}}$ Tse-tung (1989, p. 108-110).

 $^{^{18}}$ McColl (1969, p. 624).

time control. Based on rich qualitative accounts from the Philippines and Algeria, firstwave researchers noted an important temporal dimension of variation in territorial control. Namely, contested territories were defined by daytime government control and nighttime insurgent infiltration; often, the latter being more consequential for population influence. As Scaff noted of the Huk rebellion, "[i]t became an axiom of the struggle that whichever side controlled peace and order after dark controlled the lovalty of the people."¹⁹ Third, while working in a qualitative tradition, many first-wave scholars offered insights about quantifiable metrics of territorial control, some of which second- and third-wave scholars have sought to systematize and measure. For instance, studying Vietnam, McColl identified key markers of insurgent control, including the presence of rebel tax collectors and the use of graffiti to mark zones of influence.²⁰ This observation built from Whittlesey's earlier remark that within zones of control, government and rebel forces often attempt to establish uniform "cultural impress"—constructing standardized security and economic infrastructure across diverse landscapes.²¹ Other scholars noted literal efforts to fence or wall boundaries between insurgent- and government-controlled zones, or to resettle populations in a manner intended to facilitate control.²² These measurement approaches have motivated refinements in subsequent waves of scholarship.

1.2 Second-Wave Scholarship

The end of the Cold War marked a profound shift in the nature and incidence of civil conflict. In particular, the decline in superpower support to rebel movements reduced the viability of revolutionary insurgent struggle in the Maoist model.²³ This development bore

 $^{^{19}}$ Scaff (1955, p. 31).

 $^{^{20}}$ McColl (1969, p. 624).

²¹Whittlesey (1935).

 $^{^{22}}$ Race (1973); Kent (1993).

 $^{^{23}}$ Kalyvas and Balcells (2010).

important implications for the study of territorial control, since the dynamics of control differ in conventional and symmetric non-conventional civil wars in comparison to Cold War-era irregular conflicts.²⁴ At the same time, advances in quantitative social scientific methods jettisoned a push among second-wave scholars for new approaches to measurement, with a particular emphasis on developing sub- and cross-national data on territorial control.

Arguably the key theoretical contribution of the second wave was to refocus attention on the the consequences of territorial control for civilian security. Whereas first-wave scholarship largely considered how control shaped the military strategies of rebel and government forces in their confrontations against one another, second-wave research devotes much more attention to the important role civilians play in shaping armed groups' strategies of control, as well as to the consequences of control for violence and economic productivity.²⁵ Methodologically, second-wave scholars adopted a more granular conceptualization, viewing control not in the coarse fashion popularized by Mao and Guevara—in which territory is either rebel-controlled, contested, or government-controlled—but in a more continuous fashion with multiple intermediary categories between the major classes of control delineated in wave one. Kalyvas's five-category schema of control in particular has emerged as the canonical formulation from second-wave scholarship, and has inspired a large subsequent literature, including authors of the works we review.²⁶

Kalyvas offers the most influential second-wave perspective on territorial control, focusing on how the distribution of control shapes civilians' loyalties and incentives to inform, and belligerent parties' strategies of coercion and governance.²⁷ Control varies in this framework across five discrete categories from full government to full rebel control. In fully government-

 $^{^{24}}$ Balcells (2010).

²⁵Kalyvas (2006); Weinstein (2006); Johnston (2008); Berman, Shapiro and Felter (2011); Arjona (2016); Shesterinina (2021).

²⁶Kalyvas (2006); Bhavnani, Miodownik and Choi (2011); Arjona (2016); Anders (2020); Jentzsch (2022).
²⁷Kalyvas (2006).

or rebel-controlled zones, authority is segmented and armed actors maintain monopolistic power, while in contested zones, authority is fragmented and belligerent parties maintain overlapping sovereignty.²⁸ Definitionally, Kalyvas borrows from Race, who understands territorial control as a combination of "the relative ability of [belligerents] to enforce their will" and to "physically prevent enemy movement" in discrete areas.²⁹ The distribution of territorial control is an essential determinant of civilians' and armed actors' behaviors because it influences patterns of informing, defection, and coercion. In fully-controlled regions, weaker belligerent parties use indiscriminate violence to target out-groups, while stronger belligerent parties eschew violence, since risks of civilian defection are low. In zones of incomplete hegemonic control, armed actors reward supporters with material inducements for collaboration, while using selective violence to punish defectors. Finally, in fully contested regions, where competing actors are at parity, civilian victimization is low because belligerents lack information needed to selectively target opponents.³⁰ Drawing on archival data from Vietnam,³¹ agent-based models,³² and qualitative evidence from Malavsia,³³ various second-wave scholars have tested and offered support for these conclusions, marking one of the most robust findings on territorial control.

Subsequent second-wave scholarship builds on these formative insights in several important ways. First, inspired by contemporaneous American experiences waging counterinsurgency in Iraq and Afghanistan, second-wave scholars continued to expand upon Kalyvas's information-centric approach. For instance, Berman, Shapiro, and Felter model territorial

²⁸McColl (1969, p. 624) also describes transitional "frontier" zones in which control is contested and multiple actors wield sporadic authority. The conceptualization of overlapping sovereignty draws from Tilly (1978).

²⁹Race (1973, p. 152-153, 277); Kalyvas (2006, p. 210).

³⁰Kalyvas (2006, p. 196-212).

³¹Kalyvas and Kocher (2009); Kocher, Pepinsky and Kalyvas (2011).

³²Bhavnani, Miodownik and Choi (2011).

 $^{^{33}}$ Opper (2020).

control as a function of counterinsurgency effort and civilian informing, implying a key role for civilians in the process of establishing control, and suggesting—as first discussed by Mao—that sustaining control requires service provision and governance aimed at cultivating civilian loyalty.³⁴ Similarly, Rueda and Schutte show that control hinges crucially on belligerent parties' abilities to protect civilian supporters who provide them information.³⁵

Second, scholars elaborate additional ways territorial control shapes armed actors' uses of violence. Weinstein, for example, notes that by creating opportunities for interaction between insurgents and civilians, "territorial control disciplines rebel behavior," generating incentives for governance.³⁶ The chastening effect of control on rebel behavior is particularly important in areas where cohesive civilian communities can bargain with insurgents for inclusive governance,³⁷ and where combatants are dependent on local civilian populations to sustain recruitment.³⁸ In contrast, expanding territorial control, particularly over resource-rich areas, could increase civilian victimization by exacerbating organizational agency problems or competition over extractive commodities.³⁹ Johnston demonstrates, for instance, that leaders within geographically-dispersed insurgencies face difficulties disciplining misbehavior and abuse perpetrated by field commanders.⁴⁰ Relatedly, insurgent and government actors may compete for control over mineral wealth and aid rents, driving up violence in valuable territories.⁴¹ Other second-wave research also clarifies how territorial control shapes combat

³⁴Berman, Shapiro and Felter (2011, p. 755). Kilcullen (2010) offers a related theory of competitive control.
³⁵Rueda (2017); Schutte (2017).

³⁶Weinstein (2006, p. 17).

³⁷Arjona (2016); Stewart and Liou (2017); Berg and Carranza (2018); Rubin (2020); Breslawski (2021); Stewart (2021); Aponte González, Hirschel-Burns and Uribe (2023).

 $^{^{38}}$ Kubota (2011); Asal and Jadoon (2020).

³⁹Woldemariam (2018).

 $^{^{40}}$ Johnston (2008).

⁴¹Crost, Felter and Johnston (2014); Crost and Felter (2020).

tactics and the quality of insurgent violence.⁴²

Third, extending first-wave insights from Guevara, who emphasized the ways control shapes economic productivity and development, another strand of second-wave scholarship considers the socioeconomic and sociopolitical consequences of territorial control. For development, territorial control bears key implications because effective service provision requires humanitarian projects to be secured against violent cooptation. This means that development assistance is unlikely to be effective in contested areas.⁴³ In terms of economic productivity, second-wave scholarship finds that the effects of territorial control hinge crucially on the extent to which governments tolerate insurgent consolidation. Where territorial authority is ceded to rebel actors, non-state control facilitates economic order, improving household welfare and productivity.⁴⁴ Where governments contest rebel control, deliberate strategies of privation (e.g., blockades) are likely to hamper licit economic growth, while spurring illicit economic activity.⁴⁵ Actor ideology may also shape the effects of territorial control. For instance, Stoelinga shows that school attendance drops in areas influenced by Boko Haram, which espouses an explicitly anti-education ideology.⁴⁶

More generally, this strand of the literature makes important progress in highlighting empirical nuance in how territorial control varies within and across conflicts. Whereas firstwave scholars generally understood control as zero-sum—either rebel or government forces held authority—some second-wave models allow for greater granularity. For instance, in conceptualizing armed orders, "the structure and distribution of authority between armed organizations: who rules, where, and through what understandings," Staniland accounts for

⁴²de la Calle and Sánchez-Cuenca (2012, 2015); Dugan et al. (2012).

⁴³Sexton (2016). Liu (2022) suggests this relationship may flip in the post-war period, when victorious belligerents channel development aid to consolidate power in areas they held weakly during the war.

⁴⁴Ch, Vargas and Weintraub (2019); Fortou, Johansson and Mora (2023); Ibañez et al. (2023).

⁴⁵Li et al. (2015); Haass (2021); Piazza and Soules (2021).

 $^{^{46}}$ Stoelinga (2022).

the ways endogenous political interests shape control. In particular, his model underscores the fact that governments often voluntarily coexist with rebel organizations, allowing and sometimes cooperating with non-state armed groups that wield authority over discrete territories.⁴⁷ Elaborating on the political consequences of territorial control, other second-wave scholarship also makes important progress. Authors in this tradition highlight the ways control allows armed groups to coopt and influence local political life,⁴⁸ the ways control can be leveraged to influence electoral politics,⁴⁹ and the ways these political dynamics spillover into public opinion.⁵⁰ Still, the prevailing reliance on two-actor models of control in second-wave scholarship remains an important constraint.⁵¹

In terms of measurement, second-wave scholarship made tremendous progress, propelled by contemporaneous growth in quantitative social science. For one, the emergence of large-n, cross-national time-series datasets on civil war prompted efforts to code territorial control across many conflicts over time.⁵² Inspired by the credibility revolution, other scholars sought to develop subnational microdata on territorial control within specific conflicts. In this vein, some notable efforts draw on grid-cell level microdata on ethnic constellations and transportation infrastructure.⁵³ This work explicitly considers geographic constraints on territorial control, and assumes that government authority decays with distance from national capitals and major roads, while insurgent control is linked with ethnoreligious settlement patterns and rough terrain. Other prominent efforts to measure subnational territorial con-

⁴⁷Staniland (2012, 2021).

 $^{^{48}}$ Ch et al. (2018).

⁴⁹Ishiyama and Widmeier (2013); Wahman and Goldring (2020); Osorio and Beltran (2020).

⁵⁰Matanock and García-Sánchez (2018).

⁵¹Staniland (2012, p. 246).

 $^{^{52}}$ See e.g., Asal and Jadoon (2020); Wimmer and Miner (2020).

⁵³Buhaug and Gates (2002); Buhaug and Rød (2006); Weidmann (2009); Müller-Crepon, Hunziker and Cederman (2021).

trol rely on classified or archival government assessments, 54 expert and combatant surveys, 55 media reports, 56 and data on government and rebel bases. 57

However, the most common measurement strategy in second-wave scholarship relies on violent event data to characterize territorial control. In both cross-national and subnational work, conflict event data is widely used to define areas of government and rebel authority.⁵⁸ Advanced geographic and machine-learning models have also been applied to estimate territorial control from conflict event data.⁵⁹ These approaches are well-grounded in theory—inspired mainly by Kalyvas's pioneering work, which offers clear predictions about how patterns of violence should map onto patterns of control. However, there remain some major limitations of this approach. Specifically, if data on violence is used to estimate territorial control, it becomes impossible to estimate substantively interesting questions about how territorial control shapes the incidence of conflict because of fundamental endogeneity.

1.3 Third-Wave Scholarship

The books reviewed in this article represent a new, third-wave of scholarship on territorial control in civil wars, which builds on and extends classical insights from the first and second waves, but also introduces several key conceptual and methodological innovations. We specifically consider five recent books: Sarah Daly's Organized Violence after Civil War: The Geography of Recruitment in Latin America; Baczko, Dorronsoro, and Quesnay's Civil War in Syria: Mobilization and Competing Social Orders; Annette Idler's Borderland Bat-

⁵⁴Kalyvas and Kocher (2009); Hatlebakk (2010); Crost and Felter (2020).

⁵⁵Humphreys and Weinstein (2006); Ishiyama and Widmeier (2013); Gohdes (2020).

 $^{{}^{56}}$ Osorio and Beltran (2020); Petersson (2023).

⁵⁷Sexton (2016); Schouten (2022); Blair (2024).

⁵⁸For cross-national examples, see e.g., de la Calle and Sánchez-Cuenca (2015); Reeder (2018); Wimmer and Miner (2020). For subnational examples, see e.g., Ch et al. (2018); Oswald et al. (2022); Haass and Ottmann (2022).

⁵⁹Tao et al. (2016); Anders (2020); Kikuta (2022).

tles: Violence, Crime, and Governance at the Edges of Colombia's War; Stephen Biddle's Nonstate Warfare: The Military Methods of Guerillas, Warlords, and Militias; and Corinna Jentzsch's Violent Resistance: Militia Formation and Civil War in Mozambique.

Conceptually, these texts inject greater nuance into first- and second-wave models of the contest over territory in irregular civil wars, which typically assume a competition between one government and one rebel actor.⁶⁰ By studying multiparty conflicts with a complex array of belligerents, and by acknowledging the possibility of overlapping and non-exclusive forms of control—such as when disparate rebel groups share common access to base areas these books problematize the two-actor assumption prevalent in earlier scholarship. As we elaborate below, this bears important implications for our broader understanding of order and statebuilding.⁶¹ Also of note in the books we review is their emphasis on control as a strategy of influence that targets a range of objects beyond territory itself, including populations and resources.⁶² For instance, several of the manuscripts point attention to the fact that armed groups may pursue dominance over industries and livelihood activities, without needing to control large territories within which those activities take place.⁶³ When successful, these efforts at resource control can affect markets and conflict processes far beyond the discrete physical areas militants hold. Third, by appreciating the possibility for belligerents to wield control over people and economic assets in addition to defined physical spaces, these books underscore the centrality of civilian agency in shaping belligerent parties' strategies of control.⁶⁴ This raises the critical point that control relies, to a significant extent, on social relationships and non-coercive forms of influence, including armed actors' governance activities. In this regard, third-wave scholarship helps resurrect Mao's argument about the

⁶⁰See e.g., Leites and Wolf Jr. (1970); Kalyvas (2006); Anders (2020).

⁶¹Staniland (2012) makes a similar point about diverse forms of order that emerge in multiparty conflicts. ⁶²See also Bahiss et al. (2022); Jentzsch and Steele (2023).

 $^{^{63}}$ See also Schouten (2022).

 $^{^{64}}$ See also Wood (2003); Kalyvas (2006).

endogenous relationship between territorial control and the establishment of political order.⁶⁵

On measurement, the books we review offer far-reaching insights into the inherent challenges involved in studying control, and suggest several best practices empirical researchers should consider as they design and implement future studies. For one, the texts illustrate the promise of multi-method measurement strategies, which leverage multiple forms of quantitative and qualitative evidence to understand control. When used rigorously and in tandem, tools ranging from surveys and event datasets to interviews and ethnographies can help illuminate the dynamics of territorial control across space and time. Growing methodological diversity in the study of control is a promising characteristic of third-wave research.

Second, the books we review highlight the importance of dynamic, contextually-informed measurement strategies. In the complex, multiparty conflicts that characterize many modern civil wars, changing patterns of contestation can induce major, intra-war shifts in conflict parties' strategies of control. For instance, the emergence of the Islamic State (ISIS) caused a drastic shift in the nature of rebel territorial contestation in Syria in 2013, just as the Japanese invasion of China fundamentally shifted dynamics in the Chinese Civil War.⁶⁶ The books we study reinforce the importance of tailoring research designs on the basis of rich, context-specific knowledge about a given setting. Finally, building on earlier literature, which focused overwhelmingly on how territorial control shapes patterns of violence and populations that are also impacted by control in civil wars. Among the most promising developments is greater attention to the consequences of wartime control for economic welfare and post-war peacebuilding, as well as attention to the unique ways patterns of control affect women, indigenous communities, and other marginalized groups. To elucidate these points more comprehensively, we summarize each of the five books we consider below.

 $^{^{65}}$ Tse-tung (1989, p. 108-111).

⁶⁶Tse-tung (1989); Baczko, Dorronsoro and Quesnay (2018).

2 Book Reviews

To understand the dynamics of territorial control, Daly highlights the value of studying situations when conflict has abated, and armed groups have begun demobilizing. In Colombia, where right-wing paramilitaries laid down arms in the early 2000s, the stability of peace was significantly shaped by wartime patterns of control. This is because demobilized actors remain intent on preserving particularistic zones of influence at war's end. Doing so requires that former combatants retain command-and-control structures and information-gathering capabilities, which in turn help them assess their own strength vis-à-vis other actors that may encroach on their spheres of influence. Consequently, after laying down arms, conflict actors often seek to preserve their organizational assets, like social networks and economic interests, which are integral to sustaining cohesion and collective action potential (p. 99).

Daly shows that groups' success in doing so is a function of geographic recruitment patterns. In communities where armed actors recruited and deployed locally during the war, they retain significant influence after demobilizing. Demilitarization is possible in these areas because militants' local networks, resources, and command structures give them informational advantages and residual bargaining power (p. 17-18). In contrast, where demobilized groups deploy far from their recruitment bases, combatants' non-local status significantly hinders their cohesion and capacity for influence in the post-war period. Foot soldiers within non-local groups are likely to migrate away from zones of deployment after laying down their arms, hampering the ability of commanders to retain group control over territories, populations, and resources that were integral to group resilience during the conflict (p. 22-24). A return to violence is most likely where demobilized, non-local groups struggle to maintain influence despite the post-war erosion of organizational assets that facilitated their wartime control. Daly offers a wealth of evidence for these points using a multi-method design including survey-based measures of territorial control and recruitment, subnational case studies, and administrative data on violence.

That wartime territorial control shapes post-war trajectories of violence suggests control is best understood as a dynamic process, which evolves over the course of a conflict. This view is echoed by Baczko, Dorronsoro, and Quesnay (hereafter BDQ), who examines the transformation of rebel strategies during the Syrian civil war. BDQ first trace patterns of revolutionary mobilization during Syria's Arab Spring, highlighting how the ideologically-unified but organizationally-decentralized protest movement morphed into a fragmented insurgent campaign, in which recruits flowed between groups and rebel fronts shared non-exclusive control over territory (p. 37). Another notable feature about the emergence of rebel-controlled zones within Syria was that initial influence often resulted simply from government abandonment, rather than from insurgent conquest. Militant groups occupied government-neglected communities and border regions where they could quickly establish rudimentary order and marshal cross-border logistical support (p. 96).⁶⁷ Leveraging their strength in rural and peripheral areas, rebels then engaged in large-scale offensives to capture urban centers, and gradually, whole provinces.

Only after 2013, when two transnational movements, ISIS and the Kurdistan Workers' Party (PKK), entered the war, did the dynamics of control fundamentally shift. By pursuing a strategy of resource monopolization, these parties drove the consolidation of exclusivelyheld rebel territories from what were previously non-exclusively controlled opposition zones (p. 156, 195). Within areas under exclusive rebel control, diverse and sophisticated strategies of economic extraction and social engineering patterned Syrian life after 2013 (pg. 226-227, 240-246). In terms of measurement, BDQ underscore the value of deep, contextual knowledge for mapping patterns of territorial control. Through interviews and travel across government-held, contested, and insurgent-held areas of Syria and Turkey, these authors produce a comprehensive, detailed historical examination of rebel strategies of influence in

⁶⁷See Blair (2023) on controlling borderlands.

one of the world's most difficult research environments.

Like BDQ, Idler also emphasizes the diverse—and often cooperative and non-exclusive arrangements armed groups strike over territory. Focusing on the Colombian borderlands, she shows that belligerent parties variously engage in competition and cooperation over strategic territories and transnational sanctuaries. Militants' interactions range from overt military competition to unstable, short-term economic deals and durable, long-run alliances (p. 18-20).⁶⁸ Idler's analysis of these interactions belies two prominent assumptions in firstand second-wave scholarship on control: (1) that groups prioritize *exclusive* control over territories; and (2) that shared ideology is the dominant incentive for inter-group cooperation. As she notes, interactions between borderland militants "contradict the widespread view that armed conflict is about monopolistic territorial control... armed actors often share territory, regardless of their political motivation..." (p. 4-5). The nature of armed group interactions bears significant implications for economic productivity and civilian welfare in regions outside of government control. Because zones of insurgent influence tend to emerge far from state centers, the economic life of rebel-held territories is often structured around illicit exchange.

Patterns of inter-group territorial influence also profoundly shape civilian welfare. Where control is contested or conflictual, chronic insecurity attenuates generalized trust, undermining civilian well-being. In contrast, where rebels monopolize violence in a discrete physical space, armed group governance is possible. Idler shows that where groups can establish monopolistic control, they invest in protecting civilian populations and dispensing justice, endogenously bolstering civilian support and deepening group influence (p. 61-63). Patterns of control and governance also shape the tools armed groups use to enforce authority. By imposing rules and establishing norms of conduct, conflict parties reshape the social fabric of communities in areas they wield influence (p. 241-246). Idler develops these points through in-depth ethnographic research in Colombian and Venezuelan communities, where a myriad

⁶⁸See Blair et al. (2022); Blair, Horowitz and Potter (2022); and Blair and Potter (2023) on militant alliances.

of actors have held control over the past seven decades. Through participant observation, she proposes a variety of novel approaches to identifying and measuring territorial control. For instance, markers like graffiti and propaganda serve as measurable proxies of armed group presence (p. 112, 141-142). In areas where rebels rely on agricultural livelihood activities like coca cultivation and logging, remote-sensing offers other measurable indicators of control (p. 115, 223).⁶⁹ More interestingly, Idler also proposes qualitative techniques for detecting belligerent control. For instance, because pervasive insurgent influence impacts civilian behavior, researchers may be able to discern evidence of control through map-making exercises (p. 85) or analyses of interviewees' volume, tone, expressions, and gestures (p. 345).

