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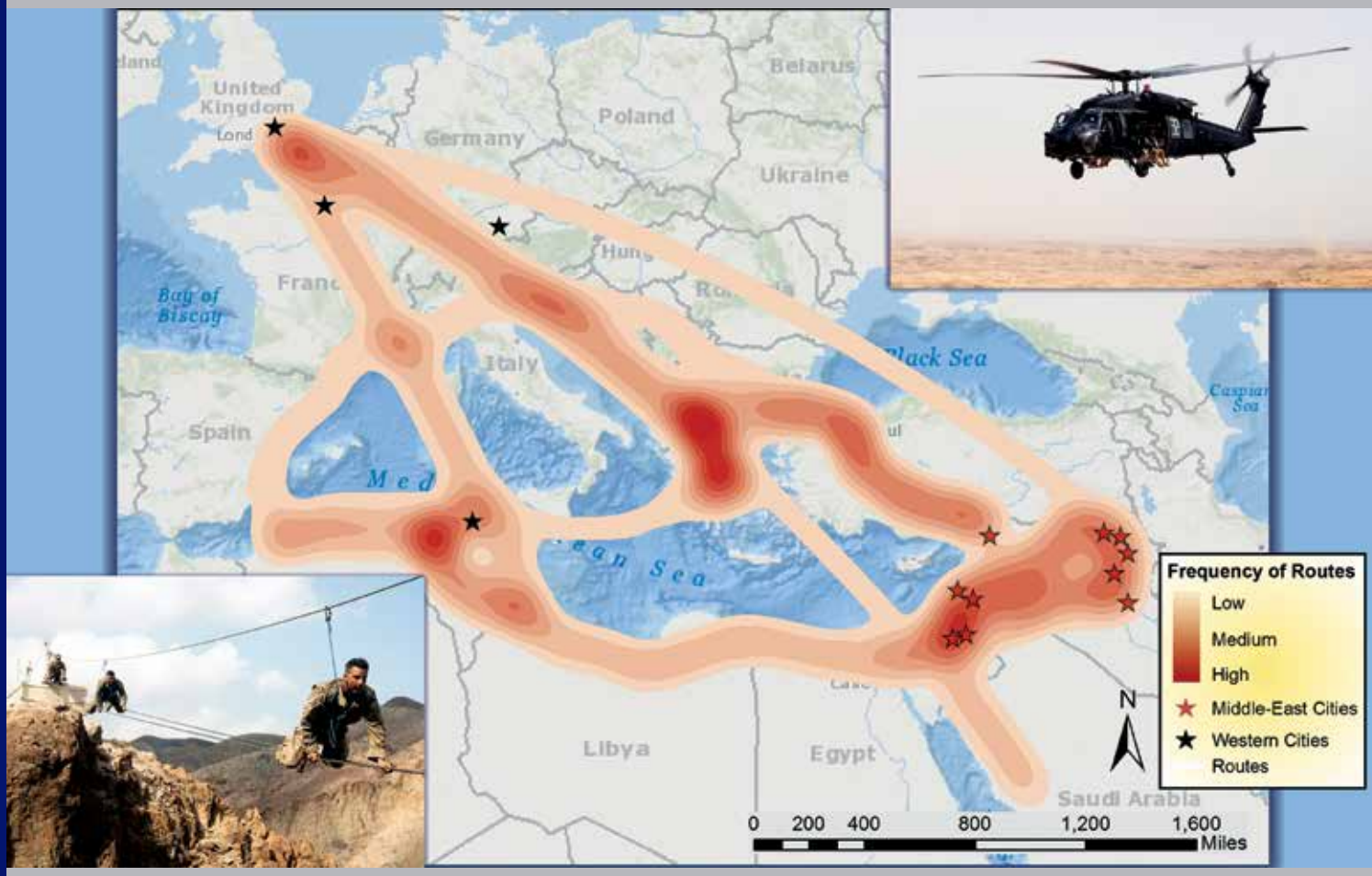

Re-Evaluating Special Operations Forces-Led Counterterrorism Efforts

By Barnett S. Koven

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On the cover:

Lower Left. U.S. Army Soldiers from the 1st Battalion, 124th Infantry Regiment, assigned to Combined Joint Task Force-Horn of Africa, make their way across a portion of the mountain obstacle course, as part of the final day of the French Marines Desert Survival Course, Oct. 10, 2016, at Arta Plage, Djibouti. Approximately 46 U.S. Army Soldiers with French Marines completed several tasks during the survival course, including desert operations, combat lifesaving skills, weapons training, survival cooking, how to decontaminate water, and water and mountain obstacle courses. Photo by U.S. Air Force Staff Sgt. Tiffany Denault

Upper Right. An Army MH-60L Black Hawk helicopter transports Iraqi Special Operations Forces (ISOF) and Soldiers assigned to Special Operations Task Force-North (SOTF-N) across the deserts of Northern Iraqi in July 2010. Photo by U.S. Navy Mass Communication Specialist 2nd Class Aaron Burden/Public Domain

Center. Map depicts probabilistic diffusion of terrorist fighters. Graphic by the Geospatial Research Unit at the University of Maryland's National Consortium for the Study of Terrorism and Responses to Terrorism (START)

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About the Author

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Re-evaluating SOF-led Counterterrorism Efforts[1]

Introduction

While the 2018 National Defense Strategy (NDS) clearly articulates that near-peer competition is the primary national security concern for the U.S. Government (USG), terrorism remains a persistent threat. Indeed, the Global Terrorism Database (GTD) documented over 9,600 terrorist attacks perpetrated in 2018 alone.[2] Moreover, of the 52 active conflicts captured in the 2018 release of the Uppsala Conflict Data Program, 49 were between states and violent non-state actors. Two of the three remaining conflicts were between the governments of India and Pakistan, and Iran and Israel, respectively.[3] Both of these dyads entailed extensive state use of terrorist proxies.

