THE SYSTEM OF DOMESTIC COUNTERTERRORISM LAW ENFORCEMENT[◦]

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‡ Assistant Professor of Law, University of North Dakota School of Law. I would like to thank the organizers of the Sixth Annual National Security Law Faculty Workshop, which are South Texas College of Law, Bobby Chesney, and Geoff Corn. Many thanks also to the attendees, who offered invaluable comments. They include Chris Bailey, Dru Brenner-Beck, Gary Brown, Bobby Chesney, Geoff Corn, Anjali Dalal, Chris Donesa, Jonathan Hafetz, Dick Jackson, Kristine Huskey, Jeff Kahn, Peter Margulies, Deborah Pearlstein, Dawn Powers, and Rachel VanLandingham. Thanks also to comments from fellow University of North Dakota School of Law faculty members Julia Ernst and C.J. Vachon. Finally, thanks to Aziz Huq for his usual detailed and insightful comments. This article could not have been possible without the support of the University of North Dakota School of Law and Dean Kathryn R. L. Rand. All errors are my own.

Abstract

Edward Snowden's recent leaks of the NSA's telephony metadata collection program, and the Internet surveillance programs PRISM and XKeyscore are only the latest iterations of the "big data" phenomenon. Arriving just in time for 9/11, new technologies have enabled government agencies to collect and aggregate massive amounts of information, usable in counterterrorism and domestic law enforcement alike. While such moves have probably stopped some terrorist plots, they also entail systemic inefficiencies that lead unavoidably to unjust results, in the form of both false positives and false negatives. This article explains these inefficiencies by describing a complex positive feedback loop inherent in domestic counterterrorism law enforcement.

Table of Contents

Introduction

In early June 2013, National Security Agency contractor Edward Snowden leaked to the *Guardian* information about two government surveillance programs. One program was designed to obtain from telecommunications companies certain types of telephony metadata.[1] The other program, about which fewer details are known, is called PRISM, and apparently facilitates government surveillance of individuals' Internet activities.[2] After the public became aware of these programs, President Obama expressed his desire to have a national debate about how Americans and the U.S. government ought to balance national security imperatives with privacy interests.[3] The President's professed desire may, however, be disingenuous, since "even basic facts of central relevance in this debate are unknown and currently unknowable to the public, facts ranging from how extensive the government surveillance programs are to how many users or accounts they affect."[4]

Seeing an opening that, prior to the leaks, may not have existed because of national security statutes, a number of companies and advocacy groups have taken action, with some filing suit in various courts, challenging the metadata and PRISM programs in part on First Amendment grounds.[5]

During the first round of leaks, Snowden asserted that he could, "[S]itting at my desk, wiretap anyone, from you or your accountant, to a federal judge or even the president, if I had a personal email."[6] At the time, the metadata and PRISM programs seemed not to provide such capability, and the government denied Snowden's claim.[7] In late July,

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[1] Glenn Greenwald, *NSA Collecting Phone Records of Millions of Verizon Customers Daily*, THE GUARDIAN, June 5, 2013.

[2] Glenn Greenwald & Ewan MacAskill, *NSA Prism Program Taps in to User Data of Apple, Google and Others*, THE GUARDIAN, June 6, 2013.

[3] Luke Johnson, *Obama Defends NSA Programs, Says Congress Knew About Surveillance*, THE HUFFINGTON POST, June 7, 2013.

[4] Brief of First Amendment Coalition et al., as *Amici Curiae* in Support of the Motions for Declaratory Judgment, In Re Motion for Declaratory Judgment of Google Inc.'s First Amendment Right to Publish Aggregate Information About FISA Orders, In Re Motion to Disclose Aggregate Data Regarding FISA Orders, Nos. Misc. 13-03, 13-04 (U.S. FISA Court, July 8, 2013).