Idler's research dovetails nicely with Biddle's work, which also questions a core assumption of much first- and second-wave scholarship: that territorial control is strictly beneficial and desirable for warfighting. Biddle identifies a spectrum of military tactics ranging from conventional ("Napoleonic") attacks, such as massed maneuvers and decisive engagements, to guerrilla ("Fabian") attacks privileging cover and concealment (p. 12). Napoleonic tactics improve lethality and help a fighting force control territory and populations; Fabian tactics improve the survivability of a fighting force at a cost of constraining that force's ability to control ground. Given the devastating effects of modern firearms and their proliferation to state and nonstate actors, belligerent parties are induced to pursue midspectrum tactics that balance these two competing aims—lethality and survivability. Hence, armed groups strategically *choose* to pursue tactics that facilitate or inhibit their ability to take and hold territory. Control is a goal belligerent parties elect to employ, and not an outcome that all groups can (or desire to) achieve. Biddle highlights several important examples, like Hezbollah in 2006 (p. 128-134) and the Croatian National Guard in 1992 (p. 247-251), of sophisticated rebel movements seizing territorial control through midspectrum and conventional tactics. In contrast, groups like Jaish al-Mahdi in Iraq (p. 169-174) and Mohammed

⁶⁹See Kikuta (2020); Prem, Saavedra and Vargas (2020).

Farah Aideed's militia in Somalia (p. 201-212) rarely sought to contest territory under counterinsurgent pressure.

The decision to pursue territorial control is primarily motivated by two factors: an armed group's military firepower and political structure. Technologically, the relative decline in states' material advantage over rebels means national militaries have gradually become less keen on using numerical predominance to establish territorial control, while militant groups have bolstered their capacities for sustained combat and control. Politically, the demands of midspectrum tactics are infeasible for rebel groups that lack mature institutions for command-and-control or a high valuation of the stakes of fighting. The planning, logistical, and military specialization requirements of adopting midspectrum and Napoleonic tactics often constrain groups that would otherwise prefer to control territory from so doing. Biddle proposes a wealth of new measures designed to capture various aspects of a rebel group's tactics, including pursuit of territorial control. For instance, the desire to hold and defend territory may be proxied by granular data on "the duration of firefights; the proximity of attackers to defenders; the incidence of counterattack; the incidence of harassing fires and unattended minefields" (p. 317). Apart from these highly-detailed measures, Biddle also proposes considering frontline troop density (p. 43, 66), a measure similar to one proposed by in earlier work by Humphreys and Weinstein, who consider territorial dominance.⁷⁰

Finally, focusing on situations in which wars become deadlocked between militarilycapable adversaries, Jentzsch also considers the battlefield and tactical consequences of control. Her focal setting is Mozambique, where conflict between the Liberation Front of Mozambique (Frelimo) and the Mozambican National Resistance (Renamo) devolved to a stalemate in the 1980s. One novelty of Jentzsch's approach is her focus on contested spaces, where belligerent parties are unable to sustain prolonged influence, with none able to exercise complete control or protect civilians. Paradoxically, we can understand the dynamics

⁷⁰Humphreys and Weinstein (2006).

and consequences of control for civilian welfare and violent mobilization by examining communities where a military impasse hampers consolidation of authority. Jentzsch finds that civilians are most likely to organize militias for community defense in localities where "territorial control changes frequently and incumbent violence is high" (p. 19-20). In these contested areas, the absence of durable combatant control may be community-empowering. Faced with threats of victimization, repeated displacement, and food insecurity, civilians in contested communities mobilize local militias for protection.

This insight underscores the central importance of civilian agency in war, building on long tradition from first- and second-wave scholarship.⁷¹ Nor was the function of militias purely strategic. Jentzsch highlights how community leaders and religious authorities negotiated elaborate forms of nonviolent collective action and civil resistance to combatant control. "Peace zones" brokered by clergy in contested areas became major centers for trade and exchange in areas otherwise economically-rayaged by years of contestation (p. 99-100). Another notable feature of Jentzsch's study is her emphasis on diverse objects of control. Particularly where territory is contested and military stalemate inhibits conquest over land itself, civilian populations become an important resource for combatants. Both Frelimo and Renamo forcibly displaced and resettled civilians from contested regions into their core territories, thereby exercising population control divorced from territorial control (p. 46, 75). Jentzsch compiles a novel set of archival documents, maps, and newspaper reports to trace shifts in territorial and population control across administrative units in Mozambique, and uses interviews and oral histories to understand civilian responses to contestation. In this way, her book is exemplary of the mixed-method approaches common in third-wave scholarship.

 $^{^{71}}$ See, e.g., Kalyvas (2006), Wood (2003).

3 Conceptualizing Control

The books we review make important progress on three major conceptual themes, with important implications for theorizing territorial control.

3.1 Multiparty Conflicts and (Non-)Exclusive Control

Models developed in first- and second-wave literature on territorial control rest upon a two-party assumption—that control is divided between one rebel actor and one government. In these models, control is understood as exclusive. That is, a given territory is viewed as completely dominated by one belligerent party or contested between the two. In reality, however, many civil wars are multiparty contests, involving diverse non-state actors, multiple intervening states, and heterogeneous government factions (Appendix C).⁷² The books we review make important progress in moving beyond two-party models of control, explicitly accounting for multiparty conflicts. By expanding attention to the range of actors that can exert control, third-wave literature brings important nuance to extant scholarship.

One especially important point that emerges from multiparty models developed in the books we review is the fact that territorial control may be non-exclusive. Rather than seeking monopolistic authority, violent non-state actors often cooperate and share access to territory with one another. For instance, in Colombia, Daly and Idler show that a diverse constellation of paramilitaries, rebels, and narcotraffickers arranged complex, informal agreements over strategically-valuable territories, sharing in governance and exploitation in these communities.⁷³ Similarly in Syria, rebel coalitions shared authority over large territories between 2011 and 2013. In these rebel-held regions, militant groups maintained joint responsibility for service provision, defense, and economic production, and did not pursue "the elimination

⁷²Cunningham (2014).

⁷³Daly (2016, p. 153-156); Idler (2019, p. 115-120).

or assimilation of "rival factions.⁷⁴ Instead, control was exercised non-exclusively; territorial competition only emerged in Syria after 2013, when ideologically-motivated, transnational groups like ISIS attempted to monopolize authority.⁷⁵ Recognizing the shared and overlapping sovereignty different belligerents wield over territory during and after conflicts problematizes an important assumption of first- and second-wave scholarship—that territorial dominance is a key goal for armed organizations. More broadly, conceptualizing nonexclusive control allows scholars to explore spatiotemporal variation in the arrangements non-state actors negotiate following the collapse of the state-imposed order.

By considering multiparty conflicts, the books reviewed here also force us to reexamine core assumptions about the motivations of government forces. Whereas classical literature presumes governments seek a monopoly on violence in their territories, recent work highlights a more complicated reality.⁷⁶ While governments sometimes violently contest efforts by non-state groups to seize territorial control, other times governments openly cede territory and cooperate to allow control by other actors.⁷⁷ Jentzsch shows that Mozambican government forces deliberately allowed local self-defense militias to seize territory as part of their counterinsurgency strategy.⁷⁸ In part, this strategy represented a response to government weakness. Where logistical challenges constrained government recruitment and deployment, ceding control to pro-government militias improved intelligence and rural security.⁷⁹ Biddle speaks to the broader logic of this strategy. Because controlling territory requires coercive leverage and an open ground presence, it sacrifices lethality and survivability. By consigning control to proxy forces, governments may be able to reduce their administrative burdens

⁷⁴Baczko, Dorronsoro and Quesnay (2018, p. 15, 131).

⁷⁵Baczko, Dorronsoro and Quesnay (2018, p. 38).

 $^{^{76}}$ Tilly (1978); Weinstein (2006).

⁷⁷Staniland (2021).

⁷⁸Jentzsch (2022, p. 25, 46, 73).

⁷⁹Jentzsch (2022, p. 74-75).

and preserve combat capacity for large counterinsurgency operations.⁸⁰ In Syria, tacit cooperation between government and non-state actors over control and administration was also motivated by ideological factors. For instance, in many rebel-held territories, non-state authorities often coopted the previous government bureaucracy, retaining municipal employees who "would [continue to] collect their salary" from the government.⁸¹ For rebel actors, this strategy allowed public service provision to continue normally, reducing negative impacts on civilian life. For the government, continuing to pay bureaucrats who served in rebel-controlled territories allowed state officials to retain their claim of sovereignty despite the collapse of formal government control.

3.2 The Objects of Control: Territory, Population, and Resources

Another major contribution of the books reviewed here is their emphasis on objects of control beyond territory itself. By objects of control we mean the targets and assets over which belligerent parties seek to exert influence. Whereas first- and second-wave literature overwhelmingly focuses on *territorial* control, third-wave scholarship also underscores the importance of social and economic control.⁸² Beyond territory, armed actors during civil wars seek to influence and control populations, resources, and sociopolitical life in important ways. Moreover, social and territorial control need not overlap. Armed groups can wield influence over people, goods, and political life in communities where they lack a physical presence.⁸³ By distinguishing non-territorial objects of control, third-wave scholarship offers several new insights about armed groups' strategies of violence and governance.

First, works we review challenge the assumption of earlier research that belligerent parties universally seek to maximize territorial control. Controlling territory is costly, so some

⁸⁰Biddle (2021, p. 54).

⁸¹Baczko, Dorronsoro and Quesnay (2018, pg. 131).

 $^{^{82}}$ Jentzsch and Steele (2023).

 $^{^{83}}$ Bahiss et al. (2022).

combatants may eschew it all together if other needs take precedence. For one, implementing the mid-spectrum tactics that help combatants take and hold territory requires political institutionalization, which some militant groups may be unable to achieve.⁸⁴ In addition, because control requires combatants to mass forces, it sacrifices concealment. In hotlycontested warzones, belligerents may therefore forgo territorial control precisely because military needs dictate prioritizing survivability.⁸⁵ In lieu of controlling large territories, belligerents may instead target other objects of control, like populations or economic assets. In turn, controlling these objects can endogenously bolster combat capacity, enabling future investments in territorial control.⁸⁶ In developing these insights, Biddle's work recalls Mao's first-wave theory of insurgent tactics, which recognized weak insurgents' need to eschew territorial control, at least early in a conflict.

Instead of maximizing territorial control, belligerent parties may prioritize economic control. Under this strategy, combatants seize key productive assets and valuable resources, without needing to hold large territories. In the eastern Democratic Republic of the Congo (DRC), for instance, rebel and government factions exercise "sovereignty on a shoestring," imposing authority in central nodes near highways and mines.⁸⁷ This strategy requires controlling territory no bigger than the blockhouse fighters use to obstruct road passage, but creates significant revenue-generating opportunities.⁸⁸ BDQ show how this strategy of economic control was used extensively in Syria. As they note, "[rebels] also took over factories, warehouses, grain silos, and distribution outlets for gas and bread. ... More generally, by monopolizing transportation of key supplies and installing checkpoints at strategic locations,

⁸⁴Biddle (2021, p. 75).

⁸⁵Biddle (2021, p. 54).

⁸⁶Taber (1965); Leites and Wolf Jr. (1970).

 $^{^{87}}$ Schouten (2022, p. 2).

 $^{^{88}}$ Sánchez de la Sierra (2020).

[insurgents] could exert pressure on the other groups by controlling their supply lines."⁸⁹ Border posts and smuggling routes also became a key target of control because holding these conferred logistical power—the ability to manipulate aid and trade flows central to armed groups' combat and governance capacities. ISIS leveraged its control over productive sites like oilfields to offer more expansive governance in towns it controlled and to gain bargaining leverage vis-á-vis the government.⁹⁰

Strategies of economic control are also important for understanding post-conflict dynamics. Daly shows how, at war's end, demobilizing fighters often gravitate toward areas with more economic opportunities. Whether or not these fighters reconstitute armed factions depends in part on the ability of their commanders to retain wartime business networks in the post-war period. Where groups manage to sustain economic control over trafficking routes, extortion rackets, and business relationships, intra-group cohesion is greater and the prospects of remilitarization are lower.⁹¹ In this way, economic control not only matters because it impacts belligerents' material capabilities, but also because economic influence shapes social networks and information. Idler echoes this point, noting how economic control impacts patterns of cooperation and conflict between combatants, with significant implications for civilian welfare and development.⁹²

Civilian populations represent perhaps the most important non-territorial object of control. The importance of social control—the ability to shape civilian decisionmaking and behavior—is imperative both because civilians provide vital information to belligerent parties and because influence over civilians is critical for building legitimacy. Jentzsch offers a compelling account of how important population control was in the Mozambican civil war.

⁸⁹Baczko, Dorronsoro and Quesnay (2018, p. 193-194).

⁹⁰Baczko, Dorronsoro and Quesnay (2018, p. 195).

⁹¹Daly (2016, p. 22-24, 88-89).

⁹²Idler (2019, p. 184).

Because the warring parties were roughly evenly matched, the war devolved to a stalemate in which neither side could easily seize new ground. Instead, Renamo and Frelimo forcibly resettled populations from front-line villages into rear zones more firmly under their control. This strategy of forced displacement allowed combatants to gather information from frontline civilians about opposition support, as well as to harness civilian labor for food production and to enforce ideological mandates.⁹³ Nor was this strategy unique to Mozambique. In the DRC, Yugoslavia, and Colombia, armed groups aimed to control population flows through forced resettlement.⁹⁴ Understanding forced displacement as a deliberate wartime strategy of social control helps cast new light on how and why armed groups manipulate migration flows during conflict.⁹⁵ One important implication is that choice-based models of migration decisionmaking must account for belligerent-imposed constraints on mobility.

Apart from manipulating population movement, social control is also exercised through ideological propaganda, coercion, and governance. First- and second-wave models often view territorial control as a "prerequisite" for exercising these mechanisms of control.⁹⁶ For instance, most work on rebel governance assumes that territorial control is a necessary precondition for transformative service provision.⁹⁷ Third-wave scholarship challenges this notion, revealing that armed groups often wield influence over civilians in areas beyond their territorial control. For instance, BDQ show that ISIS shaped patterns of civilian compliance with their ideological mandates even in areas under government control. Through propaganda, threats of violence, and the creation of mobile institutions like courts, Syrian militants im-

⁹³Jentzsch (2022, p. 46).

⁹⁴Idler (2019); Biddle (2021); Schouten (2022).

 $^{^{95}}$ Lichtenheld (2020).

⁹⁶Loyle et al. (2023, p. 269).

⁹⁷Kasfir (2005). Stewart (2021, p. 72) acknowledges "rebels who cannot control territory can still *begin* implementing their governance if the state is absent." Nevertheless, her theory treats territorial control as a scope condition.

posed social control in territories where they lacked a permanent presence.⁹⁸ Similarly in Afghanistan and India, motorbike-equipped fighters often dispensed justice and enforced ideological mandates in government-controlled districts, leveraging their embeddedness in local social networks to shape civilian behavior.⁹⁹ Information communications technology (ICT) like phones also increasingly allow insurgents to project influence into areas beyond their territorial control. In Syria, concerted messaging campaigns led to waves of military desertion, as rebel fighters called government troops and created an impression that rebel victory was inevitable.¹⁰⁰

Going forward, future work should continue to recognize that social control may be exercised absent territorial control. Another fruitful avenue for development concerns the ways territorial control helps combatants hone social control. For instance, territorial control may enable controlling actors to coopt local elites, who can in turn leverage their influential positions to help controlling actors enforce social compliance and order.¹⁰¹ Lastly, thirdwave scholarship makes important progress in highlighting how territorial and social control shape norms and social identification. Future work should also continue to develop Idler's important point that territorial control and social control can combine synergistically to generate new social norms and reinforce civilian compliance through legitimation.¹⁰²

3.3 Civilian Agency and the Social Dimensions of Control

By re-orienting the study of control to focus on populations and economic assets, in addition to defined physical spaces, the books we review also play an important role in resurrecting key insights about civilian agency, community networks, and social determinants of

⁹⁸Baczko, Dorronsoro and Quesnay (2018, p. 96-98).

 $^{^{99}}$ Waterman (2023).

¹⁰⁰Baczko, Dorronsoro and Quesnay (2018, p. 105).

¹⁰¹Daly (2016); Jentzsch (2022).

 $^{^{102}}$ Idler (2019, p. 59-60).

control. In particular, these books make significant progress in reshaping our understanding of the process of territorial conquest as a social phenomenon—not merely a military one. Whereas most first- and second-wave literature understands territorial consolidation and control as a tactical and strategic exercise achieved through violence, third-wave research reminds us that people—civilians, local elites, soldiers, and commanders—have key roles to play in shaping the nature and consequences of territorial control. In this regard, third-wave scholarship helps recover Mao's original argument about the the importance of political order and social indoctrination for establishing influence. People, and not merely arms, are central to consolidating territorial authority in civil wars.

The core reason territorial control hinges on social factors is because civilians wield agency. Non-combatants shape belligerent parties' tactics and strategies by deciding to supply information,¹⁰³ join armed factions,¹⁰⁴ and engage with armed groups' ideological and governance institutions.¹⁰⁵ As developed in great detail in second-wave work, civilian agency gives combatants incentives to respond to civilians' needs and demands through service provision and forbearance.¹⁰⁶ Otherwise, victimization and coercion risk driving civilians to collaborate with opposing conflict parties.¹⁰⁷

Building on these insights, the books we review show that civilian agency shapes the strategies and tactics belligerent parties use to seize territory. For instance, Jentzsch finds that territorial stalemates afford civilians considerable opportunities to influence belligerents' battlefield operations by mobilizing into community militias. Particularly in territoriallycontested areas, "stalemates can be community-empowering" as civilians band together to

 $^{^{103}}$ Biddle (2021).

 $^{^{104}}$ Daly (2016); Jentzsch (2022).

¹⁰⁵Baczko, Dorronsoro and Quesnay (2018); Idler (2019).

 $^{^{106}}$ Wood (2003); Berman, Shapiro and Felter (2011).

¹⁰⁷Kalyvas (2006).

form self-defense groups.¹⁰⁸ Drawing on pre-existing social networks, communities along the frontlines mobilize militias to defend their interests, liaise with combatant parties, and protect civilians. These militias have an important impact on the strategies and tactics other combatants use to take and hold authority. In Mozambique, for example, militias often prevented Frelimo and Renamo from seizing new territories, forcing these groups to pursue population resettlement rather than open conquest as a mechanism of control.¹⁰⁹ Other militias, drawing on the support of religious and traditional elites, established "peace zones," where all combatants refrained from violence and local order emerged.¹¹⁰

Idler illustrates a similar dynamic in Colombia, where civilians in borderland communities interacted with armed actors to condition the latter's behavior and strategies of control. Specifically, Idler argues evolving, recursive relationships between armed actors and civilians locked-in vicious or virtuous cycles of violence and coercion or governance and order. These relationships were, in part, the product of local social norms and patterns of trust between combatants and civilians. Civilians' perceptions and the influence of local elites were particularly important in structuring community-combatant relations, which in turn shaped whether armed actors invested in statebuilding and service provision or repression and victimization.¹¹¹ Hence, the strategies belligerents use to exert territorial control have important social roots. Memories, norms, and perceptions influence how civilians associate with combatants and how combatants effect territorial control.

Another key finding of the books we review is that social networks shape territorial control in key ways. In this sense, these books extend previous scholarship on how social networks impact armed group formation.¹¹² Considering how social networks impact and

¹⁰⁸Jentzsch (2022, p. 19-20).

¹⁰⁹Jentzsch (2022, p. 46, 64-65, 77-80).

¹¹⁰Jentzsch (2022, p. 99-100).

¹¹¹Idler (2019, p. 59-64, 236).

 $^{^{112}}$ Staniland (2014); Lewis (2020).

are impacted by territorial control offers new insight into the ways control affects collective action. For instance, Daly reveals how recruitment network dynamics affect postwar territorial control. Locally-rooted militants with denser pre-war social ties retain greater cohesion at war's end. Consequently, these fighters retain greater post-conflict territorial and political authority in communities where they held wartime control.¹¹³ In other words, social networks underpin the durability of territorial control. Apart from military capacity, monitoring and enforcement facilitated by social networks also contribute to territorial control.

Relatedly, BDQ show that social networks are vital for facilitating initial territorial conquest. Networks of anti-government protesters in Syria coalesced into insurgent movements that rapidly leveraged their revolutionary capital to fundraise and organize armed resistance. After control was established, these rebel social networks were important for governance. Key positions in insurgent-led political and economic institutions were distributed through existing networks of revolutionary elites.¹¹⁴ BDQ also uncover how territorial control can reshape pre-war social networks. Specifically, they show how the distribution of control can fracture or augment social capital, breaking or bolstering extant social networks. For example, where pre-existing social groups like tribes and clans are divided between government and insurgent controlled regions, these groups' capital and ties maybe destroyed.¹¹⁵ In contrast, territorial control can also forge new networks by reshaping identities. A shift toward sectarian identification in ISIS-controlled regions sharpened intra-Sunni social ties.¹¹⁶

This latter point leads to a final important contribution of the books we review: they uncover important social consequences of territorial control neglected in prior research. One especially critical conclusion is that territorial control may redefine the bases of social iden-

¹¹³Idler (2019, p. 5).

¹¹⁴Baczko, Dorronsoro and Quesnay (2018, p. 116-117, 226-229).

¹¹⁵Baczko, Dorronsoro and Quesnay (2018, p. 19).

¹¹⁶Baczko, Dorronsoro and Quesnay (2018, p. 212).

tification. BDQ argue that "individuals learn to manipulate their identity markers when moving around in physical [space]" across zones of combatant control.¹¹⁷ Understanding social identity as a malleable product of territorial control reinforces constructivist models of social identification. Idler also uncovers important gendered consequences of territorial control neglected in earlier scholarship. Different rules and norms imposed in contested and belligerent-controlled areas often uniquely shape the attitudes and behaviors of women.¹¹⁸ Finally, Biddle shows that whether or not groups pursue and actualize control is impacted not only by technology and relative power, but also by social processes. In particular, the perceived stakes of fighting matter greatly for whether and how militants attempt to control territory. Perceived stakes are inherently social, and are impacted not merely by military and economic factors, but also by politics and ideology.¹¹⁹ Appreciating this fact is central for understanding otherwise puzzling decisions like ISIS's choice to expend vast resources fighting to control Dabiq, a town with little strategic value, but which bore important meaning for their eschatological worldview.

4 Measuring Control

Prior work provides a rich foundation for measuring territorial control, as described in appendix B, which offers a structured guide to extant empirical strategies. The reviewed books contribute to measurement by introducing multi-method designs that combine quantitative and qualitative approaches. Further, these books broaden the scope of existing analyses by studying diverse outcomes and populations.

4.1 Multi-Method Strategies

Extending the legacies of first-wave scholarship, which pioneered the qualitative study

¹¹⁷Baczko, Dorronsoro and Quesnay (2018, p. 41).

¹¹⁸Idler (2019, p. 141-142).