To the extent that terrorism is likely to remain a relevant focus for U.S. national security practitioners, it is reasonable to expect that Special Operations Forces (SOF) will continue to be involved in counterterrorism (CT). Not only is CT one of 12 core U.S. Special Operations Command activities, but policymakers tend to disproportionately look to the armed forces when it comes to CT.[4] This is the case as the U.S. Department of Defense is resourced and trained to rapidly mobilize in response to complex problems like terrorism. SOF, in particular, are postured for especially rapid mobilization in response to terrorist threats.

Given the extensive use of the armed forces, and SOF specifically for CT, it is not surprising that the USG prefers kinetic responses to terrorism. Indeed, between 2002 and 2017, more than 80 percent of the USG CT budget was directed toward agencies principally engaged in military or law enforcement efforts to disrupt terrorism.[5] Narrowing focus to overseas CT efforts only serves to increase this preference. Yet, despite this reality, rigorous evaluations of the effectiveness of

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1. Portions of this text are reproduced and/or adapted from Barnett S. Koven, "Two to Tango: Government and Terrorist Group Actions in Colombia," Report to the U.S. Department of Homeland Security Science and Technology Office of University Programs (College Park, MD: START, July 2018). Special thanks is due to Rachel A. Gabriel who provided expert research assistance and helped with the negative binomial regression analysis for the aforementioned text. In addition, former Director of Strategic Studies at the Colombian Ministry of National Defense, César Restrepo, and then Representative, now Ambassador Federico Hoyos proved invaluable in helping me obtain access to the necessary data for this study. Professor Alfonso Aza and Capitán de Navío (Colombian Navy, Retired) Alberto Godoy deserve special mention for sharing their invaluable insights. Nevertheless, the views and conclusions contained in this occasional paper are those of the author alone, and should not be interpreted as necessarily representing the official policies, either expressed or implied, of the U.S. Government.

2. "Global Terrorism Database," The National Consortium for the Study of Terrorism and Responses to Terrorism, accessed 26 January 2020, https://www.start.umd.edu/gtd/access/.

3. "Armed Conflict Dyadic Dataset," version 19.1, The Uppsala Conflict Data Program, accessed 26 January 2020, https://ucdp.uu.se/downloads/.

4. "Core Activities," United States Special Operations Command, accessed 26 January 2020, https://www.socom.mil/about/core-activities.

5. Authors' calculations from Stimson Center, "Counterterrorism Spending: Protecting America While Promoting Efficiencies and Accountability," May 2018. This calculation likely systematically undercounts disruption-focused CT efforts as it omits the CT-relevant portion of the Intelligence Community's classified budget.

kinetic approaches to CT are lacking. Specifically, in a review of over 20,000 studies on terrorism, Cynthia Lum, Leslie W. Kennedy, and Alison Sherley identified just seven publications that they characterized as being even "moderately rigorous evaluations of counterterrorism programs."[6] While those seven articles cover diverse approaches to countering terrorism (e.g., airport screenings to prevent hijackings, political interventions against the ETA), not one focuses specifically on the role of SOF in countering terrorism.[7] This occasional paper aims to fill this gap by offering a rigorous evaluation of SOF-led CT efforts. In doing so, it proceeds in five parts. The first section offers a literature review of current studies on CT, the second introduces the research hypotheses, and the third section focuses on methodology. The penultimate section presents and discusses the results, and the final section concludes.

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Current Studies on Counterterrorism

Existing academic and policy literature on terrorism is immense. Indeed, one study approximates 1.34 million academic articles and books were written on the subject.[8] Within these, extensive attention is directed toward studying terrorist motives, attacks, and organizational structures. Nevertheless, two important gaps remain. Specifically, the aforementioned study found less than 82,000 (approximately 6 percent the size of the canon devoted to terrorism) articles and books devoted to the study of CT.[9] Consequently, the overwhelming majority of existing explorations are myopic in nature, addressing terrorism (or less frequently, CT) in isolation from CT (terrorism). Relatedly, these studies do not account for the geographic dispersion of terrorism resulting from CT activities.

In a similar vein, existing research either focuses on terrorist groups in isolation from the

6. Cynthia Lum, Leslie W. Kennedy, and Alison Sherley, "The Effectiveness of Counter-terrorism Strategies," The Campbell Collaboration, 1 January 2006, https://campbellcollaboration.org/better-evidence.html/effectiveness-of-counter-terrorism-strategies.html.

7. Carlos Pestana Barros, "An Intervention Analysis of Terrorism: The Spanish ETA Case," *Defense and Peace Economics* 14, no. 6 (2003); Bryan Brophy-Baermann and John A. C. Conybeare, "Retaliating Against Terrorism: Rational Expectations and the Optimality of Rules Versus Discretion," *American Journal of Political Science* 38, no. 1 (February 1994); Jon Cauley and Eric Iksoon Im, "Intervention Policy Analysis of Skyjackings and Other Terrorist Incidents," *American Economic Review* 78, no. 2 (May 1988); Walter Enders and Todd Sandler, "The Effectiveness of Antiterrorism Policies: A Vector-Autoregression-Intervention Analysis," *American Political Science Review* 87, no. 4 (December 1993); Walter Enders, Todd Sandler, and Jon Cauley, "UN Conventions, Terrorism, and Retaliation in the Fight Against Terrorism: An Econometric Evaluation," *Terrorism and Political Violence* 2, no. 1 (1990); Walter Enders and Todd Sandler, "Is Transnational Terrorism Becoming More Threatening? Journal of Conflict Resolution," *The Journal of Conflict Resolution* 44, no. 3 (June 2000); William M. Landes, "An Economic Study of U.S. Aircraft Hijackings, 1961-1976," *Journal of Law and Econometrics* 21, no. 1 (April 1978).