[5] *See* Brief of First Amendment Coalition et al., as *Amici Curiae* in Support of the Motions for Declaratory Judgment, In Re Motion for Declaratory Judgment of Google Inc.'s First Amendment Right to Publish Aggregate Information About FISA Orders, In Re Motion to Disclose Aggregate Data Regarding FISA Orders, Nos. Misc. 13-03, 13-04 (U.S. FISA Court, July 8, 2013); On Petition for a Writ of Mandamus and Prohibition, or a Writ of Certioari, to the FISA Court at i, In Re Electronic Privacy Information Center, No. 13-__, (U.S. Supreme Court, July 8, 2013); Microsoft Corporation's Motion for Declaratory Judgment or Other Appropriate Relief Authorizing Disclosure of Aggregate Data Regarding Any FISA Orders It Has Received, In Re Motion to Disclose Aggregate Data Regarding FISA Orders, No. Misc. 13-04, (U.S. FISA Court, June 19, 2013); Motion for Declaratory Judgment of Google Inc.'s First Amendment Right to Publish Aggregate Information About FISA Orders at 4, In Re Motion for Declaratory Judgment of Google Inc.'s First Amendment Right to Publish Aggregate Information About FISA Orders, No. --- (U.S. FISA Court, June 18, 2013); Complaint for Declaratory and Injunctive Relief, ACLU v. Clapper, No. 13-CV-3994 (S.D.N.Y. June 11, 2013); Complaint for Constitutional and Statutory Violations at 1, Seeking Declaratory and Injunctive Relief, First Unitarian Church et al. v. NSA et al., No. 13-cv-3287; Oversight of FISA Authorities, Statement of Jameel Jaffer, Deputy Legal Director, American Civil Liberties Union Foundation, Committee of House Judiciary, July 17, 2013; EFF letter to Congress, June 10, 2013.

[6] Amanda Willis, *New Snowden Leak: NSA Program Taps All You Do Online*, CNN.COM, Aug. 1, 2013.

[7] *Id.*

however, new revelations about the XKeyscore program emerged, which seemed to prove Snowden's assertion.[8] A government PowerPoint file from 2008 described XKeyscore, which, according to the *Guardian*, "allows analysts to search with no prior authorization through vast databases containing emails, online chats and the browsing histories of millions of individuals."[9] Such searches include "'real-time' interception of an individual's internet activity,"[10] encompassing "nearly everything a typical user does on the internet."[11] Director of National Intelligence James Clapper has acknowledged that NSA analysts had exceeded legal limits involving domestic surveillance.[12] U.S. Senator Ron Wyden called these violations "more serious than those stated by the intelligence community, and [] troubling."[13] Finally, in August, the *New York Times* reported that the NSA is not targeting only foreigners and Americans who communicate with foreigners.[14] It is also targeting Americans who "mention information about foreigners under surveillance."[15] An NSA document leaked by Snowden mentions that the agency "seeks to acquire communications about the target that are not to or from the target."[16]

According to the *New Yorker*, NSA analysts can search for "someone whose language is out of place for the region they are in," and "someone searching the web for suspicious stuff."[17] XKeyscore may be used in coordination with the NSA's metadata program "as one of the magnets to draw people's identities from the Web and gather information about them."[18] People with no connection to terrorism may be pulled into this program through what is known as "hop" or "chain" analysis, whereby "[w]hen the NSA identifies a suspect, it can look not just at his phone records, but also the records of everyone he calls, everyone who calls those people and everyone who calls those people."[19]

This article describes the larger context of post-9/11 domestic counterterrorism law enforcement of which the NSA programs are a part, and which is characterized by a complex, positive feedback loop that, over time, pulls more people into its orbit. This feedback loop is based on social network analysis, which has its historical roots in crime mapping. This article summarizes that history, details the contemporary social network feedback loop, and explains how the loop produces inefficiencies in the form of false positives and false negatives.

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[8] *Id.*
[9] Glenn Greenwald, *XKeyscore: NSA Tool Collects "Nearly Everything a User Does on the Internet"*, THE GUARDIAN, July 31, 2013.
[10] *Id.*
[11] *Id.*
[12] *Id.*
[13] *Id.*
[14] Charlie Savage, *N.S.A. Said to Search Content of Messages to and from U.S.*, NEW YORK TIMES, Aug. 8, 2013.
[15] *Id.*
[16] *Id.*
[17] Amy Davidson, *Presenting XKeyscore: What the N.S.A. is Still Hiding*, THE NEW YORKER, July 31, 2013.
[18] *Id.*
[19] *NSA Acknowledges Its "3 Hops" Get Millions of Americans' Phone Records, Not Just Terrorists*, THE WASHINGTON POST, July 31, 2013; *see also* Pete Yost & Matt Apuzzo, *With 3 "Hops," NSA Gets Millions of Phone Records*, THE SEATTLE TIMES, July 21, 2013 ("President Barack Obama's national security team acknowledged for the first time Wednesday that, when investigating one suspected terrorist, it can read and store the phone records of millions of Americans.").