¹¹⁹Biddle (2021, p. 103).

of territorial control, and second-wave scholarship, which innovated quantitative approaches to measuring control, the books we review offer a variety of creative, multi-method designs for studying territorial control. Notably, these designs allow for combining rich, qualitative insights derived from ethnography and interviews with detailed, empirical microdata from governments, journalists, humanitarians, area experts, and civilians. These mixed methods approaches harness specific advantages of qualitative and quantitative designs to overcome inferential limitations of either type of design used in isolation. Methodologically diverse approaches are also better-tailored to illuminate the more nuanced conceptualizations of control developed in third-wave scholarship. For instance, moving away from two-actor models requires measurement techniques that capture granular variation in combatant presence and behavior. Thus, the authors whose work we review develop new strategies to understand not only the extent of control, but also its depth. These multi-method strategies critical for studying how territorial authority is influenced by and itself shapes sociopolitical dynamics.

For instance, Daly and Idler offer two examples of careful, multi-method empirical strategies. Both authors specifically combine traditional quantitative tools, like administrative microdata and surveys, with in-depth fieldwork, interviews, and participant observation to understand how control shapes violence, governance, and civilian welfare. Daly notably uses qualitative interviews to illuminate key puzzles that emerge from her analyses of surveys of former combatants. Combining qualitative and quantitative tools in this fashion enables her to understand network ties between heterogeneous Colombian localities. While most previous quantitative studies treat control as a fixed characteristic of specific communities, Daly's measurement strategy recognizes that armed groups are mobile units that influence areas beyond those where they maintain immediate presence. Her multi-method approach offers a new strategy for understanding conflict spillovers between municipalities.¹²⁰

Idler leverages a similarly diverse set of tools to examine trends in armed group con-

¹²⁰Daly (2016, p. 74-75).

trol, combining participant observation, interviews, and social cartography. To develop a geographically-rich portrait of armed group operations in Colombia, she focuses on strategically important areas, such as borderlands. During fieldwork in these communities, Idler kept track of innovative indicators of combatant control, like armed group graffiti, a new, quantifiable metric of influence. Even more interestingly, Idler offers a transformative framework for probing qualitative insights derived from interviews by highlighting the inferential value of non-verbal cues. While most qualitative researchers focus on the verbal content of their interviewees' responses, Idler emphasizes the value of interpreting "speech mode (e.g., whispering), gestures, [and] observed power dynamics" during interviews.¹²¹ As she cogently recounts, "nonverbal signals such as lowering one's voice or nervous gazes indicate mistrust and fear and thus capture a broader spectrum of citizen security impacts than verbal data alone would do."¹²² Using multiple forms of qualitative evidence, then, can help illuminate heretofore neglected effects of territorial control on civilian welfare and perceptions.

Another promising empirical strategy Idler proposes is to leverage data missingness to understand dynamics of territorial control. For second-wave scholars, an impetus for methodological innovation was the fact that the "field suffers from a shortage of data that vary subnationally and temporally."¹²³ Given inherent challenges of data collection in conflictaffected places, most quantitative data on control are inevitably patchy and incomplete.¹²⁴ Idler identifies inferential value in this data missingness, since the inability to observe certain phenomena is itself informative. For example, "access denial to a fieldwork site in one specific moment, but not another; the absence of observable measures of insecurity, such as homicides; and the lack of information outflow from a particular territory" can provide

¹²¹Idler (2019, p. 345)

 $^{^{122}}$ Idler (2019, p. 345)

¹²³Anders (2020, p. 703).

 $^{^{124}}$ Reeder (2018).

strong evidence of territorial control by armed actors.¹²⁵ BDQ implicitly employ a similar strategy, arguing scholars can learn about shifts in control by observing anomalous patterns in the day-to-day functioning of institutions, social networks, and economic activity.¹²⁶

Finally, Jentzsch also leverages a novel combination of multi-method tools, including process tracing, oral histories, and archival government data on violence, recruitment, and belligerent presence. The most notable contribution of this approach is that Jentzsch uses contemporaneous administrative microdata produced by actors during the war to crossvalidate information derived from interviews conducted long after the Mozambican conflict subsided. One of the most notable drawbacks of using oral histories and ex-post interviews to reconstruct accounts of wartime control is the fallibility of human memory. When interviewed years or decades after conflict, respondents recollections of specific details about territorial control are likely to be imperfect. Jentzsch uses detailed (though subjective) wartime records to help cross-check inferences derived from interviews.¹²⁷ Future scholars should employ similar approaches to help overcome inferential hurdles associated with both qualitative and quantitative measurement strategies.

4.2 Diverse Outcomes and Populations

Another way third-wave literature, and especially the reviewed books, advance the empirical study of territorial control is by considering diverse outcomes and populations affected by control. Overwhelmingly, first- and second-wave scholarship focused on three major dependent variables impacted by territorial control: (1) conflict outcomes (e.g., victory); (2) civilian collaboration and victimization; and (3) recruitment.¹²⁸ While obviously important, sole focus on these outcomes hinders our understanding of the broader mosaic of conflict

¹²⁵Idler (2019, p. 345).

¹²⁶Baczko, Dorronsoro and Quesnay (2018, p. 240-243).

¹²⁷Jentzsch (2022, p. 28, 94).

¹²⁸Tse-tung (1989); Kalyvas (2006); Weinstein (2006).

processes and development phenomena affected by territorial control. The books reviewed here open new ground by turning attention to the consequences of territorial control for governance, socioeconomic life, and the environment. Authors of these works also cast new light on understudied populations, like women and indigenous people, who are uniquely affected by combatant control.

At the macrolevel, the books we review offer new insight into how territorial control affects conflict outcomes by illuminating how control impacts durability of and relationships between armed groups. For example, Daly and Idler highlight important impacts of territorial authority on patterns of remilitarization and cooperation between belligerent parties. While large literatures in conflict studies examine the resilience of and relationships between armed actors, connecting these literatures with detailed theories of control helps bridge important gaps. A major implication of Daly's work is that wartime territorial control bears on conflict recurrence. Only by appreciating how control affects intra- and inter-group politics, can we discern optimal peacebuilding strategies that prevent the violent reactivation of defeated and demobilized factions. Similarly, a conclusion Idler develops is that territorial control bears crucially on alliances between combatants in multiparty conflicts. Heterogeneous armed factions leverage territorial control to organize diverse relationships with one another, and these relationships shape their strategies of violence, governance, and extraction. Consequently, it is important to look beyond blunt outcomes like victory; rather, patterns of interaction between belligerent parties may be the most consequential outcome of territorial control.

At the microlevel, the reviewed books generate new insights on tactics and governance. In this regard, these books reinvigorate Mao and Che's classical first-wave scholarship. For instance, Biddle offers fresh perspective on how territorial control shapes the technology of violence combatants employ in war. Apart from identifying a host of novel metrics to characterize belligerents' tactical repertoires, he presents a new interpretation for Mao's classical

insight about stages of guerrilla warfare. Biddle shows, as Mao suggests, that insurgents' tactics vary starkly, and that they often initially forgo territorial control. Yet, where as Mao attributed this choice to military necessity, Biddle highlights the importance of internal politics as well. Non-state armed groups may each we control and opt for Fabian tactics both because they lack resources required to establish control and implement mid-spectrum methods (as Mao argues), and because they lack the political infrastructure needed to implement more sophisticated tactics.¹²⁹ On the related question of governance, BDQ, Idler, and Jentzsch all provide fresh insights into how territorial control shapes the nature and extent of services combatants offer. For instance, BDQ show how administration and governance reinforce control, particularly in the immediate aftermath of territorial conquest. Upon seizing new cities, insurgents needed to establish effective civil institutions to generate public goodwill; often, this required coopting the existing administrative bureaucracy.¹³⁰ While previous literature recognizes the importance of governance for incentivizing civilian informing and compliance, Idler and Jentzsch extend the focus to understand welfare implications of rebel governance. Idler in particular reveals how control and governance affect household finances, social norms, economic productivity, and investment.¹³¹ Jentzsch similarly underscores how in zones of contested control, the absence of effective service provision by any party spurred famine, while in militia-controlled "peace zones," food production and consumption flourished.¹³²

Finally, the books we review open new avenues for inquiry into how dynamics of territorial control affect diverse populations overlooked in previous research. In particular, authors of the reviewed books highlight unique consequences of control for women, children, eth-

 $^{^{129}}$ Biddle (2021).

¹³⁰Baczko, Dorronsoro and Quesnay (2018, p. 128-129).

 $^{^{131}}$ Idler (2019, p. 58).

¹³²Jentzsch (2022, p. 115-116).

noreligious minorities, and indigenous people. Shedding light on these previously neglected populations is crucial for understanding the full consequences of territorial control and violence during civil wars. Several examples bear mentioning to underscore this point. For instance, Idler identifies important gender-based variation in perceptions of control across war-affected communities in Colombia. Notably, women perceive rebel-held communities as systematically less secure even when objective measures show security improving.¹³³ BDQ also underscore different reactions of ethnic minorities in Iraq to territorial conquest by ISIS.¹³⁴ In Colombia, indigenous people and the environment bear disproportionate negative consequences of insurgent control, which typically spurs deforestation and anti-indigenous repression.¹³⁵ Studying how diverse and marginalized social groups respond to control, then, helps illuminate important and unique behavioral responses.

5 Future Research

To build on promising conceptual and empirical developments of the books we review and third-wave scholarship more broadly, we outline several important directions for future work on territorial control. We identify three major priorities for future research. First, progress can be made in defining control in dynamic conflicts. Second, research can better incorporate the changing information environment, given technological developments of the digital era. Third, more work is needed on the political economy of territorial control, with particular need for systematic accounts of how control affects welfare, development, and marginalized populations. Third-wave scholarship promises progress on all of these fronts.

5.1 Control in Dynamic Settings

As noted above, the works we review make important advances in studying control during

 $^{^{133}}$ Idler (2019, p. 141-142).

¹³⁴Baczko, Dorronsoro and Quesnay (2018, p. 176).

¹³⁵Daly (2016); Prem, Saavedra and Vargas (2020).

complex, multiparty conflicts. However, current work still focuses on identifying and measuring control at specific snapshots in time across large territorial units, failing to capture marginal and incremental changes in control. For instance, while scholars have long known that territorial authority can vary between daytime and nighttime, or across hyper-local geographies (e.g., blocks within neighborhoods), theorizing and measuring these granular changes has proven difficult. Conceptual approaches must be flexible enough to accommodate high-frequency changes in combatant tactics and influence. Theories are needed to better understand how fine-grained shifts in control affect civilian collaboration, discount factors, risk-taking, and migration patterns. On this front, some progress is being made. By theorizing and observing civilian behavior, scholars are beginning to develop compelling measures of control based on revealed preferences. Dube, Blumenstock, and Callen, for instance, track adherence to prayer times in Afghanistan by monitoring cell phone activity.¹³⁶ Changes in local religious adherence may be a valid indicator of control, given the Taliban's strict enforcement of Islamic practices in newly-seized territories. Similar inferences about control could be drawn from call detail or travel records if researchers can identify systematic patterns of civilian behavior.

Empirically, approaches to measurement are also needed that account for the possibility of very small-scale spatial and temporal shifts in control. If authority shifts at the villagelevel rather than the provincial-level, or across days rather than years, existing approaches to measurement will need to be refined to capture high-frequency change. Qualitative interviews with civilians—an approach pioneered in the books we review—offer a useful source of contemporaneous information on control, but there remain two concerns. First, recollections of control may be deliberately or subconsciously falsified, depending on the preferences and perceptions of interviewees and their experiences of conflict. Idler describes how memories

¹³⁶Dube, Blumenstock and Callen (2022).

of violence can be sufficient for civilians to self-censor.¹³⁷ Second, civilians in combatantcontrolled areas might face retributive violence for sharing information on control with researchers. Ethical considerations should be paramount for scholars using ethnographic methods to understand control. At the same time, scholars should be attentive to the subjective nature of interviews, and should weigh the slant or bias of informants. Technological innovations in audio processing may allow for quantification of important non-verbal cues from recorded interviews, such as shifts in tone, which might also help researchers understand the distribution and consequences of territorial control in interviewees' communities.

Although qualitative insights remain central for understanding the consequences of control, new measures should be developed to sidestep the challenges of measuring control based on civilians' recollections. In the books we review, authors suggest a number of promising innovations, such as using physical markers of control like graffiti to understand local combatant influence, or assessing control by studying where survey enumeration is possible.¹³⁸ Social media can also be monitored for information on control, and may allow scholars to detect changes across small temporal scales. Research on criminal governance and control, which varies at the street- and hour-level within urban neighborhoods, represents a promising development in this vein.¹³⁹ Another promising approach to measurement could leverage humanitarian actors, who often possess excellent, detailed information on humanitarian access constraints. For example, World Food Programme logisticians interested in ensuring smooth aid delivery produced detailed, village-level maps of territorial control in Afghanistan based on information from truck drivers in their distribution network (Figure B-1).

Finally, future research must grapple with an inherent aggregation issue in measuring control: what is the appropriate spatial and temporal scale at which control should be tracked?

 $^{^{137}}$ Idler (2019, p. 114).

¹³⁸Idler (2019, p. 114).

 $^{^{139}}$ Osorio and Beltran (2020); Barnes (2022).

Spatially, should we focus on points (e.g., households, blocks), roads and infrastructure sites, or higher-order administrative units like provinces? Focusing on the former allows scholars to consider microlevel shifts, but risks a loss of generality; focusing on the latter may help scholars understand politically-relevant shifts in territorial control, but necessarily ignores microlevel variation that matters for civilian welfare. Temporally, aggregation, such as to the annual level, masks incremental change, which might lead scholars and policymakers to overestimate the extent of territorial consolidation. Ultimately, determining the appropriate level of aggregation requires contextualized knowledge of the setting under study and the goals of the analysis. Researchers should be sure to justify their choices on this front.

5.2 Control and Information in the Digital Age

A second major avenue for future research concerns ICT, which has opened new digital terrain and transformed the prospects for physical territorial control during wars. Even in fragile, conflicted-affected countries, rates of mobile and internet penetration are high. Consequently, digital spaces have become a new extension of the battlefield. Online terrain is important for armed actors' efforts to govern and coerce civilians, distribute propaganda, gather battlefield-relevant information, and recruit.¹⁴⁰ Third-wave scholars should focus on understanding whether and how models of territorial control generalize to digital spaces.

One notable challenge concerns the ways ICT can be leveraged for civilian informing. Governments make widespread use of mobile tiplines to solicit information from civilians living in contested and insurgent-controlled communities.¹⁴¹ In response, militants may seek to disable or restrict internet access by controlling critical network infrastructure. However, given the centrality of connectivity for socioeconomic life, the political costs of impeding ICT access are high, making this option untenable for groups interested in winning civil-

¹⁴⁰Berman, Felter and Shapiro (2018).

¹⁴¹Shaver and Shapiro (2021).

ian support. Alternatively, belligerent parties can leverage mass communications to project social and economic control beyond spaces they physically occupy. Typically, ICT-enabled influence operations take the form of propaganda, which armed groups wield to communicate key information about their ideologies, military operations, and recruitment.¹⁴² By orchestrating social media, internet, radio, and mobile information operations, belligerent parties can shape civilians' perceptions in areas controlled by rival actors. For instance, BDQ discuss how Syrian insurgents sought to propagandize their victories through text-message campaigns, creating a perception of invincibility that sapped military and civilian morale in government-controlled areas.¹⁴³

Another interesting avenue for research concerns control in digital spaces. Increasingly sophisticated cyber operations are conducted by both government and rebel actors. For instance, after ISIS built a substantial online propaganda and hacking unit, U.S. military planners undertook a cyber campaign to degrade ISIS' digital footprint.¹⁴⁴ The capacity of rebels to engage in online influence, and the capacity of governments to restrict or censor rebels' online communications, raises new questions about digital territorial control. If armed movements can build large, (potentially) transnational networks of online followers without needing to hold physical terrain, future conflicts are likely to witness a further decoupling of social and territorial control.

Another implication of this decoupling relates to surveillance. Classical accounts argue territorial control confers substantial information-gathering opportunities. With authority consolidated, belligerent parties can identify and punish defectors, collect information on rival factions, and assess civilian needs.¹⁴⁵ Digital technologies change how and where parties

¹⁴²Mitts, Phillips and Walter (2022).

¹⁴³Baczko, Dorronsoro and Quesnay (2018, p. 105).

¹⁴⁴Temple-Raston (2019).

¹⁴⁵Kalyvas (2006); Berman, Shapiro and Felter (2011).

can gather information, weakening the links between control and information. The capacity of governments, for example, to intercept rebels' electronic and mobile communications even those originating in base areas—blurs the distinction between government and rebelcontrolled regions by enabling sophisticated counterinsurgency operations within militant strongholds. Technological innovation, then, might lead scholars to develop conceptions of control tied more to telecommunications grids and online social networks than administrative boundaries. Moreover, in a world in which supply chains and troop movements in secure, rear areas are increasingly at risk from drone and satellite monitoring, territorial control may no longer necessarily lead to increasing combat capacity, as first-, second-, and third-wave accounts suggest.¹⁴⁶ Future work should consider new tactics of control that combatants innovate in response to technology-generated informational vulnerabilities.

A related challenge for actors that control territory is the tradeoff between tactical secrecy and public goods provision. Armed groups' clandestine activities, movements, and governance activities all face greater risks of exposure as a result of ICT proliferation. Yet ICT-enabled information flows may also facilitate service provision and aid delivery, for which controlling actors can claim credit. For instance, World Food Program aid deliveries in Afghanistan were tailored through ICT-enabled poverty mapping. Both government and Taliban forces generated civilian goodwill by allowing aid deliveries to villages they controlled; however, information WFP officials gathered on the distribution of territorial control across Afghanistan also represented a vulnerability of insurgents interested in deepening and expanding their influence. How combatants navigate tradeoffs between secrecy and governance warrants particular attention in future.

5.3 Political Economy of Territorial Control

The third key avenue for future research concerns the political economy of territorial con-

¹⁴⁶Taber (1965); Kalyvas (2006); Biddle (2021).

trol. Specifically, comprehensive accounts are needed to understand the social and economic causes and consequences of granular changes in control. As new measurement approaches hone our ability to measure shifts in authority at small geographic and temporal scales, researchers should move beyond macrolevel explanations developed in prior literature. The books reviewed here offer a number of promising insights into the economic and social roots of microlevel control, as well as to the consequences of territorial consolidation for civilian life. Because the effects of territorial control on behavior and welfare are likely to be heterogeneous across population sub-groups (e.g., ethnicity, gender), future research should devote particular attention to how fine-grained variation in territorial authority impacts marginalized people.

One promising avenue of inquiry for understanding shifts in territorial control concerns the effect of economic shocks. A well-developed literature argues shocks—often stemming from commodity price changes—shape civil conflict in key ways. Rents may fund combat and statebuilding, and shape belligerents' tactics and recruitment.¹⁴⁷ Authors of the books reviewed here offer ample evidence that patterns of territorial control are shaped by considerations about the location of productive assets.¹⁴⁸ Yet, endogenous economic production in resource-endowed areas gives us little leverage over the question of how economic forces shape strategic decisions about territorial conquest during war. Future work could leverage exogenous shocks to production and extraction to understand how endogenous economic rents shape territorial influence and authority.

The link between rents and control also hinges on how revenue from production flows to combatant parties. Uneven patterns of legibility, such as spatial variation in informationgathering by tax authorities, create incentives to control some areas over others. Legibility is likely to hinge on socioeconomic control, and not merely territorial presence. Hence,

¹⁴⁷Weinstein (2006); Sonin and Wright (2024).

¹⁴⁸Daly (2016); Baczko, Dorronsoro and Quesnay (2018); Idler (2019).

scholars should consider how territorial control affects the ability of combatants and civilians to engage in labor, production, and extraction. Scholars should also develop richer theories linking territorial control to the structure of markets. For example, conflict-related smuggling bears substantial distributional consequences. By upending local trade networks, war-related black markets may outlast conflicts that produce them. Understanding the developmental consequences of territorial control requires new, detailed theories about the ways control shapes economic activities, markets, and civilians' economic decisionmaking.

Finally, while authors of the books we review make considerable progress in identifying how territorial control affects civilian welfare, more work is needed to understand the full scope of consequences changes in territorial control have for civilians' lives, including their health, education, happiness, and political engagement.¹⁴⁹ To the extent territorial consolidation is associated with more extensive governance activities, consolidated control might promote development and well-being relative to stalemated or contested control. Yet, firmer territorial control might also be associated with coercion, displacement, and restrictions on civilian mobility and livelihood activities. In this case, territorial control would correlate with reduced civilian welfare. More broadly, as Idler's work suggests, the consequences of changing control are likely to fall differently on different segments of the civilian population. Women, children, and minoritized (e.g., indigenous) people, are especially likely to bear negative consequences as a result of their weaker social position.¹⁵⁰ For instance, ISIS fighters imposed particularly severe, ideologically-motivated restrictions on women, ethnic minorities, and other marginalized groups in areas it controlled.¹⁵¹ Quantitative and qualitative

 $^{^{149}}$ Stoelinga (2022); Lilja et al. (2024).

¹⁵⁰Idler (2019, p. 19, 141-142).

¹⁵¹Baczko, Dorronsoro and Quesnay (2018, p. 207-212).

work could illuminate variation in how territorial control affects the most vulnerable.

6 Conclusion

Researchers, practitioners, and combatants have long sought to understand how territorial control shapes the conduct and outcomes of civil wars. In particular, how armed actors take, hold, and govern territory is a question with important academic and policy implications. Because territorial control affects political, social, and economic life, as well as major conflict processes, it represents a key focus of interdisciplinary scholarship in political science, economics, history, and more. This article reviews five notable, recent books, which push forward the research program on control by making important progress in conceptualization and measurement. Conceptually, these books develop models of control for multiparty wars, cast light on important non-territorial objects of control, like populations and resources, and generate fresh insights into the social determinants and consequences of territorial consolidation by combatant parties. Methodologically, the studies reviewed here yield novel, mixed methods approaches for measuring territorial control. Further, these books underscore the importance of dynamic, contextually-informed measurement approaches, and deepen our understanding of the ways control affects heretofore neglected outcomes and populations. If researchers leverage these advances to tackle some of the new and enduring questions we highlight here, significant progress will continue to be made on understanding the causes and consequences of territorial control during civil wars.

References

- Anders, Therese. 2020. "Territorial control in civil wars: Theory and measurement using machine learning." Journal of Peace Research 57(6):701–714.
- Aponte González, Andrés F., Daniel Hirschel-Burns and Andres D. Uribe. 2023. "Contestation, Governance, and the Production of Violence Against Civilians: Coercive Political Order in Rural Colombia." *Journal of Conflict Resolution* pp. 1–26.