8. Barnett S. Koven, "Counterterrorism Research Agenda," The National Consortium for the Study of Terrorism and Responses to Terrorism (College Park, MD: START, 2018).

9. Koven, "Counterterrorism Research Agenda."

government[10] or incorporates qualitative evidence from a single government policy or action from which to draw conclusions.[11] Other quantitative studies similarly assess the impact of several well-documented policies and interventions on terrorist attacks.[12] While these latter studies focus on government actions, they do not consider terrorist activities in detail while doing so.

Moreover, existing research on geospatial diffusion of insurgencies resulting from counterinsurgency (COIN) efforts observed both internal and international dispersion of violence in civil wars.[13] Evidence suggests that terrorist groups also change their spatial patterns of attacks as part of strategic planning.[14] Nevertheless, literature on conflict diffusion relating specifically to terrorism and CT is relatively sparse. Also, extant research has not accounted for geospatial dispersion of terrorist activity following government actions. It is reasonable to suspect that some government offensives may dislodge terrorist groups from traditional strongholds.[15] While this may seem positive, it could also result in a widening in the geospatial distribution and/or an increase in the intensity of attacks.[16]

Research Hypotheses

This occasional paper posits that kinetic actions undertaken by the state to kill, capture, or otherwise disrupt terrorist groups are ineffective in isolation. This is the case for at least two reasons. First, while kinetic actions may succeed in disrupting a specific plot or other activities in the immediate term, they have little long-term effect on the ability of terrorist groups to effectively operate and thus perpetrate future attacks. Indeed, government actions may serve to incite future attacks. For example, even Operation ANORI—perhaps the most successful Colombian Army CT operation—which killed the vast majority of terrorist fighters belonging to *Ejército de Liberación Nacional* (ELN)

10. See for example, Victor Asal and Karl Rethemeyer, "The Nature of the Beast: Organizational Structures and the Lethality of Terrorist Attacks," *The Journal of Politics* 70, no. 2 (April 2008); Robert A. Pape, "The Strategic Logic of Suicide Terrorism," *American Political Science Review* 97, no. 3 (August 2003).

11. Lum, Kennedy, and Shirley, "The Effectiveness of Counter-terrorism Strategies."

12. See for example, Garry LaFree, Laura Dugan, and Raven Korte, "The Impact of British Counterterrorist Strategies on Political Violence in Northern Ireland: Comparing Deterrence and Backlash Models," *Criminology* 47, no. 1 (October 2009); Keren Sharvit, et al., "The Effects of Israeli Use of Coercive and Conciliatory Tactics on Palestinian's Use of Terrorist Tactics: 2000-2006," Dynamics of Asymmetric Conflict: Pathways Toward Terrorism and Genocide 6, nos. 1-3 (13 September 2013).

13. Kristian Skrede Gleditsch, "Transnational Dimensions of Civil War," *Journal of Peace Research* 44, no. 3 (May 2007); Barnett S. Koven, "Development Assistance and the Diffusion of Insurgent Violence" (Ph.D. diss., The George Washington University, 2017).

14. Gary LaFree, Laura Dugan, Min Xie, and Piyusha Singh, "Spatial and Temporal Patterns of Terrorist Attacks by ETA 1970 to 2007," *Journal of Quantitative Criminology* 28, no. 1 (March 2012).

15. Todd Sandler and Daniel G. Arce M., "Terrorism & Game Theory," *Simulation & Gaming* 34, no. 3 (September 2003).

16. See for example, Stathis N. Kalyvas, *The Logic of Violence in Civil Wars* (New York: Cambridge University Press, 2006).

(the National Liberation Army), simply saw the group rebuild and grow to new heights.[17] Looking wider, quantitative research conducted by Patrick B. Johnston and Anoop K. Sarbahi uncovered a statistically significant increase in terrorist attacks in the months immediately following government CT actions due to grievances resulting from the CT activities (although it is worth noting that their research was limited to terrorist targets prosecuted by unmanned aerial systems).[18] Boaz Ganor postulated that terrorism is a function of both the *motivation and capabilities* of a violent extremist organization (VEO).[19] While kinetic CT efforts degrade capabilities, they may increase the motivation of VEOs to rebuild capacity.

Indeed, government actions may serve to incite future attacks.

Based on these findings, it stands to reason that CT actions that are successful—in the sense that they kill or capture terrorist targets—are most likely to generate grievances and serve terrorist propaganda and recruitment needs. Thus, the first of two hypotheses is offered:

> *H1: Kinetic actions leading to the death or capture of terrorist fighters will increase future terrorist attacks.*

Second, kinetic CT actions may appear effective insofar as terrorist violence in the immediate vicinity of the CT actions decreases. However, if terrorism is merely displaced to other areas, this is not truly indicative of success. The absence of sufficient spatial analyses in the evaluation of CT efforts only serves to further this likelihood. Importantly, it also amplifies the risk of policymakers erroneously concluding CT efforts successful.