The United States' law enforcement efforts against terrorist networks partake of traditional descriptive crime mapping and contemporary predictive efforts. But this 9/11-era social network mapping is fundamentally different. It does not map where actual terrorists reside or terroristic crimes were committed; rather, it maps connections among people, from the leaders of al Qaeda to supposed wannabe terrorists in the heart of the United States, connected to the terrorist organization sometimes by only a few tenuous online relationships.[20] This mapping presumes the potential probative value of the theory of six degrees of separation[21]: so goes the theory, because only four people stand between me and bin Laden, then I must be a terrorist.

This network mapping is enabled by the digital age, which allows the government to amass and aggregate huge amounts of data about individuals around the globe.[22] This mosaic database[23] holds the promise that data noise will be substantially reduced, patterns of data indicative of terroristic intent or conduct will come into relief, and the government will thereby be able to prevent another 9/11 through a networked version of pre-crime law enforcement. It is held as truth that more data, if it is well-managed—that is, arranged in a useful way that reflects its true meaning—and effectively searchable will inevitably improve law enforcement's ability to spot dangerous patterns and discern criminal intent.[24]

This paper challenges that assumed truth. Data mining may not produce its presumed accurate results. Bruce Schneier, for example, has argued that data mining will produce wasted law enforcement efforts in chasing false positives, and will also produce false negatives, because all that data mining does is enlarge the haystack. When what you are looking for is a rarity—as terrorist plots, or at least attacks, are[25]—and its rate of occurrence relative to all environmental conduct is quite low, then enlarging that field

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[20] One company, FMS Advanced Systems Group, has produced a "Social Network Analysis" whose graphic display is aesthetically beautiful, but may carry little probative value. FMS Advanced Systems Group, http://www.trackingthethreat.com/SocialNetworkAnalysis/; *see also* The Investigative Project on Terrorism, *The Terrorist Network in America, 1997-2007*, http://www.investigativeproject.org/maps.php.

[21] *See* Stanley Milgram, *The Small-World Problem*, PSYCHOL. TODAY, May 1967, at 61.

[22] *See* United States Dep't of Justice v. Reporters Comm. for Freedom of the Press, 489 U.S. 749, 764 (1989) ("[T]he issue here is whether the compilation of otherwise hard-to-obtain information alters the privacy interest implicated by disclosure of that information. Plainly there is a vast difference between the public records that might be found after a diligent search of courthouse files, county archives, and local police stations throughout the country and a computerized summary located in a single clearinghouse of information."); Will Thomas DeVries, *Protecting Privacy in the Digital Age*, 18 BERKELEY TECH. L.J. 283, 306 (2003).

[23] *See* Orin S. Kerr, *The Mosaic Theory of the Fourth Amendment*, 111 MICH. L. REV. 311 (2012).

[24] *See* United States v. Maynard, 615 F.3d 544, 562 (D.C. Cir. 2010) (As with the "mosaic theory" often invoked by the Government in cases involving national security information, "What may seem trivial to the uninformed, may appear of great moment to one who has a broad view of the scene." CIA v. Sims, 471 U.S. 159, 178 (1985)); *see also* Samuel J. Rascoff, *Domesticating Intelligence*, 83 S. CAL. L. REV. 575, 575-76 (2010) (describing a risk assessment approach to domestic counterterrorism, in which "domestic intelligence seeks to quantify a risk before it materializes, based on the careful analysis of aggregative data.").

[25] COMM. ON H. HOMELAND SECURITY SUBCOMM. ON OVERSIGHT, INVESTIGATIONS, AND MANAGEMENT, BORDER SECURITY ISSUES, Statement of Marc R. Rosenblum Specialist in Immigration Policy Congressional Research Service, Nov. 16, 2012; Ezra Klein, *"If You are Scared, They Win. If You Refuse to Be Scared, They Lose."* WASHINGTON POST, April 17, 2013; Editorial, *After Boston Tragedy, Let True Patriotism Reign*, PORTLAND PRESS HERALD, April 17, 2013; Editorial, *Vigilance and Resilience in Wake of Attack*, PRESS DEMOCRAT, April 17, 2013.

will make detecting the rarity statistically even more unlikely.[26] That is this paper's negative argument. Its positive argument is that the positive feedback loop resulting from counterterrorism law enforcement produces increasing systemic inefficiencies that (1) do not reduce data noise or reveal real criminal patterns; (2) reinforce the preconceived notion that such law enforcement *does* reduce noise and reveal patterns; and (3), as a result of (1) and (2), often lead to inaccurate targeting of suspects (either as false positives or false negatives), and thus inaccurate and inefficient law enforcement responses. Because this is a positive, or self-reinforcing, feedback loop, these three inefficiencies tend to grow over time, resulting in systemic instability.