- Arjona, Ana. 2016. *Rebelocracy: Social Order in the Colombian Civil War*. Cambridge University Press.
- Asal, Victor and Amira Jadoon. 2020. "When women fight: unemployment, territorial control and the prevalence of female combatants in insurgent organizations." Dynamics of Asymmetric Conflict 13(3):258–281.
- Baczko, Adam, Gilles Dorronsoro and Arthur Quesnay. 2018. Civil War in Syria: Mobilization and Competing Social Orders. Cambridge University Press.
- Bahiss, Ibraheem, Ashley Jackson, Leigh Mayhew and Florian Weigand. 2022. "Rethinking armed group control: Towards a new conceptual framework." *Centre for the Study of Armed Groups* pp. 1–53.
- Balcells, Laia. 2010. "Rivalry and Revenge: Violence against Civilians in Conventional Civil Wars." International Studies Quarterly 54(2):291–313.
- Barnes, Nicholas. 2022. "The Logic of Criminal Territorial Control: Military Intervention in Rio de Janeiro." *Comparative Political Studies* 55(5):789–831.
- Berg, Louis-Alexandre and Marlon Carranza. 2018. "Organized criminal violence and territorial control: Evidence from northern Honduras." Journal of Peace Research 55(5):566–581.
- Berman, Eli, Jacob N. Shapiro and Joseph H. Felter. 2011. "Can Hearts and Minds Be Bought? The Economics of Counterinsurgency in Iraq." Journal of Political Economy 119(4):766–819.
- Berman, Eli, Joseph H. Felter and Jacob N. Shapiro. 2018. Small Wars, Big Data: The Information Revolution in Modern Conflict. Princeton University Press.
- Bhavnani, Ravi, Dan Miodownik and Hyun Jin Choi. 2011. "Three Two Tango: Territorial Control and Selective Violence in Israel, the West Bank, and Gaza." *Journal of Conflict Resolution* 55(1):133–158.
- Biddle, Stephen. 2021. Nonstate Warfare: The Military Methods of Guerillas, Warlords, and Militias. Princeton University Press.
- Blair, Christopher W. 2023. "The Fortification Dilemma: Border Control and Rebel Violence." American Journal of Political Science pp. 1–20.
- Blair, Christopher W. 2024. "Border Fortification and Legibility: Evidence from Afghanistan." *American Journal of Political Science* pp. 1–21.
- Blair, Christopher W., Erica Chenoweth, Michael C. Horowitz, Evan Perkoski and Philip B.K. Potter. 2022. "Honor Among Thieves: Understanding Rhetorical and Material Cooperation Among Violent Nonstate Actors." *International Organization* 76(1):164–203.

- Blair, Christopher W., Michael C. Horowitz and Philip B.K. Potter. 2022. "Leadership Targeting and Militant Alliance Breakdown." *Journal of Politics* 84(2):923–943.
- Blair, Christopher W. and Philip B.K. Potter. 2023. "The Strategic Logic of Large Militant Alliance Networks." *Journal of Global Security Studies* 8(1):1–21.
- Breslawski, Jori. 2021. "The Social Terrain of Rebel Held Territory." Journal of Conflict Resolution 65(2-3):453–479.
- Buhaug, Halvard and Jan Ketil Rød. 2006. "Local determinants of African civil wars, 1970– 2001." Political Geography 25(3):335–355.
- Buhaug, Halvard and Scott Gates. 2002. "The Geography of Civil War." Journal of Peace Research 39(4):417–433.
- Ch, Rafael, Jacob Shapiro, Abbey Steele and Juan F. Vargas. 2018. "Endogenous Taxation in Ongoing Internal Conflict: The Case of Colombia." American Political Science Review 112(4):996–1015.
- Ch, Rafael, Juan F. Vargas and Michael Weintraub. 2019. "Territorial Control and Economic Growth: Quasi-Experimental Evidence from the Colombian Insurgency." Unpublished Manuscript pp. 1–50.
- Crost, Benjamin, Joseph Felter and Patrick Johnston. 2014. "Aid Under Fire: Development Projects and Civil Conflict." *American Economic Review* 104(6):1833–1856.
- Crost, Benjamin and Joseph H. Felter. 2020. "Extractive resource policy and civil conflict: Evidence from mining reform in the Philippines." *Journal of Development Economics* 144(102443):1–15.
- Cunningham, David E. 2014. Barriers to peace in civil war. Cambridge University Press.
- Daly, Sarah Zukerman. 2016. Organized Violence After Civil War: The Geography of Recruitment in Latin America. Cambridge University Press.
- de la Calle, Luis and Ignacio Sánchez-Cuenca. 2012. "Rebels without a Territory: An Analysis of Nonterritorial Conflicts in the World, 1970–1997." *Journal of Conflict Resolution* 56(4):580–603.
- de la Calle, Luis and Ignacio Sánchez-Cuenca. 2015. "How Armed Groups Fight: Territorial Control and Violent Tactics." *Studies in Conflict & Terrorism* 38(10):795–813.
- Dube, Oeindrila, Joshua Blumenstock and Michael Callen. 2022. "Measuring Religion from Behavior: Climate Shocks and Religious Adherence in Afghanistan." National Bureau of Economic Research 30694:1–50.

- Dugan, Laura, Gary LaFree, Luis de la Calle, Ignacio Sánchez-Cuenca, Victor Asal, Michael G. Findley and Joseph K. Young. 2012. "Killing Civilians or Holding Territory? How to Think about Terrorism." *International Studies Review* 14(3):475–497.
- Fortou, Jose Antonio, Sandra Lillian Johansson and Juan Carlos Muñoz Mora. 2023. "Control, Dispute, and Concentration of Land During Civil War: Evidence from Colombia." *International Interactions* 49(2):201–236.
- Galula, David. 1964. Counter-Insurgency Warfare: Theory and Practice. Praeger.
- Gohdes, Anita R. 2020. "Repression Technology: Internet Accessibility and State Violence." American Journal of Political Science 64(3):488–503.
- Guevara, Che. 1998. Guerrilla Warfare. University of Nebraska Press.
- Haass, Felix. 2021. "Insurgency and Ivory: The Territorial Origins of Illicit Resource Extraction in Civil Conflicts." *Comparative Political Studies* 54(8):1327–1361.
- Haass, Felix and Martin Ottmann. 2022. "The Effect of Wartime Legacies on Electoral Mobilization after Civil War." The Journal of Politics 84(3):1322–1336.
- Hatlebakk, Magnus. 2010. "Maoist Control and Level of Civil Conflict in Nepal." South Asia Economic Journal 11(1):99–110.
- Humphreys, Macartan and Jeremy M. Weinstein. 2006. "Handling and Manhandling Civilians in Civil War." American Political Science Review 100(3):429–447.
- Ibañez, Ana María, Ana Arjona, Julián Arteaga, Juan C. Cárdenas and Patricia Justino. 2023. "The Long-Term Economic Legacies of Rebel Rule in Civil War: Micro Evidence From Colombia." *Journal of Conflict Resolution* pp. 1–31.
- Idler, Annette. 2019. Borderland Battles: Violence, Crime, and Governance at the Edges of Colombia's War. Oxford University Press.
- Ishiyama, John and Michael Widmeier. 2013. "Territorial Control, Levels of Violence, and the Electoral Performance of Former Rebel Political Parties After Civil Wars." *Civil Wars* 15(4):531–550.
- Jentzsch, Corinna. 2022. Violent Resistance: Militia Formation and Civil War in Mozambique. Cambridge University Press.
- Jentzsch, Corinna and Abbey Steele. 2023. "Social Control in Civil Wars." *Civil Wars* 25(2):452–471.
- Johnston, Patrick. 2008. "The Geography of Insurgent Organization and its Consequences for Civil Wars: Evidence from Liberia and Sierra Leone." *Security Studies* 17(1):107–137.

Kalyvas, Stathis N. 2006. The Logic of Violence in Civil War. Cambridge University Press.

- Kalyvas, Stathis N. and Laia Balcells. 2010. "International System and Technologies of Rebellion: How the End of the Cold War Shaped Internal Conflict." American Political Science Review 104(3):415–429.
- Kalyvas, Stathis N. and Matthew Adam Kocher. 2009. "The Dynamics of Violence in Vietnam: An Analysis of the Hamlet Evaluation System (HES)." *Journal of Peace Research* 46(3):335–355.
- Kasfir, Nelson. 2005. "Guerrillas and civilian participation: the National Resistance Army in Uganda, 1981–86." Journal of Modern African Studies 43(2):271–296.
- Kent, Robert B. 1993. "Geographical Dimensions of the Shining Path Insurgency in Peru." Geographical Review 83(4):441–454.
- Kikuta, Kyosuke. 2020. "The Environmental Costs of Civil War: A Synthetic Comparison of the Congolese Forests with and without the Great War of Africa." *Journal of Politics* 82(4):1243–1255.
- Kikuta, Kyosuke. 2022. "A new geography of civil war: a machine learning approach to measuring the zones of armed conflicts." *Political Science Research and Methods* 10(1):97–115.
- Kilcullen, David. 2010. Counterinsurgency. Oxford University Press.
- Kocher, Matthew Adam, Thomas B Pepinsky and Stathis N. Kalyvas. 2011. "Aerial Bombing and Counterinsurgency in the Vietnam War." *American Journal of Political Science* 55(2):201–218.
- Kubota, Yuichi. 2011. "Territorial Control and Recruitment in the Cambodian Civil War, 1970–75: Case Studies in Battambang Province." Asian Security 7(1):1–26.
- Leites, Nathan and Charles Wolf Jr. 1970. Rebellion and Authority: An Analytic Essay on Insurgent Conflicts. Markham Press.
- Lewis, Janet I. 2020. How Insurgency Begins: Rebel Group Formation in Uganda and Beyond. Cornell University Press.
- Li, Xi, Rui Zhang, Chengquan Huang and Deren Li. 2015. "Detecting 2014 Northern Iraq Insurgency using night-time light imagery." *International Journal of Remote Sensing* 36(13):3446–3458.
- Lichtenheld, Adam G. 2020. "Explaining Population Displacement Strategies in Civil Wars: A Cross-National Analysis." *International Organization* 74(2):253–294.
- Lilja, Jannie, Giulia Ferrari, José Alvarado, Laura-Alina Fabich, Gulzhan Asylbek Kyzy, Leah Kenny and Mazeda Hossain. 2024. "Territorial control by non-state armed groups and gendered access to healthcare in conflict using a new complex adaptive systems framework." *Humanities & Social Sciences Communications* 11(855):1–18.

- Liu, Shelley X. 2022. "Control, Coercion, and Cooptation: How Rebels Govern after Winning Civil War." World Politics 74(1):37–76.
- Loyle, Cyanne E., Kathleen Gallagher Cunningham, Reyko Huang and Danielle F. Jung. 2023. "New Directions in Rebel Governance Research." *Perspectives on Politics* 21(1):264– 276.
- Matanock, Aila M. and Miguel García-Sánchez. 2018. "Does Counterinsurgent Success Match Social Support? Evidence from a Survey Experiment in Colombia." *The Journal of Politics* 80(3):800–814.
- McColl, Robert W. 1967. "A Political Geography of Revolution: China, Vietnam, and Thailand." Journal of Conflict Resolution 11(2):153–167.
- McColl, Robert W. 1969. "The Insurgent State: Territorial Bases of Revolution." Annals of the Association of American Geographers 59(4):613–631.
- Mitts, Tamar, Gregoire Phillips and Barbara F. Walter. 2022. "Studying the Impact of ISIS Propaganda Campaigns." *Journal of Politics* 84(2):1220–1225.
- Müller-Crepon, Carl, Philipp Hunziker and Lars-Erik Cederman. 2021. "Roads to Rule, Roads to Rebel: Relational State Capacity and Conflict in Africa." *Journal of Conflict Resolution* 65(2-3):563–590.
- Opper, Marc. 2020. *People's Wars in China, Malaya, and Vietnam*. University of Michigan Press.
- Osorio, Javier and Alejandro Beltran. 2020. "Enhancing the Detection of Criminal Organizations in Mexico using ML and NLP." International Joint Conference on Neural Networks (IJCNN) pp. 1–7.
- Oswald, Christian, Melanie L. Sauter, Sigrid Weber and Rob Williams. 2022. "Under the Roof of Rebels: Civilian Targeting After Territorial Takeover in Sierra Leone." *International Studies Quarterly* 64(2):295–305.
- Petersson, Emil. 2023. "Airpower and territorial control: Unpacking the NATO intervention in Libya." Conflict Management and Peace Science pp. 1–24.
- Piazza, James A. and Michael J. Soules. 2021. "Terror after the Caliphate: The Effect of ISIS Loss of Control over Population Centers on Patterns of Global Terrorism." Security Studies 30(1):107–135.
- Prem, Mounu, Santiago Saavedra and Juan F. Vargas. 2020. "End-of-conflict deforestation: Evidence from Colombia's peace agreement." World Development 129:1–11.
- Race, Jeffrey. 1973. War Comes to Long An: Revolutionary Conflict in a Vietnamese Province. University of California Press.

- Reeder, Bryce W. 2018. "The Political Geography of Rebellion: Using Event Data to Identify Insurgent Territory, Preferences, and Relocation Patterns." *International Studies Quarterly* 62(3):696–707.
- Rubin, Michael A. 2020. "Rebel Territorial Control and Civilian Collective Action in Civil War: Evidence from the Communist Insurgency in the Philippines." Journal of Conflict Resolution 64(2-3):459–489.
- Rueda, Miguel R. 2017. "Popular Support, Violence, and Territorial Control in Civil War." Journal of Conflict Resolution 61(8):1626–1652.
- Scaff, Alvin H. 1955. The Philippine Answer to Communism. Stanford University Press.
- Schouten, Peer. 2022. Roadblock Politics: The Origins of Violence in Central Africa. Cambridge University Press.
- Schutte, Sebastian. 2017. "Geographic determinants of indiscriminate violence in civil wars." Conflict Management and Peace Science 34(4):380–405.
- Sexton, Renard. 2016. "Aid as a Tool against Insurgency: Evidence from Contested and Controlled Territory in Afghanistan." *American Political Science Review* 110(4):731–749.
- Shaver, Andrew and Jacob N. Shapiro. 2021. "The Effect of Civilian Casualties on Wartime Informing: Evidence from the Iraq War." *Journal of Conflict Resolution* 65(7-8):1337– 1377.
- Shesterinina, Anastasia. 2021. Mobilizing in Uncertainty: Collective Identities and War in Abkhazia. Cornell University Press.
- Sonin, Konstantin and Austin L. Wright. 2024. "Rebel Capacity, Intelligence Gathering, and Combat Tactics." American Journal of Political Science 68(2):459–477.
- Staniland, Paul. 2012. "States, Insurgents, and Wartime Political Orders." Perspectives on Politics 10(2):243–264.
- Staniland, Paul. 2014. Networks of Rebellion: Explaining Insurgent Cohesion and Collapse. Cornell University Press.
- Staniland, Paul. 2021. Ordering Violence: Explaining Armed Group- State Relations from Conflict to Cooperation. Cornell University Press.
- Staniland, Paul. 2023. "The Evolution of Civil Wars Research: From Civil War to Political Violence." Civil Wars 25(2):187–207.
- Stewart, Megan A. 2021. Governing for Revolution: Social Transformation in Civil War. Cambridge University Press.

- Stewart, Megan A. and Yu-Ming Liou. 2017. "Do Good Borders Make Good Rebels? Territorial Control and Civilian Casualties." The Journal of Politics 79(1):284–301.
- Stoelinga, Nicole. 2022. "Education during conflict: the effect of territorial occupation by insurgents on schooling." Unpublished Manuscript pp. 1–50.
- Sánchez de la Sierra, Raúl. 2020. "On the Origins of the State: Stationary Bandits and Taxation in Eastern Congo." Journal of Political Economy 128:32–74.
- Taber, Robert. 1965. War of the Flea: A Study of Guerrilla Warfare Theory and Practice. Lyle Stuart.
- Tao, Ran, Daniel Strandow, Michael Findley, Jean-Claude Thill and Walsh James. 2016. "A hybrid approach to modeling territorial control in violent armed conflicts." *Transactions* in GIS 20(3):413–425.
- Temple-Raston, Dina. 2019. "How The U.S. Hacked ISIS." NPR.
- Tilly, Charles. 1978. From Mobilization to Revolution. Random House.
- Tse-tung, Mao. 1989. On Guerrilla Warfare. U.S. Marine Corps Combat Development Command.
- Wahman, Michael and Edward Goldring. 2020. "Pre-election violence and territorial control: Political dominance and subnational election violence in polarized African electoral systems." Journal of Peace Research 57(1):93–110.
- Waterman, Alex. 2023. "The shadow of 'the boys:' rebel governance without territorial control in Assam's ULFA insurgency." Small Wars & Insurgencies 34(1):279–304.
- Weidmann, Nils B. 2009. "Geography as Motivation and Opportunity Group Concentration and Ethnic Conflict." *Journal of Conflict Resolution* 53(4):526–543.
- Weinstein, Jeremy M. 2006. Inside Rebellion: The Politics of Insurgent Violence. Cambridge University Press.
- Whittlesey, Derwent. 1935. "The Impress of Effective Central Authority upon the Landscape." Annals of the Association of American Geographers 25(2):85–97.
- Wimmer, Andreas and Chris Miner. 2020. "The Strategic Logic of Ethnoterritorial Competition: Violence against Civilians in Africa's Civil Wars." Journal of Global Security Studies 5(3):389–407.
- Woldemariam, Michael. 2018. Insurgent Fragmentation in the Horn of Africa: Rebellion and its Discontents. Cambridge University Press.
- Wood, Elisabeth Jean. 2003. Insurgent Collective Action and Civil War in El Salvador. Cambridge University Press.

Supplementary Materials for Territorial Control in Civil Wars

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A Defining Territorial Control and Related Concepts

To help systematize definitions and concepts across waves of the literature on territorial control, we offer a summary of key definitions in Tables A-1 – A-2. First, Table A-1 we highlight key concepts and definitions offered by authors of the books we review. Then, in A-2, we identify and describe major concepts from prior literature on territorial control during civil wars.

Concept	Definition	Source
	"Armed actors with overlapping or contiguous zones of operation	
Regional Systems of Control	at the time of demobilization all of the actors with which [a group] shared territory or whose territory was adjacent."	Daly (2016, p. 99)
degional systems of Control	group] shared territory of whose territory was adjacent.	Daly (2010, p. 55)
	"[A]n economy of violence, relative values of capitals, and	
	relations between fields [(i.e., social spaces based on specific	
Social Order	practices and norms)] at varying degrees of institutionalization."	Baczko, Dorronsoro and Quesnay (2018, p. 17-18)
	"[T]he coexistence on the same national territory of competing	
Civil War	social orders engaged in a violent relationship."	Baczko, Dorronsoro and Quesnay (2018, p. 17-18)
	When a particular armed group takes control of a territory and	
Exclusive Territorial Control	actively works to explore armed groups, regardless of ideology.	Baczko, Dorronsoro and Quesnay (2018)
	The peaceful coexistence of several armed groups within a given territory, within which coexisting armed groups generate institutional structures to regulate each other's behavior and free fighters for	
Inclusive Territorial Control	territorial expansion. While the institutional structures is largely shared, military structures are separate.	Baczko, Dorronsoro and Quesnay (2018)
inclusive refrictional control	contestal expansion. While the institutional structure is largely shared, initially structures are separate.	Dacako, Dorronsoro and Quesnay (2010)
Non-State Order	"[P]atterns of behavior [and interaction] among violent non-state groups."	Idler (2019, p. 34)
	"[A] recursive relationship in which violent non-state groups provide public goods and	
	services—including the provision of security—and define the rules of appropriate behavior while	
Shadow Citizenship	people socially recognize the illicit authority, consent to these rules, and participate in shaping them."	Idler (2019, p. 59-60)
Social Control	Civilian compliance with, obedience towards, and internalization of rules established by an armed group.	Idler (2019, p. 126)
	"[A]n absolute unwillingness to defend ground via decisive engagement at any point in the theater; dispersed	
	operations with no local concentrations in excess of the theaterwide combatant density; insistence on concealment	
	obtained via intermingling with the civilian population; exclusive reliance on coercion rather than brute	
	force; and rejection of heavy weapons, even when available, in favor of light arms and	
Fabian Tactics	equipment more suitable to concealment among the population."	Biddle (2021, p. 12)
	"[A]n insistence on decisive engagement to defend or seize ground that	
	will not be voluntarily relinquished; local concentration to shoulder-to-shoulder	
	densities at a point of attack where ground is contested; use of uniformed forces on battlefields	
Napoleonic Tactics	removed from urban population centers; exclusive reliance on brute force rather than coercion."	Biddle (2021, p. 12)
Conflict Stakes	"[T]he absolute value of the perceived expected utility for the actor's senior leadership group of the war's potential outcomes."	Biddle (2021, p. 99)
	Willingness and capacity of an actor to "accept decisive engagement to contest [and hold] territory	
	whiningness and capacity of an actor to accept decisive engagement to context failed notify territory observed in the field via at least four denotata: the duration of firefights; the proximity of attackers to	
Territorial Control	defenders; the incidence of counterattack; the incidence of harassing fires and unattended minefields."	Biddle (2021, p. 317)
	"[A] situation where neither combatant is able to make noteworthy advances on the battlefield due to	
Stalemate	[A] situation where herener comparant is able to make noteworthy advances on the battleheid due to the strength of the opposing side, and neither side believes that the situation will improve in the near future."	Jentzsch (2022, p. 19)