Programs like CompStat, (wherein crime statistics are used to hold senior law enforcement professionals accountable for changes in crime rates in their precincts), as well as the analysis of data sources relevant to COIN (like Significant Activities Reports at the brigade and battalion levels) suggest it is especially likely that this type of misinterpretation is occurring for CT. Qualitative evidence related to CT efforts in Peru similarly show that the Sendero Luminoso (Shining Path) only moved into the coca producing Upper Huallaga Valley as a result of mounting Peruvian military pressures against their traditional strongholds in the southern highlands. Unfortunately, the windfall profits that accrued from their initially accidental involvement in narcotrafficking enabled the group to invest in advanced weapons, communications equipment, and training—all of

17. Barnett S. Koven, "CT Vignette: From Leftist Insurgents to Narco-terrorists," Lecture, Contemporary Irregular Warfare Course, U.S. Air Force Special Operations School, Fort Hood, 15 May 2018; Barnett S. Koven, "From Leftist Insurgents to Narco-terrorists: The Evolution of Subversion in the USSOUTHCOM AOR," Lecture, Dynamics of International Terrorism Course, U.S. Air Force Special Operations School, Hurlburt Field, 1 March 2018.

18. Patrick B. Johnston and Anoop K. Sarbahi, "The Impact of U.S. Drone Strikes on Terrorism in Pakistan," *International Studies Quarterly* 60, no. 2 (June 2016).

19. Boaz Ganor, "Terrorist Organization Typologies and the Probability of a Boomerang Effect," *Studies in Conflict and Terrorism* 31, no. 4 (April 2008).

which acted as force multipliers.[20] Combined, these lead to a second research hypothesis:

> *H2: Kinetic actions leading to the death or capture of terrorist fighters may reduce terrorist violence in the immediate area of the actions; however, as terrorist fighters are displaced to surrounding areas, violence will increase there.*

To explore these hypotheses, this study looked toward Colombia—home of one of the world's longest running internal conflicts. In 1964, civil strife erupted between the Marxist-Leninist *Fuerzas Armadas Revolucionarias de Colombia* (FARC) (Revolutionary Armed Forces of Colombia), ELN, and the Colombian government. Subsequently, between 1967 and 1984, four additional leftist subversive groups emerged: *Movimiento 19 de Abril* (M-19) (the 19th of April Movement), *Ejército Popular de Liberación* (EPL) (the Popular Liberation Army), *Movimiento Armado Quintín Lame* (MAQL) (the Quintín Lame Armed Movement), and *Partido Revolucionario de los Trabajadores de Colombia* (PRT) (the Workers Revolutionary Party of Colombia). In addition, the *Autodefensas Unidas de Colombia* (AUC) (United Self-Defense Forces of Colombia) coalesced from a diverse group of rightist paramilitary forces in 1997. The M-19, EPL, MAQL, and PRT all demobilized between 1989 and 1991, while the AUC demobilized in 2006, and the FARC in 2017. The ELN and the Colombian government have engaged in fraught negotiations in recent years, but prospects for a peace deal during President Iván Duque Márquez' tenure in office (2018-2022) appear extremely slight.[21]

While the FARC proved adept at conventional military operations, they only did so for a short period of time. It was only after their rapid growth—fueled by profits from narcotrafficking in the 1980s—that the FARC experienced conventional (versus asymmetric) military success. In 2003, the Colombian government initiated *Plan Patriota* (Plan Patriot), the largest military campaign against the subversives to date. This was succeeded by *Espada de Honor* (Sword of Honor), an even more ambitious military intervention. These initiatives forced the FARC to revert back to terrorist tactics, since the group proved no match for the now reorganized, U.S.-backed Colombian military.[22]

This conflict represents an ideal case study for two reasons. First, the extended duration of the conflict provides an array of observations of (and variation in) confrontational behavior, such

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20. Koven, "Counterterrorism Research Agenda;" Barnett S. Koven, "El resurgimiento de sendero luminoso (The Reemergence of the Shining Path)," *Air & Space Power Journal en Español* XXII, no. 2 (February 2010); Koven, "From Leftist Insurgents to Narco-terrorists;" Barnett S. Koven and Cynthia McClintock, "Cooperation and Drug Policies: Trends in Peru in the Twenty-First Century," in *Cooperation and Drug Policies in the Americas: Trends in the Twenty-First Century*, eds. Roberto Zepeda and Jonathan Rosen (Lanham, MD: Lexington Books, 2014); Barnett S. Koven and Cynthia McClintock, "The Evolution of Peru's Shining Path and the New Security Priorities in the Hemisphere," in *Reconceptualizing Security in the Americas in the Twenty-First Century*, eds. Bruce M. Bagley, Hanna Kassab, and Jonathan Rosen (Lanham, MD: Lexington Books, 2015).

21. Adriaan Alsema, "Why Peace Talks with Colombia's ELN Rebels are So Difficult," *Colombia Reports*, 9 December 2019, https://colombiareports.com/why-peace-talks-with-colombias-eln-rebels-are-so-difficult/.

22. Barnett S. Koven, "Demystifying Gray Zone Conflict: A Typology of Conflict Dyads and Instruments of Power in Colombia, 2002-present," Report to the U.S. Department of Homeland Security Science and Technology Office of University Programs and the U.S. Department of Defense Strategic Multi-Layer Assessment Branch (College Park, MD: START 06 December 2016).

as terrorist attacks and government offensives. Second, there are tomes of available data on the Colombian case, in particular.

Methodology

The two proposed research hypotheses focus on the effect of kinetic CT activities by the Colombian government on kinetic attacks by terrorists. Therefore, the dependent variable (DV), Attacks, is a count of terrorist attacks per municipality-month. This data is derived from a database of violent acts and other security indicators maintained by the Colombian Ministry of National Defense (MINDEFENSA).[23] Assessed variables were as follows:

Given that the focus of both hypotheses is on kinetic CT efforts, the independent variable (IV), Kinetic Outcomes, was used as a measure of the efficacy of kinetic raids. Classification issues precluded collecting precise data on each kinetic action undertaken by Colombian security forces. However, it was possible to obtain aggregate data at the municipality-month level on the outcome of those operations. Specifically, Kinetic Outcomes is an indexed count of the number of plots that were disrupted, terrorists captured, and terrorists demobilized. Data used to compile this index were also obtained from MINDEFENSA.[24] While it is true that unsuccessful raids—those that did not disrupt a plot, capture a terrorist, or encourage their demobilization—are not captured by this measure, these activities are less likely to have affected levels or locations of terrorist activity due to their unsuccessful nature.