These inefficiencies entail what I call a "linking fetish," meaning that the digital age mosaic database allows the government to link suspects with each other in social network maps, whether they have an actual relationship or not.[27] Prosecutors instantiate this linking fetish at trial by invoking the global jihad movement,[28] a rhetorical tactic that is not entirely vacuous, accurate, or new.[29] In the 1950s, prosecutors alleged the existence of an "international Communist movement,"[30] similar in form and function to the global jihad movement. Both were supposed to indicate a worldwide network of people, closely aligned in ideology and criminal purpose to destroy the United States. They both worked to enable prosecutors to allege damning conspiracies and introduce questionably relevant evidence thereof.[31] They both also retained currency as valid evidentiary tropes because observers believed that they signaled real foreign existential threats to democracy and society itself.[32] This expansive vision produces expansive law enforcement, and thus the feedback loop.

This loop starts with the assumption that a large number of people around the globe have the intent to engage in terrorist acts. Data mining and network mapping are the central (but not only) drivers of the loop. For example, law enforcement agencies profile certain groups, such as Mosque attendees in the greater New York metropolitan area.[33] Agencies watch and infiltrate these groups and engage in data mining (through informants, undercover agents, suspects' Internet use, wiretaps, etc.), then deposit this data into aggregators like the Total Information Awareness (TIA) system,[34] the Multistate

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[26] Bruce Schneier, *Why Data Mining Won't Stop Terror*, WIRED, Mar. 9, 2006, http://www.wired.com/politics/security/commentary/securitymatters/2006/03/70357.

[27] One company, IntelCenter, seems to have tapped into this fetish, producing a series of attractive interpersonal linking charts for particular geographic regions, individual luminaries, and specific actual attacks. IntelCenter, http://www.intelcenter.com/wc.html.

[28] *See generally* MARC SAGEMAN, UNDERSTANDING TERROR NETWORKS (2004).

[29] This is to say that E+D characterizes both law enforcement moves that appropriately respond to real emergent criminal patterns and law enforcement moves that respond to perceived, but unreal criminal or terrorist threats. E+D is, therefore, a descriptive, rather than normative, theory.

[30] Dennis v. United States, 341 U.S. 494, 546 (1951).

[31] Yates v. United States, 354 U.S. 298, 339 (1957) (Black, J., concurring in part and dissenting in part); *see also* In re Terrorist Attacks on September 11, 2001, 740 F.Supp.2d 494, 504 (S.D.N.Y. 2010); United States v. Elmardoudi, 611 F.Supp.2d 864, 866 (N.D. Iowa 2007).

[32] *See* Bernard Lewis, *Communism and Islam*, 30 INT'L AFF. 1, 9 (1954); Wadie E. Said, *The Message and Means of the Modern Terrorism Prosecution*, 21 TRANSNAT'L L. & CONTEMP. PROBS. 175, 188-89 (2012).

[33] Matt Apuzzo & Adam Goldman, *With CIA Help, NYPD Moves Covertly in Muslims Areas*, AP, Aug. 23, 2011, http://www.ap.org/Content/AP-in-the-News/2011/With-CIA-help-NYPD-moves-covertly-in-Muslim-areas (documenting the NYPD's undercover efforts to "map the city's human terrain".).

[34] Jeffrey Rosen, *Total Information Awareness*, NEW YORK TIMES, Dec. 15, 2002, http://www.nytimes.com/2002/12/15/magazine/15TOTA.html.

Anti-Terrorism Information Exchange (MATRIX),[35] and the Disposition Matrix.[36] Law enforcement then accesses this linked informational world and "connects the dots"[37] to discern veins of terroristic criminal intent or planning (XKeyscore may serve this connection function). The data mosaic is therefore remapped (or reimagined) to produce patterns that apparently reveal people with terroristic intent and their supposed affiliates. Law enforcement then locates a suspect, who has not "yet" committed any crime. Given the data mosaic, however, there is often enough evidence to charge the suspect with conspiracy,[38] providing material support,[39] making a false statement,[40] or an immigration violation.[41] If none of these charges are available, the government may arrest the suspect as a material witness.[42] With these arrests, the threat of the global jihad movement is reified and confirmed.[43] The global jihad movement and the evidence produced from the data mosaic assume evidentiary relevance and probity and therefore become the legal truth.[44] Having their initial suspicions confirmed, law enforcement agencies engage in more group targeting, more data mining, and more data aggregation. The feedback loop is complete, and is positive because it self-reinforces.