Table A-1: Key Conceptual Definitions from the Books Reviewed

Table A-2: Key Conceptual Definitions from Other Extant Literature

Concept	Definition	Source	Wave
Effective Control	"[S]overeignty over an area of marked diversity [within which an actor] must exert more than nominal control over its area Security is one of the most valued products of effective central authority—the guarantee against molestation within the state and the assurance of resistance to invasion from without."	Whittlesey (1935, p. 85)	1^{st}
Guerrilla Base	"[A]n area, strategically located, in which the guerrillas can carry out their duties of training, self- preservation and development [Guerrilla] areas can be controlled by guerillas only while they actually physically occupy them."	Tse-tung (1989, p. 108-110)	1^{st}
Territorial Control	The ability to "ma[k]e and [enforce] laws, [collect] taxes, and [organize] the lives of the people in support of [an actor's cause]."	Scaff (1955, p. 31)	1 st
Territorial Control	"[A] strong base of operations Within this territory, measures of indoctrination of the inhabitants of the zone should be utilized; measures of quarantine should be taken against the irreconcilable enemies of the revolution; all the purely defensive measures, such as trenches, mines, and communications, should be perfected."	Guevara (1998, p. 17-18)	1 st
Base Area	"[A] territorial expression of the political ideals and programs of the rebels. In addition they provide essential elements for the success of the movement, i.e., safety, supplies, direction, and training."	McColl (1967, p. 153)	1^{st}
Balance of Forces	"[A] power relationship, that is, the relative ability of the contending forces to enforce their will on an opponent [A] compound of two distinct and independent concepts: a force ratio, or roughly the number of people on each side; and a power ratio, or the ratio of effectiveness of each side's operatives after taking into account the impact of power-augmenting factors."	Race (1973, p. 144-145)	2 nd
Complete Control	"[T]he domination of an area by superior military forces [and] the physical prevention of enemy movement in defined areas."	Race (1973, p. 152-153)	2 nd
Territorial Control	"[T]he probability that a certain event or class of events will not occur within a defined area within a defined period of time, for example 'the probability that the hamlet chief will not be assassinated within the boundaries of his hamlet during his term of office,' or 'the probability that there will be no movement of external hostile individuals within the hamlet area between the hours 1800 and 0600."	Race (1973, p. 277)	2 nd
Multiple Sovereignty	"A revolutionary situation begins when a government previously under the control of a single, sovereign polity becomes the object of effective, competing, mutually exclusive claims on the part of two or more distinct polities. It ends when a single sovereign polity regains control over the government The claims themselves do not amount to a revolutionary situation. The question is whether some significant part of the subject population honors the claim. The revolutionary moment arrives when previously acquiescent members of that population find themselves confonted with strictly incompatible demands from the government and from an alternative body claiming control over the government, or claiming to be the government and those previously acquiescent people obey the alternative body." "Consider first a situation in which in each period groups of different sizes encounter citizens in the same zone probabilistically. Here control can be taken as a measure of the likelihood with which a civilian encounters a given group Consider next a situation in which the result of different groups. Here the	Tilly (1978, p. 191-193)	2 nd
Territorial Control	relative frequency of contact with different groups can be taken as a measure of their control." "[T]he relative number of troops present in a given locality [T]he estimated	Humphreys and Weinstein (2006, p. 432)	2^{nd}
Territorial Dominance	size of the quasi-unit relative to the estimated total number of troops in the zone."	Humphreys and Weinstein (2006, p. 440)	2^{nd}
Territorial Segmentation	The division of territory into zones that are monopolistically controlled by rival actors.	Kalyvas (2006)	2^{nd}
Territorial Fragmentation	The division of territory into zones where the rivals' sovereignty overlaps.	Kalyvas (2006)	2^{nd}
Territorial Control	"Consider a distribution of the geographical space into five discrete zones of control, ranging from 1 to 5 Incumbents excretise full control in zone 1; they have destruyed most or all insurgent clandestine cells and are able to prevent the rebels from entering or operating with any effectiveness. The population has no access to them In adjacent zone 2, incumbents exercise secure but incomplete control; clandestine insurgent cells are still in operation and the rebels, present in the surrounding area, can make sporadic visits by night Conversely, insurgents maintain full control in zone 5 and secure but incomplete control in adjacent zone 4, often referred to as a 'semi-liberated area'. Zone 5 areas are sometimes known as 'base areas' or 'liberated areas'. There, rebels operate openly with minimum interference from government forces In zone 4 areas, insurgents enjoy prominence [h]owver, in those areas, they cannot prevent sporadic visits by incumbent forces and must contend with clandestine cells of informers What distinguishes zones of incomplete control (2 and 4) from zones of full control (1 and 5) is that in the former the population has access, alive menual, to both actors. This is not the case in the latter, where the sovereign has a monopoly of force on a daily basis and in pretty much unequivocal fashion. Zone 4 is not within the grasp of the incumbents, but it is within their reach—and the converse is true about insurgents and zone 2. Finally, there is an intermediate area, zone 3, where both actors enjoy equal levels of control These areas are usually described as places where the government rules by day and the relebs by night."	Kalyvas (2006, p. 196, 211-212)	2nd
Rebel Control	"[T]he rebel group has a monopoly on the use of force. It may be that the government can infiltrate the		9nd
System of Control	area, but the strongest player is the rebel group." "[A] normative system [perceived by a given population, and which provides] for resilient, full-spectrum control over violence, economic activity, and human security within that population's residential area [This system]gives people order and a sense of security where they sleep."	Weinstein (2006, p. 164) Kilcullen (2010, p. 152)	2 2nd
Rebel Control	"Rebel control does not exclude government forces; it implies that attempted rebel violence against those forces will succeed in causing damage. In contrast, attempted rebel violence in government-controlled areas fails to do harm."	Berman, Shapiro and Felter (2011, p. 775)	2 nd
Territorial Control	In structure, a transport in considered to be controlled by the government when it not only can exert effective influence but when its troops and administrators are also able to remain in the area both day and night. In constrast, in a zone considered to be of rebel control and absolute authority, state and there is nil and typical government functions such as the collection of taxes and conscripts, as well as counterinsurgent operations, are absent. Beyond the constraints of these two zones lic contested areas in which both government and rebel groups tend to absent. Beyond the constraints of these two zones lic contested areas in which beth government and rebel groups tend to hold senicontrolled territory and exercise only incomplete leverage."	Kubota (2011, p. 4)	2 nd
Territorial Control	"[C]ontrol requires at least having camps or bases within the country borders, where the insurgents store weapons and train recruits. At most, territorial control means that the insurgents replace the authority of the state and create a parallel state that timposes order, administers justice, and extracts rents from the population Territorial control means that the insurgents break the state's sourceignt your its own territory."	de la Calle and Sánchez-Cuenca (2012, p. 583)	2 nd
Territorial Control	"[T]he insurgents are able to set camps or bases, to establish roadblocks and eventually to rule over the local population."	Dugan et al. (2012, p. 481)	2nd
	"[S]overeignty—that is, the exclusion of enemy presence in the territory [I]nsurgent control [i]s a situation in which rebels can prevent operations by government forces day and night, as well as the government's		-
Territorial Control	performance of basic functions like collecting taxes."	Arjona (2016, p. 247)	2 nd
Territorial Control	"[T]he geographic region in which troops can reach and take action within a certain response or reaction time." "[A] belligerent's ability to move freely, access information and resources, and prevent its enemies' movement	Tao et al. (2016, p. 414)	2 nd
Territorial Control	and access in a particular place and time." "Political order here refers to the structure and distribution of authority between armed organizations:	Rubin (2020, p. 463)	2"
Armed Order	ronucal order here refers to the structure and distribution of authority between armed organizations: who rules, where, and through what understandings."	Staniland (2012, p. 247)	3^{rd}

B Approaches to Measuring Territorial Control

In Table B-1 we characterize a variety of common approaches used for measuring territorial control in both quantitative and qualitative traditions. We briefly describe these approaches, then indicate whether they are employed in the books we review. Finally, we offer other examples of these approaches in first-, second-, and third-wave scholarship.

Measurement Strategy	Type	Description	Reviewed Books	Other Examples
Event Data	Quantitative	Event data on violence and territorial losses and gains by combatant parties used to characterize control	Daly (2016); Biddle (2021)	Dugan et al. (2012); Tao et al. (2016); Ch et al. (2018) Matanock and Garcia-Sánchez (2018); Reeder (2018); Anders (2020) Oswald et al. (2022); Winner and Miner (2020); Hasse (2021) Haass and Ottmann (2022); Kikuta (2022); Welsh (2022)
Government Assessment	Mixed	Archival and contemporaneous records from official sources used to code territorial control by combatant parties	Daly (2016); Jentzsch (2022)	Race (1973); Hatlebakk (2010); Kocher, Pepinsky and Kalyvas (2011) Rubin (2020); Liu (2022)
Expert Assessment	Mixed	Experts from think tanks and monitoring groups compile open source reports used to code territorial control by combatant parties	Baczko, Dorronsoro and Quesnay (2018)	Ishiyama and Widmeier (2013); Gohdes (2020)
Humanitarian Assessment	Mixed	Internal reports from humanitarian actors deployed in the field used to code territorial control by combatant parties		Stoelinga (2022)
Enumerator Assessment	Quantitative	Enumerators deployed for research characterize the feasibility of sampling and fieldwork across administrative units	Idler (2019)	Wright (2024)
Academic Assessment	Quantitative	Academics use primary and secondary sources to code territorial control by combatant parties		de la Calle and Sánchez-Cuenca (2012); Stewart and Liou (2017) Asal and Jadoon (2020); Breslawski (2021); Stewart (2021)
Media Reports	Mixed	Press reports used to code territorial losses and gains by combatant parties	Baczko, Dorronsoro and Quesnay (2018) Jentzsch (2022)	Osorio and Beltran (2020); Piazza and Soules (2021); Petersson (2023)
Infrastructure Data	Mixed	Administrative data, interviews, and ethnography used to code infrastructure (e.g., bases), graffiti, and propaganda indicative of combatant presence	Daly (2016); ?); Biddle (2021)	Berman, Shapiro and Felter (2011); Sexton (2016) Müller-Crepon, Hunziker and Cederman (2021); Schouten (2022)
Election Data	Quantitative	Data on electoral participation and election outcomes used to characterize areas of combatant influence		de la Calle (2017); Wahman and Goldring (2020)
Other Geographic Data	Quantitative	Information on terrain features, ethnoreligious settlement patterns and combatants' claims used to characterize areas of combatant presence	Baczko, Dorronsoro and Quesnay (2018)	McColl (1967); Buhang and Gates (2002); Weidmann (2009) Bhavnani, Miodownik and Choi (2011); Schutte (2017) Carter, Shaver and Wright (2019); Holtermann (2019) Carter, Kaplan and Schultz (2022)
Surveys	Mixed	Questionnaires used to assess civilian and local elite beliefs about areas of combatant presence	Daly (2016)	Humphreys and Weinstein (2006); Arjona (2016); Ibañez et al. (2023)
Interviews and Focus Groups	Qualitative	Conversations used to assess civilian and local elite recollections about areas of combatant presence	Baczko, Dorronsoro and Quesnay (2018) Idler (2019); Jentzsch (2022)	Kalyvas (2006); Kubota (2011); Berg and Carranza (2018); Woldemariam (2018) Shesterinina (2021); Aponte González, Hirschel-Burns and Uribe (2023)
Ethnography and Social Cartography	Qualitative	Participant observation and map-making exercises to understand combatant presence and social control	Baczko, Dorronsoro and Quesnay (2018) Idler (2019)	Barnes (2022); Fortou, Johansson and Mora (2023)

Table B-1: Standard Approaches to Measuring Territorial Control

To further highlight how these approaches may yield different conclusions about the scope and nature of territorial control, we use data from Afghanistan reflecting a variety of the measurement strategies described in Table B-1. Specifically, in Figure B-1 we plot territorial control in Afghanistan as of May 2016 using data from contemporaneous government, expert, humanitarian, and enumerator assessments, along with event and geographic data. In the top left panel we plot district-level control based on event data (Anders, 2020) from the Significant Activities (SIGACTs) dataset, which represents a comprehensive, military-collected record of insurgent violence. In the top right panel we plot district-level control as assessed by U.S. government contractors. In the middle left panel we plot district-level control as assessed by independent experts from the Foundation for Defense of Democracies's Long War Journal using open source reporting. In the middle right panel we plot village-level control as assessed by World Food Programme (WFP) logisticians, who analyzed humanitarian access constraints to facilitate aid delivery. Gray areas in this panel are sparsely-populated. In the bottom left panel we plot district-level control as assessed by survey enumerators contracted by NATO, who made field visits to determine the feasibility of sampling each district. Finally, in the bottom right panel we plot control as proxied by ethnic settlement patterns, denoting highly Pashtun areas as more insurgent-influenced.

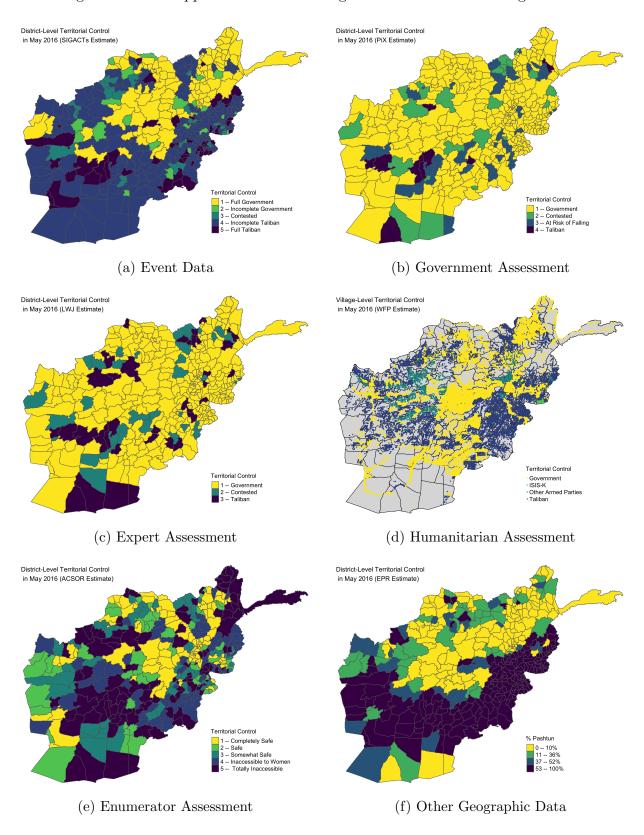


Figure B-1: Six Approaches to Measuring Territorial Control in Afghanistan

C Multiparty Conflict

The Militant Group Alliances and Relationships (MGAR) dataset (Blair et al., 2022; Blair, Horowitz and Potter, 2022) codes information on the universe of violent non-state actors, including terrorist and rebel groups. Using this data, we show that most countries face violent opposition from multiple militant groups. In the top panel of Figure C-1 we plot the share of countries facing no violent opposition from militants (no conflict), violent opposition from one militant group (two-party conflict), and violent opposition from two or more militant groups (multiparty conflict) in each year. In the bottom panel we plot the average number of militant groups in each country over time.

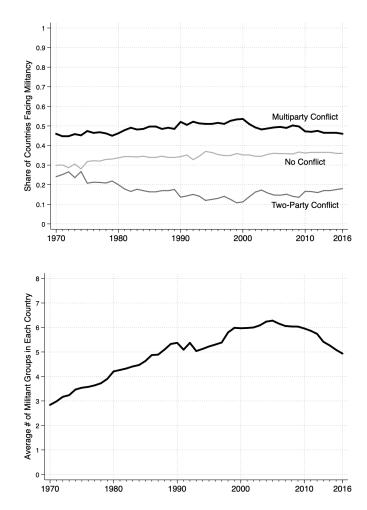


Figure C-1: Multiparty Civil War is Common

D Annotated Bibliography

Below we offer an annotated bibliography of other literature—apart from the reviewed books—on territorial control. Our annotated bibliography characterizes important conceptual and empirical innovations of some of the most-cited, extant political science work on control.

Whittlesey (1935)

- "Effective" control means a central authority maintains sovereignty over a marked area and its presence is more than nominal; Security is the most important product of effective control: "the guarantee against molestation within the state and the assurance of resistance to invasion from without." (85)
- Central authorities often try to establish uniform "cultural impress" across diverse landscapes (e.g., official buildings will all look alike in different regions).

McColl (1967)

- Base areas are "a territorial expression of the political ideals and programs of the rebels. In addition they provide essential elements for the success of the movement, i.e., safety, supplies, direction, and training." (153)
- Larger base areas offer better prospects for survival and accumulation of resources. These should be located along major cities and transport links as saftey allows in order to facilitate attacks. Controlling agricultural hinterlands can help insurgents lay siege to larger cities reliant on supplies from the countryside. Insurgent bases can be predicted from topographical features and knowledge of prior areas of resistance during earlier conflict episodes. "Base area locations are determined primarily by political considerations; secondarily by long-term defensibility and terrain." (166)

McColl (1969)

• For national revolutionary movements, which "consciously attempt to involve entire populations in their causes... not merely to replace the present leadership of the state but to drastically alter the form of government and often the structure of society itself," the capture and control of territory is an insurgent group's "territorial imperative." "National revolutionary movements must seek the creation of territorial units complete with all the attributes of any legitimate state, namely a raison d'etre, control of territory and population and, particularly, the creation of its own core areas and administrative units as well as a power base in its guerrilla army. In fact it is useful to view contemporary national revolutions as a process of the evolution of a territorially based political unit within politically hostile territory. ... The geopolitical tactic is the attrition of government control over specific portions of the state itself." (614)

- "The actual 'boundary' between insurgent and government territory may be marked with signs or even booby traps. This is certainly the case in South Vietnam where signs proclaiming National Liberation Front (NLF) control are posted and the need for a pass to enter safely is openly advertised. In the absence of such direct and obvious markers, there are indirect but certainly as effective means of determining the 'boundary.' The presence or absence of government services and/or officials is one. Those areas where government troops and civil servants are able to move with safety both day and night, where the government is able to collect taxes and to assign its representatives without fear of their assassination are clearly within the boundary of maximum government control. Conversely, those areas where the insurgent is able to prevent the extended operation of government forces both day and night, where the government is unable to collect taxes on a regular basis, and where few government servants are assigned, these are areas within the insurgent's 'boundary.' (624)
- "Between the government and insurgent 'boundaries' is a transitional zone or 'frontier.' Such frontiers are characterized by government control during the day and insurgent control at night, or by government control of the cities and major transportcommunication lines and insurgent control within fifty meters of these areas. Often these 'frontiers' or 'contested areas' are the most important arenas of struggle between the two forces. It is into the frontier zone that the insurgent attempts to expand while the same area is viewed by the government as the area in which to hold the line against further insurgent advances. The struggle is not over the land itself, as in a purely military battle, but rather over the population concentrations. The result is that the local populations in such 'contested' or 'frontier' areas become politically neutral; anything else would lead to immediate suppression by one side or the other. Such neutralization actually works to the advantage of the insurgent and disadvantage of the government. Even if the local population should not believe in or support the cause of the insurgent, its failure to report his activities and sabotage to the government means that the government will fail to detect the insurgent's presence, will walk into booby traps, and will gradually be forced to withdraw from the area as an effective presence. Such areas then come under insurgent control." (624)

Race (1973)

• On the balance of forces: "We may visualize a society as composed of numerous contending forces, whose distribution for and against the status quo is referred to in Party doctrinal materials as the 'balance of forces.' Inherent in this concept is the idea of a power relationship, that is, the relative ability of the contending forces to enforce their will on an opponent. ... Consequently, the concept of balance of forces is a compound of two distinct and independent concepts: a force ratio, or roughly the number of people on each side; and a power ratio, or the ratio of effectiveness of each side's operatives after taking into account the impact of power-augmenting factors. ... [T]he Party may 'control' a hamlet with only one local guerrilla, while the government is unable to do so with continuous battalion sweeps through the hamlet area. By applying this concept of force, we see that the lone guerrilla represents a monopoly of force in his hamlet, except for a few hours a month during which the government battalion is sweeping through. On the other hand, the battalion does not even represent a force as defined, because the only means by which a battalion can determine the actions of others—the threat of violence—is ineffective if the battalion is present only a few hours." (144-145) "For the communist term 'balance of forces' there simply was no corresponding concept in the government vocabulary. The closest word was 'control' (kiem soat) by which government officials referred to the domination of an area by superior military forces. Yet 'balance of forces' is superior in two important respects: it focuses directly on the operative process—the tension between conflicting forces, broadly defined—and it is a concept capable of describing a range, while 'control' is inherently an absolute term, referring to a final state. ... [G]overnment officials were at a loss to explain the apparent paradox of 'less than complete control' posed by a single guerrilla versus the mobile battalion, and they drew the erroneous conclusion that the only response was to station heavy military forces in each hamlet." (152-153)

- On control/security: Like control, security "meant the physical prevention of enemy movement in defined areas" according to government officials in South Vietnam. (153)
- Oil spot theory of control: "The actual strategy the government adopted in its attempts to prevent a revolutionary take-over was only articulated to any appreciable degree in the military domain. It may be summarized as a city-based strategy involving the abandonment of the rural areas and withdrawal into populated centers. These were to be employed as bases for a gradually widening net of operations into rural areas, or the so-called 'oil spot' theory. According to this strategy, as revolutionary forces were worn down, the heavier government military units could be moved onto a wider perimeter, their place being taken by police or paramilitary organizations which could maintain sufficient security to reestablish the local organs of government." (153)
- Control = "the probability that a certain event or class of events will not occur within a defined area within a defined period of time, for example 'the probability that the hamlet chief will not be assassinated within the boundaries of his hamlet during his term of office,' or 'the probability that there will be no movement of external hostile individuals within the hamlet area between the hours 1800 and 0600."' (277)
- On problems with the Hamlet Evaluation System (214-216, 223): "The reason that the HES yielded such a misleading picture of events in Long An is that it focused on precisely those superficial factors which over the years consistently monopolized the attention of government observers. The conceptual confusion on which government strategy was founded thus carried over to the measurement process as well, which tended in turn to support the existing strategy. The Hamlet Evaluation System had

four specific weaknesses. First, the HES, in common with government strategy, was not founded on any explicit conceptualization of revolution as a coherent social process, which would focus attention in measurement on the specific factor to be evaluated, and in strategy on the specific processes to be manipulated. Second, the HES, again like government strategy, focused on 'security' without making the crucial distinction between a tactical conception of security based on the suppression of opposition and a strategic conception of security based on the absence of opposition. Third, the HES failed to distinguish among the relative impacts of forces internal to the province, domestic forces external to the province, and foreign forces. Fourth, the HES combined two incommensurable quantities: as noted earlier, it was based on nine 'developmentrelated factors' and nine 'security-related factors.' Development, as measured against an ideal 'developed hamlet,' might justifiably be measured as an absolute value. 'Security,' on the other hand, may be viewed as a circuitous way of describing the balance of forces, which can only be quantified as a proportion, and not as an absolute value.' (223)

Kent (1993)

• "The effective control of geographically based regions leading to the establishment of an insurgent state is an axiom of modern revolutionary movements." (441)

Buhaug and Gates (2002)

- The choice of location and scope of conflict for territorial control are strategic and shaped by available resources and identities of actors. Scope of civil wars refers to the size of territory that is directly affected by fighting. Location is about where exactly actors choose to challenge other groups' territorial control.
- There are two types of geographic factors that affect scope and location of civil wars: permanent and contingent. The first refers to climate and terrain. The latter put constraints on intelligence and logistics. Authors study contingent factors, arguing that access to foreign territory, natural resources, and presence of mountainous terrain increases the scope of conflicts. At the same time, identity of rebels shapes location of battles: anti-state rebels initiate conflicts closer to the capital while religious and ethnic rebels stick to the areas that are more distant from the capital.