Given that the population is an important center of gravity in terrorism and CT, preexisting levels of public service provisioning is incorporated into the analysis. Populations that are not receiving basic public services are more likely to be aggrieved with the government, and therefore more apt to join or assist the subversives (e.g., by providing shelter, foodstuffs, intelligence). Households in Deficit captures the percentage of households in each municipality in 2005 that were lacking one or more basic necessities, including public services such as potable water, sewage, electricity, and trash collection.[25] Naturally, the population of each municipality is also included in the analysis. Specifically, Households is the total number of households in each municipality in 2005. Both variables were derived from the 2005 *Censo General* (General Census) administered by the *Departamento Administrativo Nacional de Estadística* (DANE) (National Administrative Department of Statistics).[26]

In addition, the ethnic composition of communities is also consequential to levels of violence. Scholars have long recognized ethnolinguistic fractionalization (and more recently the relative size of ethnic minorities excluded from power) as a significant predictor of intrastate conflict and

23. "Data," Ministerio de Defensa Nacional, 2016.
24. "Data," Ministerio de Defensa Nacional.
25. Trash collection was not considered in rural areas.
26. "Censo General," Departamento Administrativo Nacional de Estadística, 2005.

violence.[27] This dynamic is especially prevalent in Colombia, where indigenous and Afro-Colombian populations are disproportionally victimized.[28] Consequently, the final peace accord between the Colombian government and the FARC includes an "Ethnic Chapter" that specifically addresses the plight of these populations.[29] As such, the variables Indigenous and Afro-Colombian were included in analyses. These variables capture the number of registered indigenous and Afro-Colombian municipalities per department in 2011 and 2010, respectively.

Force strength of the subversives affects the potential for terrorist violence. Measures of the size of terrorist forces in a given area are not publically available. However, given that both the FARC and ELN are heavily dependent on illicit activities, the size of their presence can be at least very roughly approximated by the amount of illegal economic activities occurring in a given municipality. This information was obtained from the United Nations Office on Drugs and Crime and the MINDEFENSA. Specifically, the *Sistema Integrado de Monitoreo de Cultivos Ilícitos* (SIMCI) (Integrated System for Monitoring Illicit Cultivation) utilized satellite imagery to accurately measure the cultivation of illicit crops based on their unique refractive index.[30] The variable Coca Cultivation is the number of hectares under cultivation in each municipality in 2006.[31] Figure 1 shows the author standing on a captured FARC semisubmersible used for smuggling cocaine HCL at Naval Base ARC Bolivar. This vessel, and others like it, cost an estimated US$2-3 million to build and was designed to transport a single shipment one way before being scuttled. This reality attests to the magnitude of the FARC's involvement in narcotrafficking.

However, given that both the FARC and ELN are heavily dependent on illicit activities, the size of their presence can be at least very roughly approximated by the amount of illegal economic activities occurring in a given municipality.

In addition to narcotrafficking, MINDEFENSA provided municipal-year level data on the illegal exploitation of natural resources (e.g., lumber) and mineral resources (e.g., alluvial gold)[32]

27. See for example, Joan Esteban and Ray Debraj, "Polarization, Fractionalization and Conflict," *Journal of Peace Research* 45, no. 2 (1 March 2008); James D. Fearon and David D. Latin, "Ethnicity, Insurgency, and Civil War," *American Political Science Review* 97, no. 1 (February 2003); Barnett S. Koven, Katy Lindquist, and Max Erdemandi, "Counterterrorism Net Assessment Data Structure (CT-NEADS) Project Report," Report to the Combating Terrorism Technical Support Office (CTTSO), Assistant Secretary of Defense for Special Operations/Low Intensity Conflict (ASD SOLIC) (College Park, MD: START, January 2020).

28. Gemina Sanches-Garzoli, "Colombia's Peace Process: Integrating Afro-Colombian and Indigenous Rights," Washington Office on Latin America, 16 March 2016, https://www.wola.org/analysis/colombias-peace-process-integrating-afro-colombian-and-indigenous-rights/.

29. "Final Agreement to End the Armed Conflict and Build a Stable and Lasting Peace," Presidencia de la República, 24 November 2016, http://especiales.presidencia.gov.co/Documents/20170620-dejacion-armas/acuerdos/acuerdo-final-ingles.pdf.

30. "Sistema Integrado de Monitoreo de Cultivos Ilícitos–SIMCI," United Nations Office on Drugs and Crime, n.d., https://www.unodc.org/colombia/es/simci/simci.html.

31. "Proyecto SIMCI. 2006. UNODC Colombia," United Nations Office on Drugs and Crime, 2006.

32. Technically minerals are a type of natural resource. Nevertheless, MINDEFENSA collected separate data on the illegal exploitation of minerals, versus other forms of naturally occurring resources.

Figure 1. Author on a captured FARC semisubmersible at naval base ARC Bolivar. Photo by Thomas R. Luley, Jr./Used with Permission

for the entire period under examination. Over time, both the FARC and ELN diversified their illicit portfolios placing extensive focus on lootable natural resources.[33] These are incorporated into the analysis as two additional variables: Illicit Natural Resources and Illicit Mineral Resources, respectively.[34]

Finally, Lagged Attacks is incorporated into the analysis to control for preexisting levels of violence. This is necessary for two reasons. First, government CT activities are not likely random. Rather, areas with higher levels of terrorist violence are more likely to be targeted by SOF engaged in CT efforts. Second, higher preexisting levels of terrorist violence in an area is likely reflective of a substantial local base of support. This will affect the degree to which local subversives are able to ratchet up violence following government actions. The complete dataset consists of 116,230 observations spread across 1,064 municipalities and 160 months.