The initial (and persistent) need to pursue terrorists just after 9/11 caused the government to engage in a set of law enforcement tactics, including but not limited to mosque infiltration, data aggregation, and racial and religious profiling. These tactics may or may not have been practically sound law enforcement decisions. They were, however, self-reinforcing, creating the positive feedback loop I describe. Some have commented that as the attacks of 9/11 recede, law enforcement responses to terrorism

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[35] William J. Krouse, *The Multistate Anti-Terrorism Information Exchange (MATRIX) Pilot Project*, CONG. REC. SERV., Aug. 18, 2004, http://www.fas.org/irp/crs/RL32536.pdf.

[36] Greg Miller, *Plan for Hunting Terrorists Signals U.S. Intends to Keep Adding Names to Kill Lists*, WASHINGTON POST, Oct. 23, 2012, http://articles.washingtonpost.com/2012-10-23/world/35500278_1_drone-campaign-obama-administration-matrix.

[37] Pam Benson, *Scramble to Connect Dots in New Terror Threat*, CNN, Sept. 9, 2011, http://security.blogs.cnn.com/2011/09/09/scramble-to-connect-dots-in-new-terror-threat/; John Hollywood et al., *"Connecting the Dots" in Intelligence: Detecting Terrorist Threats in the Out-of-the-Ordinary*, RAND CORP., 2005, http://www.rand.org/pubs/research_briefs/RB9079.html; Michael Scherer, *Obama's Terrorism Postmortem: Still Not Connecting the Dots*, TIME, Jan. 6, 2010, http://www.time.com/time/nation/article/0,8599,1951882,00.html.

[38] Steven R. Morrison, *The System of Modern Criminal Conspiracy*, --- CATH. U. L. REV. ---- (forthcoming 2013), available at http://papers.ssrn.com/sol3/papers.cfm?abstract_id=1955158.

[39] David Cole, *The New McCarthyism: Repeating History in the War on Terror*, 38 HARV. C.R.-C.L. L. REV. 1, 14-15 (2003); Dru Stevenson, *Effect of the National Security Paradigm on Criminal Law*, 22 STAN. L. & POL'Y REV. 129, 154 (2011).

[40] *See* Second Superseding Indictment, United States v. Mehanna, No. 1:09-cr-10017-GAO (D. Mass. June 17, 2010).

[41] *See* Second Superseding Indictment, United States v. Al-Hussayen, No. CR 03-0048-C-EJL (D. Idaho Mar. 4, 2004).

[42] *See* Ashcroft v. Al-Kidd, 131 S.Ct. 2074 (2011); Mayfield v. United States, 599 F.3d 964, 967 (9th Cir. 2010); Lauryn P. Gouldin, *When Difference is Dangerous: The Judicial Role in Material-Witness Detentions*, 49 AM. CRIM. L. REV. 1333 (2012).

[43] See the discussion below, regarding confirmation biases and feedback loops.

[44] *See* In re Terrorist Attacks on September 11, 2001, --- F.3d ----, 2013 WL 1590255, *4 (2d Cir. 2013); American Freedom Defense Initiative v. Suburban Mobility Authority for Regional Transportation, 698 F.3d 885, 889 (6th Cir. 2012); United States v. Elmardoudi, 611 F.Supp.2d 864, 866 (N.D. Iowa 2007).

seem, counterintuitively, to be getting more and more normatively problematic.[45] The reason for this is that the feedback loop has been reinforcing initial law enforcement moves, resulting in a distancing from criminal law norms that have traditionally operated as system stabilizers. This means that the system of counterterrorism law enforcement is unstable and therefore produces inefficiencies—specifically, it targets people who are innocent (or, as in the case of the targeted killing of Anwar al-Aulaqi, may not have deserved the punishment imposed) and may not detect people who in fact have terroristic criminal intent.[46] The problematic aspects of the feedback loop are often intractable because its sources reflect, at least approximately, the reality of crime and terrorism.

I. A Short History of Crime Mapping

"Fetish" is defined as "an object . . . believed to have magical power to protect or aid its owner."[47] The counterterrorism linking that we engage in today is, by definition, fetishistic. This fetish emerged in crime mapping, a practice that law enforcement agencies and sociologists long engaged in for various purposes. Crime mapping has proceeded through five stages, resulting in today's attempts to map social networks and make them functional anti-terrorism tools.