Humphreys and Weinstein (2006)

- Restraint is possible where armed groups anticipate more future rewards than they can extract in the short-term through coercion. Competition for territorial control affects the ability of groups to internalize incentives for restraint.
- Two ways of defining control: "Consider first a situation in which in each period groups of different sizes encounter citizens in the same zone probabilistically. Here control can

be taken as a measure of the likelihood with which a civilian encounters a given group. In such cases, the greater the control a group has over a given territory, the more confident its leaders can be that they (and not others) will benefit in future periods from restraint they exercise today. Groups that control a particular territory can expect to benefit from discipline, even in situations where smaller groups elect to engage in abusive actions in the same area. Greater levels of control then are associated with lower levels of abuse. ... Consider next a situation in which civilians may encounter multiple groups in a given period, but possibly with different frequencies for different groups. Here the relative frequency of contact with different groups can be taken as a measure of their control. In such cases, and unlike in the previous case, a cooperative arrangement depends on the ability of groups to engage in implicit collusion. For collusion to be compatible with the incentives of fighters from different groups, however, there must be a sufficiently large margin between the quantity of extractable resources and the subsistence requirements of civilians such that each group, after taking some share for themselves, can still leave enough on the table that future groups have an incentive to refrain from abusive behavior." (432)

• "[W]e measure the relative number of troops present in a given locality. By tracking the movements of a representative sample of fighters, we have good estimates of troop levels in the chiefdoms throughout the war. We develop a measure for each quasiunit of the extent to which their group is dominant in a given area. The measure of [d]ominance records the estimated size of the quasi-unit relative to the estimated total number of troops in the zone." (440)

Kalyvas (2006)

- Military power and civilian collaboration facilitate control: "Political actors maximize territorial control; they seek to 'conquer' territory and increase the level of control over the territory they rule. I assume no anarchy; when one actor abandons a territory, the rival actor moves in. Increasing control means obtaining the exclusive collaboration of civilians and eliminating defection, that is, collaboration with the rival actor; that is the main function of selective violence. The production costs of selective violence are assumed to be inversely related to control; I take the distribution of control at t_0 to be exogenous; once the process has begun, the subsequent shifts of control are a function of two factors: first, exogenous military resources that allow an actor to 'conquer' territory hiterto controlled by its rival and, second, the use of selective violence in territory that is already 'conquered,' which increases the degree of collaboration and hence control in the subsequent period t_1 —provided, of course, that the existing balance of power is not exogenously altered by one actor withdrawing forces or the rival actor bringing in additional forces." (196)
- On the levels of control: "Consider a distribution of the geographical space into five discrete zones of control, ranging from 1 to 5. Zone 1 is an area of total incumbent control, and zone 5 is an area of total insurgent control. In between lie zones 2, 3, and 4,

which are contested areas where control varies as follows: zone 2 is primarily controlled by the incumbents (dominant incumbent control), zone 4 is primarily controlled by the insurgents (dominant insurgent control), and zone 3 is controlled equally by both sides (parity)." (196) "Incumbents exercise full control in zone 1; they have destroyed most or all insurgent clandestine cells and are able to prevent the rebels from entering or operating with any effectiveness. The population has no access to them. Many cities in civil war settings would fit this description, such as the city of Algiers in the aftermath of the battle of the Casbah. In adjacent zone 2, incumbents exercise secure but incomplete control; clandestine insurgent cells are still in operation and the rebels, present in the surrounding area, can make sporadic visits by night. Conversely, insurgents maintain full control in zone 5 and secure but incomplete control in adjacent zone 4, often refereed to as a 'semi-liberated area'. Zone 5 areas are sometimes known as 'base areas' or 'liberated areas'. There, rebels operate openly with minimum interference from government forces. ... In zone 4 areas, insurgents enjoy prominence... [h]owever, in those areas, they cannot prevent sporadic visits by incumbent forces and must contend with clandestine cells of informers." (211) "What distinguishes zones of incomplete control (2 and 4) from zones of full control (1 and 5) is that in the former the population has access, albeit unequal, to both actors. This is not the case in the latter, where the sovereign has a monopoly of force on a daily basis and in pretty much unequivocal fashion. Zone 4 is not within the grasp of the incumbents, but it is within their reach—and the converse is true about insurgents and zone 2. Finally, there is an intermediate area, zone 3, where both actors enjoy equal levels of control. ... These areas are usually described as places where the government rules by day and the rebels by night." (212)

- Control shapes the ability of groups to reward supporters and punish defectors: "Political actors are willing to pay a premium for collaboration (in the form of more promises, promotion, or material goods) where their capacity to control decreases, even while their ability to deliver this premium decreases with control, as one moves away from zone 3 toward areas of weaker control. In contrast, their capacity to arrest defectors increases with control, as one moves from zone 3 toward areas of stronger control. ... It follows that only martyrs defect under total control (zones 1 and 5), though highly committed individuals defect under dominant control (zones 2 and 4). Defection picks up in zone 3 for both actors and explodes in zones 4 and 5 (toward the insurgents) and 2 and 1 (toward the incumbents). Defection is a problem for incumbents in all zones except zone 1 and for insurgents in all zones except zone 5. Put otherwise, zones 1 and 5 are homogeneous, while zones 2, 3, and 4 are heterogeneous, consistent with with characterization as contested areas." (197)
- On control and information: "Information about defectors cones either from direct monitoring, when the level of control is high, or from denunciations when control is lower; this is the case because direct monitoring entails a large administrative apparatus that is unavailable when control is challenged, that is, in contested areas. If there are

no denunciations, or id denunciations are known to be systematically false, then ... there will be no violence. ... In short, where levels of control are high, there is no defection, no denunciation, and no violence. If violence is observed in zones 1 and 5, it is likely to be indiscriminate violence exercised by the rival actor. Where one actor exercises hegemonic but incomplete control (zones 2 and 4), there will be defections and denunciations; hence political actors have both an incentive and the ability to use selective violence. Finally, in areas of parity (zone 3) there will be much defection but no denunciation. Although the incentive to use violence is high, its cost will be even higher. In the absence of information, using indiscriminate violence in zone 3 could result in mass defection toward the rival actor, hence its low likelihood." (203)

- How control shifts: "Shifts in control are primarily a function of tactical military decisions. First political actors decide how to allocate scarce military resources. For example, incumbents may target a group of villages, 'conquering' and occupying them— 'clearing and securing' them, in counterinsurgency language. Insurgents, who typically lack the military means to defend these villages against frontal assault, flee along with their most prominent local collaborators. However, they may remain in the surrounding area and keep contacts with clandestine cells of collaborators within these villages... ." (213)
- On the sequence of control: "[P]rocess tracing suggests that a shift in control entails two distinct steps: initial shift and consolidation. First, tactical military decisions cause control to shift in two directions: from insurgent to incumbent control (from 4 or 5 to 2) and from incumbent to insurgent control (from 2 and 1 to 4). Second, the use of selective violence, once control has shifted, triggers a process of consolidation with control moving from 2 to 1 (full incumbent control) and from 4 to 5 (full insurgent control). Hence, in the absence of additional exogenous shifts in military resources, zones 2 and 4 can be thought of as areas in transition; in a sense, they represent a temporal dimension in the process of control shift. The violence follows the initial shift in control and precedes the consolidation."
- On measurement: "The most significant empirical challenge is the measurement of control. Control can be defined and measured empirically, using various indicators such as the level of, presence of, and access enjoyed by political actors in a given place and time." (210)
- On the Humphreys and Weinstein dominance measure: "[T]he ability of an armed group to control a particular locality is only partly a function of the raw numbers of combatants. Control is a function of the distribution of these troops across an area with specific geographical features, combined with the number, commitment, and distribution of civilian supporters across the same area. In short, when it comes to coding territorial control there is no easy alternative to either direct and careful data collection using all available sources, or prior coding by the insurgents or counterinsurgents themselves, when they do leave extensive archival material behind."

Weinstein (2006)

- "The prospect of territorial control disciplines rebel behavior across geographic regions because it embeds insurgents in an interaction with civilians that, if they are successful, will be repeated over time." (17)
- "In order to deliver collective goods, rebel groups must be of sufficient size and strength to challenge the government for control of specific territories. This contestation gives rise to a situation of multiple sovereignty in which at least two contenders compete to be the central political authority and at least some part of the population honors the claim of the challenging group by following its directives. With a credible claim to control over a specific part of the national territory, rebel groups offer their constituents collective benefits as an incentive for support, much as governments do when they provide basic education, health care, and infrastructure. The most important collective good rebel groups provide is security—in particular, they offer protection from government forces." (37)
- Rebel control = "the rebel group has a monopoly on the use of force. It may be that the government can infiltrate the area, but the strongest player is the rebel group." (164)
- On control and governance: "Institutions for governing civilians emerge as rebel groups begin to hold territory. Territorial control allows rebels to move freely rather than remain in hiding, offers the prospect of regularized interaction with civilians, and sends a strong signal of rebel strength. The control of territory and civilian populations also creates a new organizational challenge for rebel leaders. Civilians are strategic actors, and as such they have the capacity to provide or withhold their participation and support. Noncombatant populations can assist rebel groups by providing the resources groups desire, they can ignore rebel groups, or they can actively resist them by fighting back on their own or by assisting the government. In managing civilians, rebel groups must take into account their desire for security, their need for food and shelter, and their incentives to choose one side over the other. ... A rebel government exists when and where (1) a rebel group exercises control over territory, (2) it establishes institutions within or outside of its military to manage relations with the civilian population, and (3) these institutions set in place a series of formal or informal rules that define a hierarchy of decision making and a system of taxation." (163-164)
- Rebels may rule territories jointly with civilians or unilaterally through force. Unilateral control is preferred in areas where rebels hold resource wealth.
- Control necessitates governance: "The decision to control territory—one that emerges early on in conflict as groups seek to obtain resources and security and to demonstrate strength—necessitates the development of a strategy for governing noncombatants in the course of conflict." (196)

Johnston (2008)

- By increasing the need for delegation, territorial control may hamper military effectiveness. Delegation without oversight, monitoring, and punishment (enabled by technology) leads to counterproductive abuse.
- "[E]xercising control over large expanses of sparsely populated territory is exceedingly difficult and costly for rulers who have relatively little capital or few coercive instruments. ... Territorial control creates similar challenges for insurgent organizations. Leaders of geographically concentrated insurgencies are better able to broadcast power directly over subordinates than leaders of geographically deconcentrated groups. These elites are better able to monitor and punish subordinates. These oversight mechanisms help to induce subordinates to execute the commands of elites by reducing the opportunities for and raising the costs of defection. As groups expand territorially, information asymmetries become greater and leaders have less ability to directly oversee day-to-day operations. I argue that without a sufficient increase in what I refer to as 'managerial resources,' leaders must delegate de facto authority to subcommanders whose position in the organizational hierarchy generates incentives for them to shirk leadership's goals and instead to pursue their own personal interests." (112)

Kalyvas and Kocher (2009)

• The Hamlet Evaluation System relied on government reports and expert surveys to assess levels of insurgent control across Vietnamese villages. "Our key independent variable is local control, which the HES attempted to capture in a sophisticated way. Questionnaires were processed in Saigon and the resultant variables resolved into 'level 1 models', ordinal indices that rated hamlets on a scale from A (best from the government viewpoint) to E (worst from the government viewpoint). ... Coded at the village level and updated on a quarterly basis, this question was used in the construction of the level 1 'Friendly Military Presence' model, on the theory that hamlets in villages where the authorities could not expect rapid reinforcement were somewhat less likely to be controlled by those authorities. Level 1 models were combined into level 2 and higher level models using decision tables." (340)

Weidmann (2009)

- Geographically-concentrated ethnic groups have a higher likelihood of mobilizing for conflict because of opportunity. Concentration and proximity increase coordination and mobilization.
- Territorial concentration of an ethnic group may proxy for conflict risk and control by associated rebels.

Hatlebakk (2010)

• Maoist control at the district level in Nepal is approximated by four measures: the number of people killed per capita, the number of people displaced per capita, the annunciation of people's governments by Maoist forces, and a security classification provided by the government.

Kilcullen (2010)

- Theory of competitive control: "In irregular conflicts (i.e., conflicts in which at least one warring party is a nonstate armed actor), the local armed actor that a given population perceives as most able to establish a normative system for resilient, fullspectrum control over violence, economic activity, and human security is most likely to prevail within that population's residential area. In other words, whoever does better at establishing a resilient system of control, that gives people order and a sense of security where they sleep, is likely to gain their support and ultimately win the competition for government." (152)
- Tax compliance with either the government or the rebels is indicative of their control (61). The ability of public officials (or insurgent leaders) to sleep and move or live openly in an area indicates control (63-64). Control is established where an armed group has the capacity to regulate social relationships (158)

Berman, Shapiro and Felter (2011)

- Information from civilians to counterinsurgents helps deliver government territorial control. "Control of territory is represented by a binary variable... which is one if the government controls the territory and is zero if it is controlled by rebels." The probability of government control is given by government counterinsurgency effort times civilian information-sharing. "Consistent with current doctrine, this makes some minimal information sharing a necessary condition for government control." (775)
- On rebel control: "Rebel control does not exclude government forces; it implies that attempted rebel violence against those forces will succeed in causing damage. In contrast, attempted rebel violence in government-controlled areas fails to do harm." (775)
- Absence of government services indicates rebel control: "in the case of rebel control the community does not benefit at all from government services... either because the government withdraws services when it cannot protect its employees and contractors or because it conditions local public-good provision on control, as collective punishment." (776)

Bhavnani, Miodownik and Choi (2011)

• In a triadic model of civil war, selective violence by a stronger actor is concentrated in areas where weaker actors exercise control. The relative level of selective violence used by weaker actors will be lower because of a reduced capacity to induce civilian collaboration. In areas of parity among three actors, low levels of selective violence will occur, and what little selective violence does occur will be perpetrated by the strongest actor.

Kubota (2011)

- Territorial control bears crucially on combatant recruitment. To gain support in controlled zones, combatants seek to influence the welfare of the populace and to captures its loyalty through mental/psychic resources (e.g., indoctrination). Territorial control is important for building ideological appeal. Absent material resources to incentivize mobilization, territorial losses increase forced recruitment.
- "Territorial areas in civil war can be expediently categorized into a number of distinctive zones according to the actors controlling those areas and the degree to which they wield clout in the region. A zone is considered to be controlled by the government when it not only can exert effective influence but when its troops and administrators are also able to remain in the area both day and night. In contrast, in a zone considered to be of rebel control and absolute authority, state involvement is nil and typical government functions such as the collection of taxes and conscripts, as well as counterinsurgent operations, are absent. Beyond the constraints of these two zones lie contested areas in which both government and rebel groups tend to hold semicontrolled territory and exercise only incomplete leverage." (4)

Bhavnani and Choi (2012)

- The distribution of ethnic groups shapes patterns of territorial control, collaboration, and violence. Violence directed at civilians occurs with greater frequency in locations where one political actor exercises hegemonic but incomplete territorial control, especially in ethnically mixed settings.
- Agent-based models begin with two competing actors. Control is a function of: military capacity, logistical capacity, the distance to a group's stronghold, the ethnic configuration of a location measured by the number of civilians from politically affiliated and unaffiliated ethnic groups, and the salience placed by group members on ethnicity. The presence of friendly ethnic groups lowers the costs of control, while distance from a stronghold increases the military cost of control.

de la Calle and Sánchez-Cuenca (2012)

- Territorial control is mainly determined by state capacity. Where the state is weak, insurgencies can control ground. In intermediately strong states, rebels are driven underground, and pursue nonterritorial conflict. In wealthy/strong states, internal violence does not occur. Nonterritorial insurgencies are also more likely in older, democratic states.
- Some center-seeking insurgents control territory, while some separatist insurgencies do not control territory. "We are not concerned here with the goals of the insurgents but rather with the way in which they fight for their cause. There is a strong association between territorial control and rural guerrillas, on one hand, and a lack of territory and urban insurgency, on the other. Most insurgencies that control territory are rural-based, having a base in the jungle or in the mountains, where they become local rulers. But the association is far from perfect... there are rural insurgencies of a nomadic nature that hide from security forces but fall short of controlling any territory. ... there may be territorial control of urban areas, as was the case for example in Beirut during the Lebanese civil war, where the contending parties had control of various areas of the city." (583)
- " [T]erritorial control requires at least having camps or bases within the country borders, where the insurgents store weapons and train recruits. At most, territorial control means that the insurgents replace the authority of the state and create a parallel state that imposes order, administers justice, and extracts rents from the population. By contrast, underground or nonterritorial insurgencies are forced to hide all the time. Both territorial and nonterritorial armed groups challenge the monopoly of violence the state is supposed to hold. The difference between the two is rather one related to sovereignty. Territorial control means that the insurgents break the state's sovereignty over its own territory. ... In nonterritorial conflicts, the state retains sovereignty even if an armed group commits violent attacks. The seizure of territory within the state's borders has far-reaching implications for the production of insurgent violence. The dynamics of bargaining, recruitment, and lethality rely on the capacity of insurgents to seize territory and keep it." (583)
- Territorial groups can expand and engage in more sophisticated attacks, while nonterritorial groups must operate clandestinely and rely on irregular tactics. Consequently, territorial insurgents are more often invited to negotiations.
- "When the state administration works all over the national territory and the army and the police have an effective presence across the country, insurgents are not able to liberate territory from the state's control. This is most likely to occur in rich countries, which are the ones with the capacity to maintain sovereignty intact. Rebels, therefore, gain territorial control in poor, defective states." (584)

• Taking groups involved in attacks in the GTD, the authors code territorial control from open sources. "According to our general rule, there is territorial control when the insurgents are able to do some or all of these things: (a.) Set up camps or bases within the country's borders in which they store weapons, train recruits, and so on.; (b.) Establish stable roadblocks, disrupting the flow of goods and people within the country.; (c.) Rule the civil population in the localities they seize (e.g., extracting rents or administering justice). To be recognized as the new authority, insurgents may wear uniforms and carry arms in the controlled areas." (597)

Dugan et al. (2012)

- The actor-based approach to measuring terrorism understands it as violence committed by a group that does not hold territory. The action-based approach allows for territorial groups to commit terrorism.
- Territorial control = "the insurgents are able to set camps or bases, to establish roadblocks and eventually to rule over the local population." (481)

Staniland (2012)

- Scholars assume that civil wars are contests for a monopoly of violence over distinct territories. Armed orders belie this assumption: states and rebels often coexist.
- Completely different political relationships between actors can prevail despite control appearing to look the same: intense combat may → divided control; modest competition with minimal violence may → divided control; political disagreement with illicit cooperation may → divided control.
- Order = "the structure and distribution of authority between armed organizations: who rules, where, and through what understandings." (247)
- The distribution of territorial control "reflects the presence and structure of armed actors in a particular territorial domain, which is important for shaping the types of relationships and arrangements that are possible. Control provides a key background condition to understanding the dynamics of conflict and cooperation, whether in a specific village or the conflict as a whole, because it reflects the capacity of the actors and the structure of their competition." (247) Control can be segmented or fragmented, following Kalyvas. "We can think of segmented sovereignty as analogous to a conventional military frontline, whereas fragmented sovereignty intermixes state and insurgent armed forces. In both segmented and fragmented distributions of control the state's monopoly on violence has broken down and multiple armed contenders for power exist. The difference between the two comes in how this division of power is structured." (247)

• Where the state and rebels actively cooperate, segmented control → shared sovereignty and fragmented control → collusion. Where the state and rebels passively cooperate, segmented control → spheres of influence and fragmented control → tacit coexistence. Where the state and rebels do not cooperate, segmented control → clashing monopolies and fragmented control → guerrilla disorder.

Ishiyama and Widmeier (2013)

- Rebel control of territory translates to postwar electoral performance. Rebels dominate the vote in areas they controlled in past war, especially where their control is dominant and extensive.
- Different measurement strategies are used to identify insurgent-controlled districts in Nepal and Tajikistan. In Nepal, an expert coding is used, which takes into account Maoist killings, displacement, governance activities, and a government assessment score. In Tajikistan violence data is used, including data on attacks, caches, and media text data on rebel operations.

de la Calle and Sánchez-Cuenca (2015)

- Territorial control determines tactical choice. Military power required to engage in battles and raids is logistically complex. Groups without territory operate underground and rely on assassinations, bombings, and robberies.
- Coding GTD groups, the authors determine whether rebels lack territory, control territory without population, or control populated territory. In some analyses, rebel groups are assumed to control territory in rural areas and assumed to operate underground in major cities.

Li et al. (2015)

- ISIS control reduced urban nightlight in northern Iraqi cities in 2014. To complicate ISIS governance, the Iraqi government reduced electricity supply to ISIS-held areas.
- Qualitative sources are used to identify the dates in which 13 Iraqi cities were contested or controlled by ISIS during 2014.