To assess the first research hypothesis (H1, whether kinetic actions leading to the death or capture of terrorist fighters will increase future terrorist attacks), a negative binomial regression was employed. To test for hypothesized geospatial diffusion of terrorist attacks predicted by the second hypothesis (H2), more advanced statistical techniques were required. Specifically, only by understanding how government CT activities affect terrorist violence, not only where they are

33. Jim Wyss and Kyra Gurney, "Dirty Gold is the New Cocaine in Colombia–And It's Just as Bloody," *Miami Herald*, 16 January 2018, https://www.miamiherald.com/news/nation-world/world/americas/colombia/article194188034.html.

34. "Data," Ministerio de Defensa Nacional.

implemented but also in surrounding areas, can scholars and practitioners correctly evaluate the efficacy of CT efforts. As such, a Spatial Durbin model (SDM) was used to test H2. This statistical technique allows for assessment of distinctions between the effect of government CT actions on terrorist violence in the areas where it occurs (the direct effects) and its effect on terrorist attacks in surrounding locations (the indirect effects).

Results and Discussion

Table 1 presents the results from negative binomial regression analysis linked to Hypothesis 1 (H1).

Table 1. Hypothesis 1 Results

	Month 1	Month 3	Month 6	Month 12	Month 24	Month 36
Lagged Kinetic Outcomes	0.195***	0.228***	0.213***	0.224***	0.249***	0.261***
	(0.008)	(0.008)	(0.008)	(0.008)	(0.009)	(0.011)
Natural Resources	0.010**	0.011***	0.012***	0.017***	0.016***	0.018***
	(0.004)	(0.004)	(0.004)	(0.004)	(0.005)	(0.005)
Minerals	0.087***	0.123***	0.124***	0.128***	0.149***	0.169***
	(0.033)	(0.029)	(0.030)	(0.031)	(0.032)	(0.033)
Coca Cultivation (2006)	0.001***	0.001***	0.001***	0.001***	0.001***	0.001***
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
Households (2005)	0.000***	0.000***	0.000***	0.000***	0.000***	0.000***
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
Households in Deficit (%, 2005)	-0.004***	-0.004***	-0.004***	-0.004***	-0.003***	-0.002***
	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)
Afro-Colombian (2010)	-0.018***	-0.020***	-0.020***	-0.017***	-0.014***	-0.014***
	(0.002)	(0.002)	(0.002)	(0.002)	(0.002)	(0.002)
Indigenous (2011)	0.016***	0.017***	0.017***	0.017***	0.017***	0.018***
	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)
Lagged Attacks	1.437***	1.287***	1.188***	1.156***	1.051***	1.004***
	(0.028)	(0.027)	(0.028)	(0.030)	(0.033)	(0.037)
Intercept	-4.022***	-4.020***	-4.043***	-4.098***	-4.168**	-4.255***
	(0.037)	(0.035)	(0.035)	(0.037)	(0.039)	(0.042)
* p <0.1; ** p<0.05; *** p<0.01. Negative binomial regression model using random effects.						

Consistent with the first hypothesis, the results show that government CT actions have a statistically significant positive effect on terrorist attacks in all subsequent time periods. Government actions correlated with a subsequent increase in terrorist attacks in the 1-, 3-, 6-, 12-, 24-, and 36-month time periods following CT intervention. This finding is statistically significant at the 99 percent confidence level for all time periods.

Figure 2 graphically depicts this finding. In addition, the trend line shows that the effect size

increases over time. For example, while the average expected increase in terrorist attacks one month following a government action is approximately half an attack, over time this rises to a maximal point of an expected increase of roughly 1 1/3 additional attacks in month 35. This finding suggests that while terrorist actions increase immediately (one month) following government CT actions, it takes terrorist groups time to more completely increase their violent activities in response to government actions.

Following Ganor's logic, it may be that the CT action immediately increases terrorist motivations. And while these newly enhanced motivations are able to yield increased capabilities within the first month, it takes a bit longer for terrorist organizations to fully exploit increased motivations to drive recruitment and resource mobilization thereby enabling substantially more attacks by month 35. Importantly, the delta between the predicted increase in terrorist violence in months one and two is especially large (approximately 3/4 of an attack). As such, a limited window following effective CT actions may exist wherein non-kinetic approaches (e.g., information operations targeting local populations) may be particularly effective in forestalling terrorist organizations from translating increased motivations into local recruitment and resource mobilization efforts.