Comparative crime mapping. In 1829, French lawyer and social ecologist André-Michel Guerry used one of the first choropleth maps,[48] which are thematic maps in which areas are shaded or patterned in proportion to the measurement of the statistical variable being displayed on the maps, such as population density or per-capita income to compare crime rates around France to climate, level of education, and other factors.[49] Seeking to understand *why* crime manifested in the way it did, Guerry's work would later be adopted by modern police forces and others to show *where* in a geographic area crime occurred and, by extension, where it was predicted to occur. Belgian Adolphe Quetelet followed suit in 1831, producing a map of crimes against property in France,[50] and, in 1847, Englishman Joseph Fletcher began to publish maps that compared British crime rates to ignorance.[51]

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[45] Radley Balko, *A Decade after 9/11, Police Departments are Increasingly Militarized*, HUFFINGTON POST, Sept. 12, 2011, http://www.huffingtonpost.com/2011/09/12/police-militarization-9-11-september-11_n_955508.html; Erik Luna, *Criminal Justice and the Public Imagination*, 7 OHIO ST. J. CRIM. L. 71, 114 (2009); Nadine Strossen, *Problematic Post-9/11 Judicial Inactivism: Immunizing Executive Branch Overreaching*, in CONFRONTING TERROR: 9/11 AND THE FUTURE OF AMERICAN NATIONAL SECURITY __ (John Yoo & Dean Reuter, eds. 2011) (The state secrets privilege "has been invoked by both the Bush and Obama administrations with increasing frequency and success as an automatic, door-closing non-justiciability doctrine.").

[46] Pete Yost, *FBI Interviewed Tamerlan Tsarnaev, Dead Bombing Suspect, In 2011: Official*, HUFFINGTON POST, Apr. 20, 2013.

[47] Fetish, MIRRIAM-WEBSTER, http://www.merriam-webster.com/dictionary/fetish.

[48] Michael Friendly, *Milestones in the History of Thematic Cartography, Statistical Graphics, and Data Visualization*, p. 16-17, Aug. 24, 2009, http://www.math.yorku.ca/SCS/Gallery/milestone/milestone.pdf.

[49] Robert Cook & Howard Wainer, *A Century and a Half of Moral Statistics in the United Kingdom: Variations on Joseph Fletcher's Thematic Maps*, SIGNIFICANCE, June 2012, at 32; Michael Friendly, *A.-M. Guerry's Moral Statistics of France: Challenges for Multivariable Spatial Analysis*, 22 STATISTICAL SCIENCE 368 (2007).

[50] Cook & Wainer, *supra* note 49, at 32.

[51] *Id.* at 33.

It does not appear that these early maps were used to manage crime or direct law enforcement assets, such as they existed then. The first modern police force was created in London in 1829,[52] and it was charged first with patrolling the streets, keeping the peace, and, later, investigating crime.[53] It was likely uninterested in macro-level sociological issues. Rather than meant for tactical deployment of law enforcement assets or community awareness, these maps suggest a Benthamite concern with connecting crime to larger sociological trends, many of which are class-based, in order to facilitate social reform.

Asset deployment crime mapping. Beginning in the late 1980s and still used today, a new form of crime mapping became important for law enforcement and criminal justice agencies.[54] This new crime mapping involves localized maps that display the analysis of "specific crimes, crime rates, and the identification of geographic crime loci by offense category."[55] New York City's CompStat system may be the most prominent example of this type of crime mapping.[56]

These crime maps consolidate on one map the various criminal incidents that have taken place in the past. Broadly termed Geographic Information Systems (GIS), this mapping "has been used to produce maps depicting crime 'hot spots' as well as to conduct spatial analyses that suggest relationships between crime and characteristics of the social and physical environments in which crime concentrations occur."[57] Much of this data collection is so localized that people can propose reducing crime through thinking about the architecture of cities, neighborhoods, and individual buildings.[58] This mapping has two overt purposes: to direct future law enforcement assets based on past criminal patterns, and to increase community awareness by informing residents of criminal incidents in their neighborhoods. There is, therefore, an element of prediction associated with modern crime mapping. This prediction, however, is of crime trends,[59] rather than of individual criminal intent.

Simple social network analysis. More recently, the popularity of social network analysis has emerged, certainly to augment traditional mapping in the crime context, but also to provide a new way to conduct domestic and international counterterrorism. Yang and Sageman define a social network as

> a network representing social actors and their interactions or relationships, in which nodes represent the actors and links represent the interactions or relationships . . . Social groups are collections of actors who are closely linked to