Arjona (2016)

• Governance styles may vary across villages in areas controlled by armed groups. Territorial control does not imply symmetry of governance across space. "[D]ifferent forms of order frequently coexist in areas controlled by the same non-state armed group. Adjacent villages, or even neighborhoods, end up living under very different institutions." (2)

- Territorial control creates a need to engage in governance. "[A]rmed groups interested in controlling territory have incentives to establish institutions because doing so helps them to both gain territorial control and strengthen their organizational capacity." (7)
- "I assume that rebels aim to control territories as a means of pressuring the incumbent and increasing their strength. I also assume that a secondary goal is to maximize the byproducts of that control—such as obtaining material resources, attracting recruits, and expanding their networks—which help rebels build their organizational capacity. Given these two goals, I argue that rebels prefer order to disorder and, among the possible types of order, they prefer rebelocracy to aliocracy. Order is instrumental to maintaining territorial control, which is hardly possible in the absence of clear rules that regulate both civilian and combatant behavior. Such rules facilitate rebel monitoring of civilian conduct (such as helping the enemy), and also make civilians more likely to voluntarily obey and offer support." (9)
- Rebels hold short time horizons and allow disorder when they are competing for territory or when they have weak internal discipline. "When fighting to preserve territorial control, rebels have fewer incentives to restrain their behavior and abstain from conduct that they expect will increase the odds of winning that territory. ... Disorder, or the absence of a social contract, is therefore likely to emerge when two or more warring sides actively compete for territorial control." (10)
- Rebelocracy—extensive rebel involvement in civilian affairs—facilitates territorial control by reinforcing civilian compliance. Communities that can collectively resist can threaten rebel territorial control. In these areas, rebels prefer less intervention in civilian affairs, delegating governance to local institutions while retaining territorial control. Yet, "some territories are so important for the group that tolerating civilian autonomy is too costly. Areas where high-level commanders live, or where new recruits are trained, are good examples. Other territories are highly valuable because of their geographic location, such as corridors that would allow the group to bring in weapons, export illegal resources, or connect factions deployed across the country. In these strategic territories, armed groups need tight population control and broad cooperation, and therefore do not tolerate civilian autonomy, even if they expect resistance. Communities that demand civilian autonomy are therefore likely to be targeted, often with the aim of displacing all their members from the area. Disorder is the likely outcome." (12)
- Territorial control = "[S]overeignty—that is, the exclusion of enemy presence in the territory." (44)
- Territorial control helps rebels pressure the government, recruit troops, and increase combat power, as well as profit from natural resources. "While the quest for territorial control is widely recognized as a key factor shaping armed groups' behavior, a second, related goal, tends to be overlooked: maximizing the byproducts of that control. This

omission obscures the fact that while preserving territorial control will remain rebels' core goal, they will try to use that control to maximize a wide range of benefits. Indeed, control can translate into acquiring economic resources, accessing key networks, recruiting new members, and gaining popular support. In order to understand rebel behavior and civilian combatant interactions, we need to take these potential benefits into account." (45)

- Territorial control requires "obedience—complying with combatants' demands" and "spontaneous support—voluntarily offering them help." (46)
- On governance without control: "[o]ften armed groups are able to control the behavior of the civilian population without permanently deploying many combatants to the locality." (191)
- Qualitative, interview, and survey approaches were used to reconstruct timelines of community control and rebel governance, include mind mapping, timeline construction, and institutional biographies. (119-121)

Sexton (2016)

- Military control is a vital prerequisite for development aid to impact counterinsurgency. Aid functions as a tool for force protection and pacification once pro-government forces demonstrate control.
- Military bases are used to code government control. "Using monthly reports published by the Institute for the Study of War (ISW) on the order of battle in Afghanistan, the positions of battalion-level and larger ISAF installations is coded by month into the time series. ... The ISW reports indicate where "white" units are positioned, that is, regular military units as opposed to special forces units and other "black" operations. The locations of battalion-level forward operating bases (FOBs) and major installations and their primary listed areas of responsibility (AOR) are coded as "secured" with a dummy variable. These data are available at the district-month level of resolution. During the period under study, only two FOBs are decommissioned, otherwise it is a strictly additive process. The number of districts with battalion-level troop bases increases from 28 in May 2008 to 49 in December 2010." (737)

Tao et al. (2016)

- Territorial control = "the geographic region in which troops can reach and take action within a certain response or reaction time." (414)
- Measuring territorial control is conceptualized "as an application of calculating service areas around points of control" (413). Determining the shape, size, and boundaries of a controlled region requires decisions comparable to those taken while defining catchment

areas. "The service area of a center is ... the geographic space over which the influence of that center is greater than or equal to that of any other center." (414)

- Rebel groups often move over and control areas beyond formal transport networks, which makes it difficult to model control using road networks and cost-surface rasters. Instead, measurement is based on travel cost contingent on distance, time, traffic, and travel mode. The main approach is to calculate drive-time buffers around controlled centers, allowing for off-road movement. Centers are defined by UCDP GED battle events, provincial capital cities, and military bases.
- Using network analysis and a hybrid movement raster, control is defined as areas reachable within one hour of a center. Events are collapsed to the calendar-year time interval, so overlapping regions of control are possible.

de la Calle (2017)

- Violence conducted by rebels is driven by two different goals. Pursuit of those goals explain variation in targeting of civilians versus state forces. Attempts to control territory result in attacks against state forces, while pursuit of legitimacy drives higher rates of civilian victimization. Pre-existing territorial control shapes an armed group's choice of targets of violence. Rebels use violence against civilians in order to bolster their legitimacy locally, while use of force against state forces is require to establish control in the first place.
- Rebel control = "the capacity of the rebels to seize and rule geographical areas of the country, displacing previous state authorities."
- Rebel control is measured by "the degree of success of electoral boycotts promoted by the insurgents." "I consider a district as under SP's control when the election was annulled (or never held). I consider a district as contested when the election was held, but the number of spoiled votes was larger than 50% of the votes cast. If the state is sufficiently strong to run the election, but not strong enough to prevent SP from forcing (or encouraging) local citizens to cast a spoiled ballot, the situation resembles one of contested power. Finally, if the election was run smoothly and few spoiled votes were cast, then the district belongs to zone 1 and is considered under safe state control."

Rueda (2017)

• What role does expected territorial control play in shaping civilians' cooperation decisions? Selective violence perpetrated after an armed group has established control of territory brings more civilian cooperation than randomly applied punishment even when enemy collaborators are less likely to be punished under selectivity than in random reprisals.

- Formal model of conflict and cooperation, in which civilian-provided information helps armed groups establish control of a territory: Civilians decide to tip or pass fraudulent information, counterinsurgents conduct operations on the basis of received information, and counterinsurgents take control of a village if a sufficiently high share of the population informs relative to rebel military strength—"full civilian cooperation can offset the effects of a strong rebel group's military force on the probability of attaining control." (1630)
- The key criteria for territorial control is the ability of a controlling group to protect its informants from enemy retaliation. Protection gives civilians an incentive to support the side that they believe others support more. Counterinsurgent operations spur civilians to inform in favor of counterinsurgents since misinformed operations yield more community civilian harm.

Schutte (2017)

- Violence becomes more indiscriminate the farther it is perpetrated from an actor's power center because actors have a harder time distinguishing collaborators from innocents in regions far from their core bases. Control and discrimination follow a simple distance-decay function.
- National capitals are defined as the government's center of power. In Afghanistan, the Pakistan border is defined as the insurgents' center of control.

Stewart and Liou (2017)

- When rebel groups control territory domestically, they are incentivized to build mutually beneficial relations with civilians living in their territory and limit their violence against them. Insurgencies with foreign territorial control use violence against civilians to gain compliance and extract resources since they are less dependent on civilian support.
- Territorial control is a military asset that offers insurgents sanctuary, propaganda opportunities, and financing.
- Territorial control measured from the Non-State Actor Dataset. Instruments for territorial control are the logged total length of land borders (in kilometers) of the rebel group's target state, and the total number of that state's neighbors.

Berg and Carranza (2018)

• "Armed groups seeking to control territory use violence for different purposes, including competing against rivals, coercing residents and state officials, and exploiting the public for profit. Variations in community organization, defined as the density of interpersonal ties and the prevalence of shared expectations for collective action, affect the utility of violence for each of these purposes. Community organization can raise the cost of controlling territory, reduce the benefits of coercive violence, and generate pressure to protect residents from exploitation. ... neighborhoods with denser community organization experienced lower levels of violence. Narrative evidence points to specific ways in which community organization mediates effects of competition among criminal groups and their interaction with state officials." (566)

• Focus group discussions and interviews with residents → coding criminal control over neighborhoods.

Ch et al. (2018)

- Violence and armed group influence enable institutional capture. Armed groups manipulate local politicians in their areas of control.
- "Measuring the influence exercised by an armed group over a specific location is extremely challenging. Indicators of presence and nonviolent coercion over a large set of municipalities cannot be systematically recorded in an objective way. Violence, on the other hand, while more easily observed, is only imperfectly correlated with territorial dominance. ... [N]onviolent dominance is unlikely to occur without any violence inflicted in the past, either as a way to legitimize influence with the citizenry or to oust any contesting (legal or illegal) group. It is thus reasonable to assume that the ability to inflict localized violence over a relatively long period could be expected to translate into influence in different ways." (1002)
- The authors "use a past stock measure of violence over a period of years as an (imperfect) indicator of influence." (1003)

Matanock and García-Sánchez (2018)

- Civilians falsify their preferences over government and insurgent rule depending on contextual factors. Where insurgents control or contest territory, support for the military will be high on direct questions but low on indirect questions.
- Insurgent control = "dominant but not total insurgent control. Rarely are there 'no go' zones for the military in insurgencies, where civilians supporting insurgents would expect to be entirely safe from military punishment (because these asymmetrical conflicts feature governments with greater repressive capacity but less information... Even in areas 'controlled' by the rebel group individuals can expect the military to monitor reported support and punish pro-insurgent responses. Across contexts of insurgency, then, individuals can usually identify the 'correct' answer when asked about support for the military, specifically depending on audience, and they have incentives to provide that answer." (804)

• To measure control the authors use data on political violence across municipalities from 2002-2009. Using semiparametric group-based modeling, they use violence data to identify clusters of municipalities on different trajectories of violence, perpetrated by different armed actors, and combine the trajectories to identify the status of control for each municipality. "This measure is reliable as it is based on a source with standardized data collection rules, integrates all armed actors, and respects the temporal dynamic of the Colombian conflict." (808)

Reeder (2018)

- Ecological niche = the "subset of geographic space that the group exploits for survival" (697). A group's geographical preferences are the factors correlated with their operations (e.g., forested terrain, cobalt, and gold mining).
- Measuring rebel areas of operation from event data is difficult because events may be under-reported and because rebels tend to avoid areas of dense media coverage. The measurement approach taken here makes spatial predictions about unobserved events before estimating groups' home ranges using habitat analysis techniques from ecology.
- The method predicts that unobserved events took place in proximity to reported events, while some events took place at more distant locations where the terrain and available resources match group preferences within the study area. Kernel density estimation is used on ACLED data to estimate known locations of rebel groups. The estimated intensity of group presence is combined with group preferences to predict events that were not reported. Geographical preferences are a product of the selected level of temporal aggregation.

Woldemariam (2018)

- Territorial gains and losses are both correlated with insurgent fragmentation. Substantial territorial gains reduce outside threats to a movement, eroding the bargains required to sustain inter-faction cooperation within a rebel movement. Commitment problems emerge over the internal distribution of power and preference divergence emerges over strategy and tactics. Territorial losses, in contrast, raise doubts over organizational viability, spurring defection.
- Territory has symbolic value. "[F]or many rebel organizations that participated in the Ethiopian civil war, the acquisition of territory wasn't simply a strategic necessity, but an ideological and emotional requirement of rebellion. A powerful indication of this attachment to territory is that those areas 'liberated' from the enemy were often administered in a manner illustrative of the new political order the rebels sought to establish. Put differently, these territories served as laboratories of the future. ... The other ideological force behind the commitment of many Ethiopian rebel organizations to territory was largely a product of global political currents of the 1960s and 1970s.

Insurgent movements across the so-called Third World were swept up by the clarion call of Marxism–Leninism, and many (but certainly not all) armed challengers to the Ethiopian state were no different. ... The acquisition of territory, in this sense, mattered a great deal, since it enabled the proliferation of the rebellion's program of social change at the local level." (55-56)

- Operational reach = "territory in which a rebel organization demonstrates the ability to consistently launch attacks." (52)
- "In defining gains and losses as shifts of districts or population centers, we focus on territorial exchanges that are likely to be of strategic and political consequence, and as such, those most likely to affect the perceptions and expectations of combatants. The downside of the measure, of course, is that while it allows us to distinguish periods of stasis and marginal territorial change from periods of more dramatic change, it does not capture the relative size of change beyond the minimum threshold." (53)

Ch, Vargas and Weintraub (2019)

- Rebel territorial dominance increases economic activity, security, and tax collection and reduces illegal narcotic cultivation.
- Rebel territorial dominance refers to the de facto cession of the monopoly of violence to rebel forces.

Holtermann (2019)

• Most secessionist violence occurs within their claimed homelands. But territoriallymotivated groups may attack outside their claimed regions for diversionary reasons. Outside attacks occur during government offensives with an aim of forcing the government to divert troops and resources to protect unclaimed areas, potentially undermining homeland offensives.

Anders (2020)

- Rebels use terrorism mostly outside their strongholds, preferring conventional guerrilla tactics when they command higher levels of control → in *asymmetric* civil wars, rebels use more terrorism in areas they lack control, whereas conventional attacks are preferred in areas of stronger control.
- Control is an unobserved latent variable that can be estimated via a Hidden Markov Model using observed variation in rebel tactics. Measures of tactics come from geocoded subnational event data, weighted by distance and time → control measure across 0.25 decimal degree hexagonal cells. This method would "preclude estimation of territorial control in conflicts featuring multiple non-state actors" if "groups' aspirations for control... overlap significantly." (705)

• The method encounters known problems with estimation in areas where there is low population density and likely under-reporting in the conflict microdata.

Asal and Jadoon (2020)

- Territorial control raises the need for fighters and the opportunities for recruitment \rightarrow correlation with deployment of women in combat roles.
- The Big Allied and Dangerous (BAAD2) dataset is used to code whether an insurgent group controls territory in a given year.

Gohdes (2020)

- Digital surveillance is particularly useful for facilitating targeted violence in areas outside government control. Inside areas of government control, traditional means of intelligence gathering can be used.
- "I rely on data collected by the Syria Conflict Mapping Project (SCMP) that is part of the Carter Center to construct an indicator of individual armed group presence and territorial control. The SCMP collects highly accurate and detailed open source information on conflict events occurring across the country to date, including information on changing relationships between the main conflict actors. The project tracks more than 5,000 local communities and determines which conflict party is in control. ... The main measure of control is a categorical variable that takes on the name of the group that has more than 60% of all communities in a governorate under its control. When and where none of the groups holds more than 60% (e.g., in Aleppo in January and July 2014), the variable is coded as contested control. In order to measure the government's local presence more precisely, I also include the actual percentage of control for the government." (495-496)

Opper (2020)

- "Military strategies determine the ability of insurgents to maintain control of territory. Political strategies determine the coalitions that insurgents establish, that is, to which groups they distribute political, social, and economic inducements, and against which groups they mete out sanctions. I argue that when rebels establish broad coalitions their movement will persist when they do not have control of territory because they enjoy the support of the civilian population and civilians will not defect to the incumbent. By contrast, when rebels establish narrow coalitions, civilian compliance is a product of coercion and a defeat on the battlefield brings about and when insurgents cannot maintain exclusive control of territory, civilians will defect to the incumbent, bringing about a collapse of the insurgency." (13)
- "In uncontested areas, insurgent institutions will persist regardless of the size of the coalitions they establish because civilians can not defect to the incumbent. However,

in contested areas, the size of insurgent coalitions is decisive: in areas where insurgents establish narrow coalitions, civilians will defect to the incumbent, bringing about a collapse of the insurgent's institutions. By contrast, when incumbents contest areas in which insurgents establish broad coalitions, insurgent institutions will persist." (16)

• Territorial control = "contestation of territory is temporally bounded by the presence of a rival belligerent that attempts to administer the civilian population. ... When a belligerent contests control of the civilian population in a given area, it establishes institutions that regulate the behavior of civilians beyond the brief period in which the main military forces of that belligerent are in the area. When belligerents do not contest territory, either because they are physically unable to reach areas under a rival's control or because they do not make any attempt to govern civilians, defection from one to the other is not possible. In the context of an insurgency, if incumbents do not or cannot contest areas under insurgent control, insurgent's institutions will persist regardless of the level of compliance they receive and the amount of coercion they apply." (23-24)

Osorio and Beltran (2020)

• A georeferenced database of criminal organizations in Mexico is created by scraping a large corpus of Mexican newspapers, using a machine classifier to tag relevant stories, using NLP for the Spanish language to generate event data on Mexican criminal organizations, and then georeferencing event data to identify areas of criminal group presence.

Oswald et al. (2022)

- In the transitional period after rebels take territory but before they consolidate their authority, civilian victimization rises as rebels enforce compliance. Once local capacity is built, rebel-held areas become less violent.
- Social control = "the establishment of behavioral guidelines for civilians that ensure compliance with rebel rulers in exchange for the provision of security." (296)
- Using data from ACLED, the authors use battles that yielded no change in territorial control to estimate the baseline level of civilian victimization associated with battles. Then, they estimate civilian victimization after battles resulting in rebel seizure of territory.

Rubin (2020)

• Community collective action capacity (CAC) facilitates information and resource mobilization, making high CAC communities valuable to control, but high CAC also enables communities to make costly demands for governance.

- High CAC increases rebel control in areas of state neglect, but deters rebel control as state service provision increases → civilians demand more governance.
- Territorial control = "a belligerent's ability to move freely, access information and resources, and prevent its enemies' movement and access in a particular place and time. Territorial control is a continuous concept: a combatant may have partial control if it can restrict, even if not eliminate, its enemy's movement and access." (463)
- Benefits of control include lootable resources, sanctuary, geographic advantages, financial contributions, access to food, information, shelter, and supplies. Costs of control are entry costs (sending personnel and resources) and governance costs.
- Territorial control coded from Philippine military intelligence reports covering villagelevel communist control over 2011-2014. Government assessments may not be biased to favor the military's reputation since these assessments are classified and misstating levels of control "would put at risk government employees" (484).

Wahman and Goldring (2020)

- Violence is a tool to disrupt and maintain territorial control in localities with low levels of competitiveness. Territorial control by the opposition conditions the relative effectiveness of violence compared to other electoral strategies. The incumbent utilizes its competitive advantage in violence and targets localities with high level of opposition support.
- Instead of directly measuring control, they use electoral data to identify electoral strongholds.

Wimmer and Miner (2020)

- Rebels and government fighters kill civilians in areas populated in equal shares by their own and their adversary's coethnics because, in such areas, small amounts of violence suffice to tilt the local balance of power in their favor. Rebels target places close to the border between the settlement areas of their own and their adversary's coethnics as this will allow expanding the contiguous area under their control.
- ACLED data on territorial gains and losses is used to measure control across 0.25 decimal degree hexagonal grids cells.

Asal and Nagel (2021)

• The process of territorial control includes two steps: consolidating control by coercing civilians, driving some out and punishing others; and maintaining control by enforcing order and rules. In the first stage, sexual violence is used to force out or punish rivals and non-constituents. In the second stage, sexual violence is used to enforce compliance and recruitment.

• The Big Allied and Dangerous (BAAD2) dataset is used to code whether an insurgent group controls territory in a given year.

Breslawski (2021)

• In rebel-controlled areas, groups can use violence to impose coercive control, or they can create institutions to govern civilians. Order in controlled regions depends on who makes decisions over rule-setting, dispute resolution, and local resource distribution,

Müller-Crepon, Hunziker and Cederman (2021)

• Relational state capacity—the relative degree of state accessibility versus rebel accessibility to populations—is central. Conflict breaks out where ethnic groups are disconnected from the state and far from the capital, but highly internally connected with one another.

Haass (2021)

• Rebels intensify resource extraction as they compete with government forces for territorial control. Competition over territorial authority increases illicit revenue generation by affording opportunities for black market access, by increasing the need for revenue to fund combat, and by increasing the need for generating civilian cooperation through governance. Territorial competition = "violent and nonviolent activities by rebel and government forces to establish physical presence to and political authority over the population in a given territory." (1333)

Piazza and Soules (2021)

- ISIS loss of population centers prompted the group to conduct more transnational attacks, to shift attack venues abroad, and to cause higher casualties abroad. ISIS affiliates also became more active as the core group lost territory.
- Territorial control had ideological value: "control over territory and populations was a crucial element of ISIS's appeal and distinct identity vis-a-vis other jihadi movements. Unlike other organizations that referred to the reconstruction of a Muslim caliphate, such as its rival al Qaeda, ISIS actually proclaimed a populated caliphate on physical territory in Iraq and Syria and built within it Islamic governing institutions. The caliphate was a key selling point for ISIS: it captured the imaginations of alienated Sunni Muslims in Iraq and Syria, and in the wider Muslim world, providing them with an idealized but concrete achievement in which they could participate." (112)
- Rather than what territory is controlled, we should focus on how much population mass is controlled. The ideal measure of ISIS territorial control would be a daily measure of the number of people living under ISIS control.

• "This study's independent variable is a cumulative daily count of a sample of the major population centers ISIS controlled. To construct this variable, we developed an indicator that measures the daily cumulative count of the number of population centers ISIS lost over the observation period." (125-126)

Shesterinina (2021)

- The classical view from Kalyvas suggests people's choices during war are conditioned by wartime patterns of territorial control, and relatively divorced from prewar commitments and loyalties. Shesterinina argues we need to understand prewar contention to "understand why so many Abkhaz mobilized for war in areas where Georgian forces instantly established territorial control, absent the promise of material rewards for participation on the Abkhaz side." (51)
- Territorial control did not alter the importance of prewar, quotidian social networks. Many individuals who could have fled Georgian-controlled zones stayed to protect relatives, and ended up joining non-combat support roles on the Abkhaz side. (147)
- Interviews help reconstruct patterns of control. Respondent's locations at the time of an interview may be different than their locations during the time they are asked to recollect. Territorial control was very fluid in east and west Abkhazia, and the fast changing nature of the conflict may hamper accuracy of memories. (221)

Stewart (2021)

• Territorial control = "rebels' ability [to] hold and protect territory from direct incursions by the state. Territorial control allows rebels an unfettered ability to preserve or change preexisting social and political formations and establish more permanent institutions... Thus, for the purposes of this work, to ensure that variation in rebel governing efforts are not simply the result of differential degrees of state presence, one of the scope conditions is rebel territorial control." (72)

Bahiss et al. (2022)

- Four main findings: "Armed groups seek to influence and control people and behaviour and not necessarily territory alone. Armed groups often project power beyond areas where they are physically present. They do not even have to 'hold' territory to control what happens there. Control cannot be thought of in zero-sum terms. Armed groups, the government and others often exert fluid, overlapping forms of influence on populations. The assumption of state dominance may obscure actual power dynamics. The state may be only one among many actors vying for control—and not always the dominant one." (6)
- Cycles of Control: "Spheres of control encompass the realms in which armed groups exercise control over civilian life. We break this dimension down into the economic,

social and political, to better explore how civilians experience and navigate forms of armed group influence. Practices of control are the techniques that armed groups use to exercise control. They include, but are not limited to: various forms of direct and indirect violence, resource extraction and taxation, the regulation of civilian movement, the restriction or regulation of access to aid and essential services, and social strictures. Capacities for control describe the resources, organisational attributes and abilities that enable an armed group to exert various types of control. We break these down into coercive, organisational and financial capacities." (7)

- Control extends beyond areas of physical presence: "Armed groups can, and often do, project power beyond areas where they are physically present. Armed groups do not have to hold territory, or even have a stationary presence, to control or 'govern' it. Such conceptions may miss more subtle forms of influence." (13)
- On overlapping areas of control: "Where neither the government nor armed groups have full 'control' of an area, they will exert fluid and overlapping layers of influence. The government may still claim to control such areas, but so too may armed groups (and various armed groups might vie for control, making competing claims)." (14) The importance of territory itself is context-specific. Certain practices of control require stable territorial presence, while others do not. (19)
- On social control: "Armed groups attempt to control the social space and behaviour of civilians by shaping and enforcing certain rules. We can think of these in two broad categories: operational and normative. Operational rules might be purely about the security and self-preservation of the armed group. The group might not want civilians to have smartphones, for example, lest they tip off its adversaries. Alternatively, it may prohibit certain types of behaviour or movement (i.e. visiting government offices, travelling to certain locales). More broadly, however, the social sphere is about eliciting normative compliance. Dressing a certain way, engaging in certain activities, speaking a certain language, having a certain ringtone or haircut, and so on, all confirm a certain kind of obedience. They are all acts of submission that, in various ways, confirm armed group dominance." (23)
- Three prominent indicators of changing control dynamics: shifting tactics of violence, shifting patterns of taxation (following shifts in violence), and shifting patterns of dispute resolution (especially increasing reliance and compliance with an armed actor's justice system). (7-8)
- On challenges of using violence as a measure of control: "Levels of violence can be deceptive. Violence may drop or become more selective where the armed group is more confident of its influence and control, or where local accommodations have been reached that formalise the group's dominance. Shifts in the timing of violent practices (i.e. from night-time to daytime and vice versa) can indicate changes in the level of control. Shifts in how selectively violent practices are applied indicate changes in

the level of control, with higher selectivity indicating enhanced control or capacity for control." (33)

Barnes (2022)

- Criminal territorial control = "the degree to which an OCG [organized criminal group] faces a threat to their exclusive access to a delimited geographic area." (795)
- "[U]nlike territorial control established by insurgent or rebel groups, criminal territorial control does not necessarily come at the expense of the state. In fact, criminal groups are perfectly content to exist within and even work with the state so long as they can continue their illicit activities. Instead, criminal territorial control is almost entirely focused on ensuring their exclusive access and activities vis-a-vis other criminal groups. Such control allows them to monopolize illicit markets, multiply their economic interests, and expand their political and social influence within those areas." (794)
- Ethnographic fieldwork, participant observation, and interviews with gang members and civilians in the favelas of Rio de Janeiro → coding gang territories across neighborhoods.