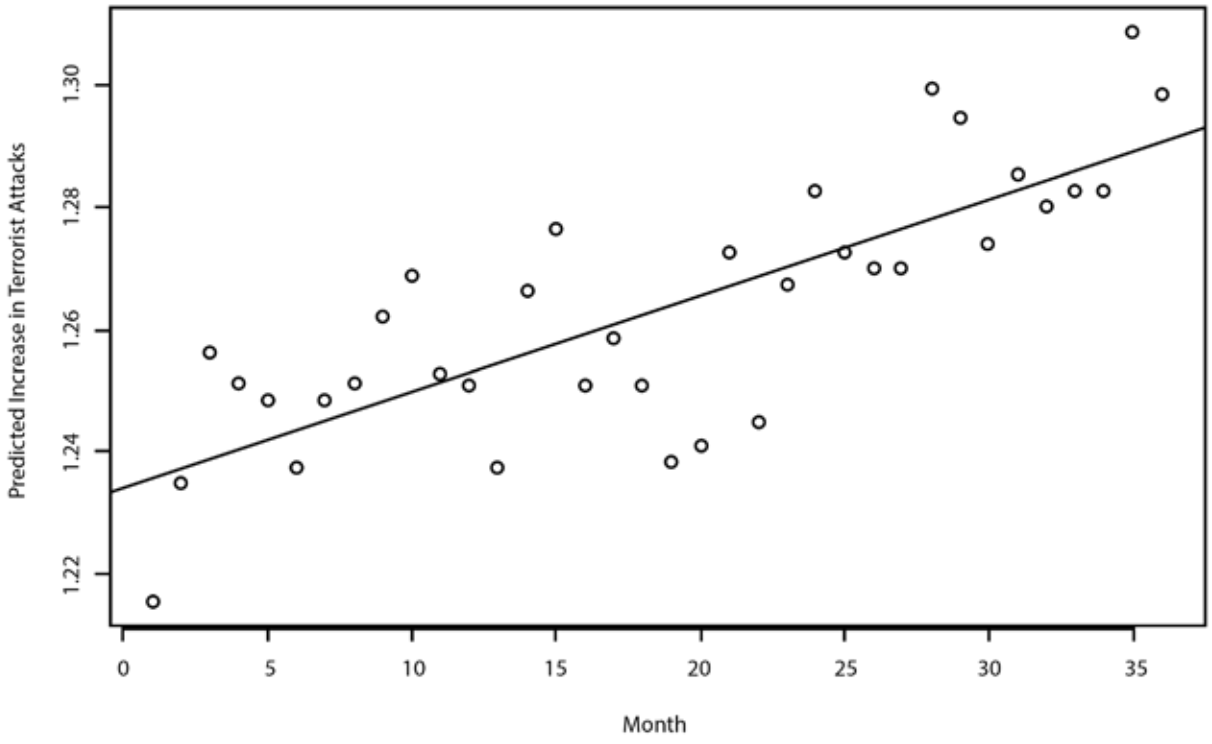

Figure 2. Substantive Effects of Lagged Kinetic Outcomes on Attacks

Table 2 presents the results from the geospatially-weighted SDM used to test the second hypothesis. It summarizes the results for the final 12-month period of analysis (June 2015 through May 2016).[35] All 1,064 municipalities (with the exception of two islands, which do not have contiguous neighboring municipalities) were included.

Table 2. Hypothesis 2 Results

	2012-2013		2015-2016	
	Direct	Indirect	Direct	Indirect
Lagged Kinetic Outcomes	0.00785***	0.00494**	0.0119***	0.0162***
	(0.000975)	(0.00232)	(0.00158)	(0.00378)
Natural Resources	0.00331**	0.000665**	0.00327***	0.000707***
	(0.00160)	(0.000332)	(0.00103)	(0.000237)
Minerals	-0.000598***	-0.000120	0.00287	0.000620
	(0.00119)	(0.000240)	(0.00583)	(0.00126)
Coca Cultivation (2006)	0.00000372	0.000000748	0.0000443***	0.00000959***
	(0.00000331)	(0.000000670)	(0.00000835)	(0.00000202)
Households (2005)	0.0000000913***	0.0000000184***	0.000000344***	0.0000000745***
	(0.0000000166)	0.00000000394	(0.0000000493)	(0.0000000133)
Households in Deficit (%, 2005)	-0.000000684	-0.000000137	0.0000480	0.0000104
	(0.000975)	(0.00000822)	(0.000103)	(0.0000223)
Afro-Colombian (2010)	-0.00000883	-0.00000177	-0.000612**	-0.000133**
	(0.000113)	(0.0000226)	(0.000286)	(0.0000663)
Indigenous (2011)	0.000100*	0.0000201*	0.000509***	0.000110***
	(0.0000514)	(0.0000105)	(0.000130)	(0.0000299)
Lagged Attacks	0.0489***	0.00982***	0.0841***	0.0182***
	(0.00936)	(0.00217)	(0.00624)	(0.00233)
* p <0.1; ** p<0.05; *** p<0.01. SDM using random effects.				

This analysis discovered that government CT actions undertaken in a given month and municipality correlated (statistically significant at the 99 percent confidence level) with higher levels of terrorist attacks in the subsequent month in the same municipality. Moreover, the results demonstrate that CT actions also correlate with the geographic spread of terrorist attacks. Specifically, the analysis shows that government CT actions undertaken in a given month and municipality correlated (statistically significant at the 95 percent confidence level) with higher levels of terrorist attacks in the subsequent month in neighboring municipalities. These findings are

35. Limited computational power precluded analyzing the entire dataset simultaneously, given that the spatial-weighting matrix containing every municipality-month multiplied to nearly 17 billion observations. However, table 2 also presents the results from an arbitrarily chosen second time period, 2012-2013. These results provide even stronger evidence in support of hypothesis 2 (H2). Specifically, they show that CT actions undertaken in a given month and municipality correlated with higher levels of terrorist attacks in subsequent months in the same, as well as surrounding municipalities. Both sets of results are statistically significant at the 99 percent confidence level, and the size of the effects are even larger.

consistent with the second hypothesis. Given spatial diffusion of terrorism appears to increase over time following CT actions, it is also likely that sequencing kinetic and non-kinetic CT efforts, such as information operations and development assistance designed to win local popular support, can help reduce the diffusion of terrorist violence following kinetic CT actions.

Conclusion

This study, backed by data from Colombian CT efforts over several years, demonstrates that government CT activities leading to the capture, killing, or demobilization of terrorists are correlated with an increase in terrorist attacks following a government's actions. Importantly, the predicted increase in the number of terrorist attacks rises over time following the government's CT intervention. Moreover, statistical analysis of this data further demonstrates that the change in the frequency of terrorist attacks following government interventions is not limited to the municipalities where the government is pursuing CT activities. Rather, this study reasons that government actions also serve to diffuse terrorist attacks into surrounding municipalities.