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[52] Steven J. Heyman, *The First Duty of Government: Protection, Liberty and the Fourteenth Amendment*, 41 DUKE L.J. 507, 544 (1991).
[53] Malcolm Thorburn, *Reinventing the Night-Watchman State?*, 60 U. TORONTO L.J. 425, 433-34 (2010).
[54] John D. Althausen & Thomas M. Mieczkowski, *The Merging of Criminology and Geography Into a Course on Spatial Crime Analysis*, 12 J. CRIM. JUST. EDUC. 367, 367 (2001).
[55] *Id.* at 368.
[56] M. Todd Henderson et al., *Predicting Crime*, 52 ARIZ. L. REV. 15, 29 (2010).
[57] Elizabeth R. Groff & Nancy G. LaVigne, *Forecasting the Future of Predictive Crime Mapping*, in ANALYSIS FOR CRIME PREVENTION 29, 30 (N. Tilley ed. 2002).
[58] Neal Kumar Katyal, *Architecture as Crime Control*, 111 YALE L.J. 1039, 1041 (2002).
[59] Groff & LaVigne, *supra* note 57, at 49.

one another. Social positions are sets of actors who are linked into the total social system in similar ways.[60]

A Google Images search for "social network analysis" will uncover a virtually endless number of aesthetically attractive analyses purporting to illustrate networks of members of Al Qaeda[61] and other, more mundane, networks.[62] The government is also using social network analysis to hunt terrorists.[63] The 9/11 attacks, unsurprisingly, brought what was an academic and abstract interest in social networks into use in war fighting.[64] The most conservative purposes of simple social network mapping involve typical investigations: understanding the structure of criminal organizations and connections, determining who the leaders are, and detecting weaknesses that may be exploited.

Simple social network analysis is controversial because it may not be effective as a tool for counterterrorism,[65] in part because it is meant to reveal incriminating information about individual suspects, such as their *mens rea* to commit terrorist acts, rather than general, depersonalized crime trends. One U.S. official even claimed that applying social networking in war zones has led to unethical practices.[66] One reason for this possible ineffectiveness is that the analyses remain static, whereas the networks they depict are constantly changing.[67] Another reason is that simple social network mapping is concerned only with the "who" in networks—it shows only whether people are connected in any way to others, and does not account for the content or nature of that connection.[68] "The tricky part of . . . network analysis is not finding the links but knowing which of them are significant."[69]

Dynamic social network analysis. Dynamic social network mapping, or "dynamic metanetwork analysis," ("DNA"), maps the "who," in networks, but it also proposes to

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[60] Christopher C. Yang & Marc Sageman, *Analysis of Terrorist Social Networks with Fractal Views*, 35 J. INFORMATION SCI. 299, 300 (2009).
[61] FMS Advanced Systems Group, http://www.fmsasg.com/SocialNetworkAnalysis/.
[62] Social Sim, http://socialsim.wordpress.com/2007/03/01/another-fabulous-network-image-academy-award-thanks/ (academy award winners); Social Network Analysis, http://kalyanimisra.blogspot.com/2010/10/social-network-analysis-of-may-09.html (a tutor-mentor conference in Chicago); Scientometrics, Knowledge Management, and Social Network Analysis, *Barcelona vs. AC Milan Passing Distribution*, http://scientometrics.wordpress.com/ (soccer passing distributions).
[63] John Bohannon, *Counterterrorism's New Tool: 'Metanetwork' Analysis*, 325 SCIENCE 409 (2009); K.A. Taipale, *Data Mining and Domestic Security: Connecting the Dots to Make Sense of Data*, 5 COLUM. SCI. & TECH. L. REV. 2, ¶¶ 84, 123 (2003); Thom Shanker, *Insurgents Set Aside Rivalries on Afghan Border*, NEW YORK TIMES, Dec. 29, 2010, at A1 (explaining that intelligence officials assessed that Al Qaeda and associated terrorist groups operate as a "loose federation [that] was not managed by a traditional military command-and-control system, but was more akin to a social network of relationships.").
[64] Bohannon, *supra* note 63.
[65] *Id.*
[66] *Id.*
[67] *Id.*
[68] *Id.*
[69] Brian Hayes, *Can the Tools of Graph Theory and Social-Network Studies Unravel the Next Big Plot?*, 94 AMERICAN SCIENTIST 400 (Sept.-Oct. 2006).

map the when, what, where, and why.[70] A leading thinker in the field, Kathleen Carley, has written that DNA focuses first on "relational data" about "the links or ties among entities such as people, groups, knowledge, resources, events and locations. The second is a focus on change; i.e., how are these relations likely to change normally and in response to strategic intervention."[71] Carley's approach attends to "why the link was created and the interpretation as to what the links mean."[72]

The purpose of DNA is to provide a nuanced, dynamic picture of terrorist networks not only *qua* networks but also in relation to non-terrorist linkages around those networks.[73] DNA, therefore, might be useful in reactive criminal prosecutions, proactive investigations, and, in a war zone, compiling target lists and engaging in counterinsurgency.