Carter, Kaplan and Schultz (2022)

- Territorial claims are the regions that groups themselves seek to control and govern as independent polities. Groups with 'fuzzy' claims that do not follow administrative boundaries or clear geographic features \longrightarrow attack more around their envisioned state's border. Groups with ethnically heterogeneous regions or fragmented movements \longrightarrow violence concentrates within the claimed region for the sake of establishing control. Unified movements \longrightarrow coercive attacks in the national capital.
- Rebels' territorial claims were mapped using GIS tools and sources documenting areas claimed.

Haass and Ottmann (2022)

• After war, rebels target pre-electoral benefits to their wartime constituencies, where people share their grievances, support, self-interests, and security considerations. To distribute resources, rebel parties rely on wartime networks.

Kikuta (2022)

• Empirical findings are sensitive to areal units chosen. We could define conflict zones as small regions around event points, as administrative units within which events occur, or as broader regions containing rebels' constituencies. A conflict zone is "a summary function that maps locations and other substantive information onto the presence/absence of conflict events" and "a concise representation of the geographic distribution of conflict." (98-99)

• A one-class support vector machine (OCSVM)—an unsupervised machine learning method commonly used for outlier detection—is used to define conflict zones from conflict event data.

Liu (2022)

- Control during war matters in the postwar period too. Rebels leverage strong ties to encourage community-led reconstruction in wartime strongholds. These regions receive fewer state resources, since control is already strong. In unsecured terrain, rebel governments bolster control by deploying loyal bureaucrats and channelling state development resources. In rival strongholds, cooptation is less efficient and rebel governments channel military resources to break rivals' local ties, eschewing development in the short-term.
- Coding of territorial control is based on archival and ethnographic reports, and is mapped onto the district-level.

Schouten (2022)

- Roadblock politics = "actors impose themselves on strategic points of passage in flows of people and goods, to derive power from the capacity to disrupt this movement." (2) We can also think of this as "sovereignty on a shoestring." "Politico-military actors of all stripes focus their efforts disproportionately on trade routes, and roadblocks are a primary means of financing the exploits of many Central African armed groups—particularly so if, like M23, they don't control much mineral-rich territory." (4)
- Conventional models of state formation emphasize control over people and territory as the central element of sovereignty. An alternative logic prevails in Central Africa, where control over flows of people and goods is paramount, i.e., logistical power. Roadblocks serve as tools to impose and resist political authority. Roadblocks are most effective where capital accumulates in trade more than in production.
- "To be sure, roadblocks can also function as vehicles of territorial control. If a roadblock is situated on the only access road to a village or mining site, it can be said that that roadblock encodes exclusive territorial control, by enabling to selectively withhold and grant access." (136)
- The author helped construct the DIIS/IPIS roadblock database covering the Democratic Republic of the Congo and the Central African Republic. This represents a GIS map of roadblocks. Interviews are the other major source of data.

Stoelinga (2022)

- "Conceptually, the occupation—interchangeably called rule or governance—is defined as the territorial control of a rebel group and their actions towards civilians that live in that area. In this study, this specifically implies the imposition of anti-educational rules" (1). Boko Haram occupation reduces school attendance.
- "[D]ata from ACLED is used to document where and when (non-)violent transfer of territory to Boko Haram occurred. Second, the data from ACLED is cross-referenced with maps of the IOM. These maps depicts the areas that were fully and partially under Boko Haram control in January 2015." (13)

Welsh (2022)

- Where a militant group controls territory, competition from rival groups \longrightarrow civilian victimization to signal strength and punish or deter defection. In controlled regions where a group does not face competition, groups refrain from civilian victimization.
- Territorial control is measured at the 0.5 decimal degree grid cell level using ACLED event data. "To determine whether or not a militant group has territorial control, I use the following ACLED events: battle (no change of territory or non-state actor overtakes territory); headquarters or base established; strategic development; and non-violent transfer of territory. With this, I develop a binary measure for control in which a value of 1 is given if a militant group is assigned to any of the listed events in a specific cell, and 0 otherwise. ... A value of 1 is assigned in the subsequent cell year units until the government overtakes territory. To account for contestation, I assign a value of 0 where there is more than one change in territorial control between the state and militant groups within a year in the same cell." (7-8)

Aponte González, Hirschel-Burns and Uribe (2023)

- Communities controlled by a single armed actor suffer high levels of civilian victimization on par with areas of active contestation. Communities controlled by armed groups that form pacts to rule jointly are less violent. In single control areas, rebels commit governing violence to punish crimes and enact socioeconomic order. Under pacted control, economic incentives guiding pact formation disincentivize civilian victimization.
- "We define territorial control as being comprised of two jointly necessary conditions. First, an armed group must exercise a monopoly on violence in a defined geographic area. This involves using either violence or the threat of violence to dominate an area. This does not necessarily mean that the area will contain no opposing combatants or preclude the possibility that opposing combatants will sometimes attack from outside the area, but rather that opposing armed groups cannot establish a stable presence. Second, armed groups must at least minimally regulate some aspect of social life through coercion. This regulation of social life can be very narrow, such as taxing

a single crop or only punishing murderers, but a minimal level of regulation of social life is a necessary feature of territorial control: territories are comprised of people, and to exercise control armed groups must hold some coercive power over the territory's inhabitants." (5)

• "Territorial control is most precisely measured through in-depth qualitative research. While other methods may generate larger samples, the accuracy provided by qualitative sourcing is unmatched." (4)

Fortou, Johansson and Mora (2023)

- "[W]e define control as a (near) monopoly of presence by an actor, violent or otherwise, as opposed to the overlap of this presence, which Kalyvas describes as zones of intermediate or contested control and which we call dispute. ... A key aspect of territorial control and governance is the establishment of institutions, or rules, about the distribution and redistribution of land, which we call land transfer mechanisms." (206-207)
- "Territorial control by armed actors is notoriously hard to measure using standard conflict data, since the absence of direct violence can sometimes mean control by a single actor... [a]s an alternative, we use a wealth of qualitative field data from focus groups, interviews, and structured social cartography to assess control and dispute by different armed actors." (205)

Ibañez et al. (2023)

• Surveys and focus group discussions were used to identify areas of armed group presence over the period from 2000-2010 in Colombia. "The information collected in the community questionnaire in 2010 allowed us to identify communities with prolonged presence of non-state armed actors between 2000 and 2010. We contacted community leaders before starting fieldwork to find out whether armed groups had been present for at least six consecutive months during the conflict, a fact reported in 35 communities. We visited these communities and identified specific individuals with in-depth local knowledge to participate in key informant interviews, historic memory workshops, and quantitative surveys." (9)

Waterman (2023)

• Territorial control is not necessarily a prerequisite for rebel governance. United Liberation Front of Assam (ULFA) insurgents used social embeddedness to exert social influence without overtly controlling territory.

References for Supplementary Materials

- Anders, Therese. 2020. "Territorial control in civil wars: Theory and measurement using machine learning." Journal of Peace Research 57(6):701–714.
- Aponte González, Andrés F., Daniel Hirschel-Burns and Andres D. Uribe. 2023. "Contestation, Governance, and the Production of Violence Against Civilians: Coercive Political Order in Rural Colombia." *Journal of Conflict Resolution* pp. 1–26.
- Arjona, Ana. 2016. *Rebelocracy: Social Order in the Colombian Civil War*. Cambridge University Press.
- Asal, Victor and Amira Jadoon. 2020. "When women fight: unemployment, territorial control and the prevalence of female combatants in insurgent organizations." Dynamics of Asymmetric Conflict 13(3):258–281.
- Asal, Victor and Robert U. Nagel. 2021. "Control over Bodies and Territories: Insurgent Territorial Control and Sexual Violence." Security Studies 30(1):136–158.
- Baczko, Adam, Gilles Dorronsoro and Arthur Quesnay. 2018. Civil War in Syria: Mobilization and Competing Social Orders. Cambridge University Press.
- Bahiss, Ibraheem, Ashley Jackson, Leigh Mayhew and Florian Weigand. 2022. "Rethinking armed group control: Towards a new conceptual framework." *Centre for the Study of Armed Groups* pp. 1–53.
- Barnes, Nicholas. 2022. "The Logic of Criminal Territorial Control: Military Intervention in Rio de Janeiro." *Comparative Political Studies* 55(5):789–831.
- Berg, Louis-Alexandre and Marlon Carranza. 2018. "Organized criminal violence and territorial control: Evidence from northern Honduras." Journal of Peace Research 55(5):566–581.
- Berman, Eli, Jacob N. Shapiro and Joseph H. Felter. 2011. "Can Hearts and Minds Be Bought? The Economics of Counterinsurgency in Iraq." Journal of Political Economy 119(4):766–819.
- Bhavnani, Ravi, Dan Miodownik and Hyun Jin Choi. 2011. "Three Two Tango: Territorial Control and Selective Violence in Israel, the West Bank, and Gaza." *Journal of Conflict Resolution* 55(1):133–158.
- Bhavnani, Ravi and Hyun Jin Choi. 2012. "Modeling Civil Violence in Afghanistan: Ethnic Geography, Control, and Collaboration." *Complexity* 17(6):42–51.
- Biddle, Stephen. 2021. Nonstate Warfare: The Military Methods of Guerillas, Warlords, and Militias. Princeton University Press.

- Blair, Christopher W., Erica Chenoweth, Michael C. Horowitz, Evan Perkoski and Philip B.K. Potter. 2022. "Honor Among Thieves: Understanding Rhetorical and Material Cooperation Among Violent Nonstate Actors." *International Organization* 76(1):164–203.
- Blair, Christopher W., Michael C. Horowitz and Philip B.K. Potter. 2022. "Leadership Targeting and Militant Alliance Breakdown." *Journal of Politics* 84(2):923–943.
- Breslawski, Jori. 2021. "The Social Terrain of Rebel Held Territory." Journal of Conflict Resolution 65(2-3):453–479.
- Buhaug, Halvard and Scott Gates. 2002. "The Geography of Civil War." Journal of Peace Research 39(4):417–433.
- Carter, David B., Andrew C. Shaver and Austin L. Wright. 2019. "Places to Hide: Terrain, Ethnicity, and Civil Conflict." *The Journal of Politics* 81(4):1446–1465.
- Carter, David B., Morgan L. Kaplan and Kenneth A. Schultz. 2022. "The Geography of Separatist Violence." *International Studies Quarterly* 66(3):1–14.
- Ch, Rafael, Jacob Shapiro, Abbey Steele and Juan F. Vargas. 2018. "Endogenous Taxation in Ongoing Internal Conflict: The Case of Colombia." American Political Science Review 112(4):996–1015.
- Ch, Rafael, Juan F. Vargas and Michael Weintraub. 2019. "Territorial Control and Economic Growth: Quasi-Experimental Evidence from the Colombian Insurgency." Unpublished Manuscript pp. 1–50.
- Daly, Sarah Zukerman. 2016. Organized Violence After Civil War: The Geography of Recruitment in Latin America. Cambridge University Press.
- de la Calle, Luis. 2017. "Compliance vs. constraints: A theory of rebel targeting in civil war." Journal of Peace Research 54(3):427–441.
- de la Calle, Luis and Ignacio Sánchez-Cuenca. 2012. "Rebels without a Territory: An Analysis of Nonterritorial Conflicts in the World, 1970–1997." *Journal of Conflict Resolution* 56(4):580–603.
- de la Calle, Luis and Ignacio Sánchez-Cuenca. 2015. "How Armed Groups Fight: Territorial Control and Violent Tactics." *Studies in Conflict & Terrorism* 38(10):795–813.
- Dugan, Laura, Gary LaFree, Luis de la Calle, Ignacio Sánchez-Cuenca, Victor Asal, Michael G. Findley and Joseph K. Young. 2012. "Killing Civilians or Holding Territory? How to Think about Terrorism." *International Studies Review* 14(3):475–497.
- Fortou, Jose Antonio, Sandra Lillian Johansson and Juan Carlos Muñoz Mora. 2023. "Control, Dispute, and Concentration of Land During Civil War: Evidence from Colombia." *International Interactions* 49(2):201–236.

- Gohdes, Anita R. 2020. "Repression Technology: Internet Accessibility and State Violence." American Journal of Political Science 64(3):488–503.
- Guevara, Che. 1998. Guerrilla Warfare. University of Nebraska Press.
- Haass, Felix. 2021. "Insurgency and Ivory: The Territorial Origins of Illicit Resource Extraction in Civil Conflicts." *Comparative Political Studies* 54(8):1327–1361.
- Haass, Felix and Martin Ottmann. 2022. "The Effect of Wartime Legacies on Electoral Mobilization after Civil War." *The Journal of Politics* 84(3):1322–1336.
- Hatlebakk, Magnus. 2010. "Maoist Control and Level of Civil Conflict in Nepal." South Asia Economic Journal 11(1):99–110.
- Holtermann, Helge. 2019. "Diversionary Rebel Violence in Territorial Civil War." International Studies Quarterly 63(2):215–230.
- Humphreys, Macartan and Jeremy M. Weinstein. 2006. "Handling and Manhandling Civilians in Civil War." American Political Science Review 100(3):429–447.
- Ibañez, Ana María, Ana Arjona, Julián Arteaga, Juan C. Cárdenas and Patricia Justino. 2023. "The Long-Term Economic Legacies of Rebel Rule in Civil War: Micro Evidence From Colombia." *Journal of Conflict Resolution* pp. 1–31.
- Idler, Annette. 2019. Borderland Battles: Violence, Crime, and Governance at the Edges of Colombia's War. Oxford University Press.
- Ishiyama, John and Michael Widmeier. 2013. "Territorial Control, Levels of Violence, and the Electoral Performance of Former Rebel Political Parties After Civil Wars." *Civil Wars* 15(4):531–550.
- Jentzsch, Corinna. 2022. Violent Resistance: Militia Formation and Civil War in Mozambique. Cambridge University Press.
- Johnston, Patrick. 2008. "The Geography of Insurgent Organization and its Consequences for Civil Wars: Evidence from Liberia and Sierra Leone." *Security Studies* 17(1):107–137.
- Kalyvas, Stathis N. 2006. The Logic of Violence in Civil War. Cambridge University Press.
- Kalyvas, Stathis N. and Matthew Adam Kocher. 2009. "The Dynamics of Violence in Vietnam: An Analysis of the Hamlet Evaluation System (HES)." Journal of Peace Research 46(3):335–355.
- Kent, Robert B. 1993. "Geographical Dimensions of the Shining Path Insurgency in Peru." Geographical Review 83(4):441–454.

- Kikuta, Kyosuke. 2022. "A new geography of civil war: a machine learning approach to measuring the zones of armed conflicts." *Political Science Research and Methods* 10(1):97–115.
- Kilcullen, David. 2010. Counterinsurgency. Oxford University Press.
- Kocher, Matthew Adam, Thomas B Pepinsky and Stathis N. Kalyvas. 2011. "Aerial Bombing and Counterinsurgency in the Vietnam War." *American Journal of Political Science* 55(2):201–218.
- Kubota, Yuichi. 2011. "Territorial Control and Recruitment in the Cambodian Civil War, 1970–75: Case Studies in Battambang Province." Asian Security 7(1):1–26.
- Li, Xi, Rui Zhang, Chengquan Huang and Deren Li. 2015. "Detecting 2014 Northern Iraq Insurgency using night-time light imagery." *International Journal of Remote Sensing* 36(13):3446–3458.
- Liu, Shelley X. 2022. "Control, Coercion, and Cooptation: How Rebels Govern after Winning Civil War." World Politics 74(1):37–76.
- Matanock, Aila M. and Miguel García-Sánchez. 2018. "Does Counterinsurgent Success Match Social Support? Evidence from a Survey Experiment in Colombia." *The Journal of Politics* 80(3):800–814.
- McColl, Robert W. 1967. "A Political Geography of Revolution: China, Vietnam, and Thailand." *Journal of Conflict Resolution* 11(2):153–167.
- McColl, Robert W. 1969. "The Insurgent State: Territorial Bases of Revolution." Annals of the Association of American Geographers 59(4):613–631.
- Müller-Crepon, Carl, Philipp Hunziker and Lars-Erik Cederman. 2021. "Roads to Rule, Roads to Rebel: Relational State Capacity and Conflict in Africa." *Journal of Conflict Resolution* 65(2-3):563–590.
- Opper, Marc. 2020. *People's Wars in China, Malaya, and Vietnam*. University of Michigan Press.
- Osorio, Javier and Alejandro Beltran. 2020. "Enhancing the Detection of Criminal Organizations in Mexico using ML and NLP." International Joint Conference on Neural Networks (IJCNN) pp. 1–7.
- Oswald, Christian, Melanie L. Sauter, Sigrid Weber and Rob Williams. 2022. "Under the Roof of Rebels: Civilian Targeting After Territorial Takeover in Sierra Leone." *International Studies Quarterly* 64(2):295–305.
- Petersson, Emil. 2023. "Airpower and territorial control: Unpacking the NATO intervention in Libya." Conflict Management and Peace Science pp. 1–24.

- Piazza, James A. and Michael J. Soules. 2021. "Terror after the Caliphate: The Effect of ISIS Loss of Control over Population Centers on Patterns of Global Terrorism." Security Studies 30(1):107–135.
- Race, Jeffrey. 1973. War Comes to Long An: Revolutionary Conflict in a Vietnamese Province. University of California Press.
- Reeder, Bryce W. 2018. "The Political Geography of Rebellion: Using Event Data to Identify Insurgent Territory, Preferences, and Relocation Patterns." *International Studies Quar*terly 62(3):696–707.
- Rubin, Michael A. 2020. "Rebel Territorial Control and Civilian Collective Action in Civil War: Evidence from the Communist Insurgency in the Philippines." Journal of Conflict Resolution 64(2-3):459–489.
- Rueda, Miguel R. 2017. "Popular Support, Violence, and Territorial Control in Civil War." Journal of Conflict Resolution 61(8):1626–1652.
- Scaff, Alvin H. 1955. The Philippine Answer to Communism. Stanford University Press.
- Schouten, Peer. 2022. Roadblock Politics: The Origins of Violence in Central Africa. Cambridge University Press.
- Schutte, Sebastian. 2017. "Geographic determinants of indiscriminate violence in civil wars." Conflict Management and Peace Science 34(4):380–405.
- Sexton, Renard. 2016. "Aid as a Tool against Insurgency: Evidence from Contested and Controlled Territory in Afghanistan." American Political Science Review 110(4):731–749.
- Shesterinina, Anastasia. 2021. Mobilizing in Uncertainty: Collective Identities and War in Abkhazia. Cornell University Press.
- Staniland, Paul. 2012. "States, Insurgents, and Wartime Political Orders." Perspectives on Politics 10(2):243–264.
- Stewart, Megan A. 2021. Governing for Revolution: Social Transformation in Civil War. Cambridge University Press.
- Stewart, Megan A. and Yu-Ming Liou. 2017. "Do Good Borders Make Good Rebels? Territorial Control and Civilian Casualties." The Journal of Politics 79(1):284–301.
- Stoelinga, Nicole. 2022. "Education during conflict: the effect of territorial occupation by insurgents on schooling." Unpublished Manuscript pp. 1–50.
- Tao, Ran, Daniel Strandow, Michael Findley, Jean-Claude Thill and Walsh James. 2016. "A hybrid approach to modeling territorial control in violent armed conflicts." *Transactions* in GIS 20(3):413–425.

Tilly, Charles. 1978. From Mobilization to Revolution. Random House.

- Tse-tung, Mao. 1989. On Guerrilla Warfare. U.S. Marine Corps Combat Development Command.
- Wahman, Michael and Edward Goldring. 2020. "Pre-election violence and territorial control: Political dominance and subnational election violence in polarized African electoral systems." Journal of Peace Research 57(1):93–110.
- Waterman, Alex. 2023. "The shadow of 'the boys:' rebel governance without territorial control in Assam's ULFA insurgency." Small Wars & Insurgencies 34(1):279–304.
- Weidmann, Nils B. 2009. "Geography as Motivation and Opportunity Group Concentration and Ethnic Conflict." *Journal of Conflict Resolution* 53(4):526–543.
- Weinstein, Jeremy M. 2006. Inside Rebellion: The Politics of Insurgent Violence. Cambridge University Press.
- Welsh, Blair. 2022. "Your space or mine? Competition, control, and the spatial profile of militant violence against civilians." *Journal of Peace Research* pp. 1–16.
- Whittlesey, Derwent. 1935. "The Impress of Effective Central Authority upon the Landscape." Annals of the Association of American Geographers 25(2):85–97.
- Wimmer, Andreas and Chris Miner. 2020. "The Strategic Logic of Ethnoterritorial Competition: Violence against Civilians in Africa's Civil Wars." Journal of Global Security Studies 5(3):389–407.
- Woldemariam, Michael. 2018. Insurgent Fragmentation in the Horn of Africa: Rebellion and its Discontents. Cambridge University Press.
- Wright, Austin L. 2024. "The Economic Origins of Territorial Control." Unpublished Manuscript p. 1.