Importantly, the predicted increase in the number of terrorist attacks rises over time following the government's CT intervention.

While the aforementioned results may give the impression that kinetic CT actions are ineffective, it is plausible that the relationship between kinetic actions by states and terrorist groups is more nuanced. Specifically, it is likely the case that kinetic CT activities are merely ineffective in isolation at translating tactical and operational successes by SOF into desired strategic level objectives (e.g., the defeat of a terrorist organization). For example, in Colombia's conflict against the FARC, it appears that MINDEFENSA's newfound ability to kill or capture substantial numbers of senior FARC leaders beginning around 2010 was instrumental in bringing the group to the negotiating table. However, negotiations (non-kinetic, conciliatory actions) were still necessary to ensure the FARC's ultimate demobilization. (Further application of advanced intelligence and precision guided munitions to target more of the leadership would almost certainly have resulted in a splintered group that would have retained the ability to perpetrate attacks but lacked the hierarchical structure necessary for effective negotiations and demobilization.[36]) Thus, future research ought to examine integrated approaches for responding to terrorism that leverage both kinetic and non-kinetic approaches, which are both conflictual and conciliatory in nature. Unfortunately, the results presented herein suggest there is a short temporal window for follow-on non-kinetic efforts. As such, advanced planning and careful sequencing are likely necessary.

For U.S. SOF and national security practitioners, this will likely not take the form of negotiations. Nevertheless, other non-kinetic interventions that serve to reduce the motivations of terrorists themselves and/or the local population to support terrorist organizations are worth

36. Barnett S. Koven, "'Give Peace a Chance?," Explaining Colombia's (Failed) Peace Process with the FARC" (College Park, MD: START, 4 November 2016); Koven, "From Leftist Insurgents to Narco-terrorists"; Koven, "CT Vignette"; Barnett S. Koven, "Trans-regional Jihadism and a Tale of Two Caliphates," Lecture, Special Operations Forces Interagency Collaboration Course, Joint Special Operations University, Naval Amphibious Base Coronado, February 2018.

considering. This can take many forms. In the Colombian case, evidence speaks to the particularly pronounced impact of information operations and development assistance.

In one case, following a series of kinetic military operations that substantially degraded the FARC's fighting forces, the Colombian military disseminated leaflets with the baby photos of FARC fighters and personal messages from their families encouraging them to demobilize in time for Christmas. The effort, aptly titled Operation CHRISTMAS, proved highly successful, resulting in the demobilization of 331 FARC fighters.[37] MINDEFENSA experienced similarly positive effects when sequencing kinetic CT with a development assistance program, Integral Action (*Acción Integral*; AI). Indeed, one Colombian officer explained that the "fundamental strategic error" undergirding CT efforts prior to AI was ignoring the local population as the critical center of gravity.[38]

Another area for future research deals with transnational and transregional diffusion of terrorist attacks following government interventions. While this occasional paper focuses on the internal displacement of terrorist activities, similar dynamics appear relevant to explaining the international diffusion of terrorist attacks by transnational groups like al-Qaeda and the Islamic State of Iraq and Syria (ISIS).[39] Indeed, suggestive results from a recent study demonstrate spatiotemporal diffusion of al-Qaeda in the Islamic Maghreb's attacks following U.S. and French SOF-led CT efforts.[40]

While there is no doubt that U.S. SOF has become extremely tactically proficient at CT, successes at the tactical and operational levels have not translated to strategic outcomes. Indeed, tactical and operational achievements may actually be undercutting strategic CT aims by motivating the proliferation of terrorist violence and the geographic spread of their organizations. Despite immense USG efforts, al-Qaeda celebrated their 31st birthday in 2019. As of 2018, the GTD documented al-Qaeda attacks in a dozen countries, and recorded 52 active affiliates. For their part, ISIS—despite losing physical control over territory in Iraq and Syria—was active in nearly three times as many countries as al-Qaeda, and maintained affiliations with an additional 44 terrorist organizations.[41] This immense strategic depth virtually ensures the continued existence of these transnational terrorist organizations. Consequently, it is equally certain that the U.S. SOF enterprise will continue to be called upon to conduct CT.

Previously, the U.S. national security enterprise was willing and able to direct immense attention and resources to CT. The 2018 NDS suggests that despite the continued saliency of terrorism, U.S. SOF will face new constraints on resourcing for CT, as well as competing priorities. To be successful

37. David Leveill, "Colombia's Government has a Christmas Message for FARC Rebels. Come Home," *Public Radio International*, 16 December 2013, https://www.pri.org/stories/2013-12-16/colombias-government-has-christmas-message-farc-rebels-come-home; Koven, "Building Partner Capacity in Colombia."

38. Colonel Carlos Alfonso Velasquez Romero (Colombian Army, Retired), interview with Barnett S. Koven, research interview, Bogota, Colombia, 2 June 2016.

39. See for example, Koven, "Trans-regional Jihadism."

40. As indicated, these results are not conclusive and should be interpreted with caution. Koven, Lindquist, and Erdemandi, "Counterterrorism Net Assessment Data Structure (CT-NEADS)."

41. Global Terrorism Database, "Al Qaida and Islamic State Franchises," Lecture, START, 2019.

in a resource constrained environment, the SOF enterprise must quickly learn to effectively translate tactical and operational successes into strategic objectives. This research suggests that this is possible, but it will require carefully sequencing kinetic and non-kinetic approaches to CT, with a heavier emphasis on the latter. After all, since terrorism is an inherently political phenomenon, it should not be surprising that effective CT requires more than just the application of military power.

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