Predictive social network analysis. The historical arc of crime mapping has been toward the accessible, dynamic mapping of networks as they exist in the present and evolve. Work continues to enable these networks to approach what I call the "prediction horizon" in law enforcement and counterterrorism, to enable agents to, colloquially, "connect the dots".[74] Put another way, as social network mapping becomes more detailed and dynamic, its usefulness in responding to crime increases and approaches the point at which the map reflects current reality—its reality-reflective lag time approaches zero. It has not, however, been demonstrated to cross the prediction horizon such that the map can reliability guide law enforcement to interdict future crime.

Work by Groff and LaVigne illustrates the persistent connection between retrospective and predictive crime mapping:

> [T]he true promise of crime mapping lies in its ability to identify early warning signs across time and space and inform a proactive approach to police problem solving and crime prevention. Such efforts necessitate predictive models that identify 'hot spots' of crime and disorder, as well as areas where crime is abating.[75]

Predictive crime mapping, therefore, continues to rely on past events as data, and may be limited to predicting geographic hot spots rather than individual criminal conduct. A leading network mapper, Valdis Krebs, acknowledged this limitation, writing, "Currently, social network analysis is applied more to the prosecution, not the prevention, of criminal activities . . . We must be careful of 'guilt by association.' Being an alter of a terrorist does not prove guilt—but it does invite investigation."[76] The predictive power of social

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[70] Bohannon, *supra* note 63; Xiaoyu Wang et al., *Investigative Visual Analysis of Global Terrorism*, 27 EUROGRAPHICS/IEEE-VGTC SYMPOSIUM ON VISUALIZATION 919, 919 (2008).
[71] Kathleen M. Carley, Dynamic Network Analysis for Counter-Terrorism, 1 (unpublished manuscript) (on file with author).
[72] *Id.* at 4.
[73] Hayes, *supra* note 69.
[74] Taipale, *supra* note 63, at ¶¶ 11, 12-21, 23.
[75] Groff & LaVigne, *supra* note 57, at 30.
[76] Valdis E. Krebs, *Mapping Networks of Terrorist Cells*, 24 CONNECTIONS 43, 49 (2002).

networks remains in its infancy.[77] Structural realities that limit even the retrospective reliability to social networks exacerbate any potential predictive function.[78]

II. Limitations of Social Network Mapping

Until the advent of programs like XKeyscore, there was little application of DNA to terrorism data.[79] Specific structural realities may limit its reliability.

A. Operator Bias

A presumed advantage of all types of crime mapping, including DNA, is that they provide a fact-based, objective picture of criminal or terrorist activity. In fact, the operation of these networks continues to depend upon human action to determine what data is deemed to be relevant[80] and also to create data-collection algorithms that adequately filter data to produce reliable, useable results.[81]

Operators, like anyone, have selfish motives when compiling network data. They want to create network analyses that reflect reality and so permit the efficient direction of law enforcement resources, but crime mapping is also used to publicize the efficiency of police and to provide grounds for their continued support.[82] This motivation is expressed, as one commenter observes, in "gimmicks and tricks to make the problem of crime appear as threatening as possible."[83]

One such trick is based on crime reporting and categorization.[84] An accurate crime map depends upon accurate reporting and categorization, which can be undermined when agents exercise their discretion to not charge a crime, charge down a crime, or charge up a crime. This discretion is often an important justice-producing part of the criminal system, but it is often meant to make police departments appear more effective or neighborhoods safer than they really are.[85] In each case, any resulting crime map will not be perfectly accurate.

The production of crime maps and social network analyses is, moreover, not unidirectional—operators produce the maps, but the maps also inform the operators and reinforce operators' beliefs. "Maps and mappings (cognitive and others) tell us equally much about who we are and what we do, as well as about the environment they represent.

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[77] Groff & LaVigne, *supra* note 57, at 30, 46, 48; Brooke Foucault Welles, *Predictive Network Analysis in Game User Research*, CHI'12 (2012), available at http://hcigames.businessandit.uoit.ca/chigur/wp-content/uploads/2012/04/gurchi2012_submission_9.pdf.

[78] Henderson et al., *supra* note 56, at 31 ("no widely accepted method for predicting criminal activity has emerged.").

[79] Wang et al., *supra* note 70, at 921.

[80] Henderson et al., *supra* note 56, at 30.

[81] Hayes, *supra* note 69 ("algorithms must somehow distinguish a few dozen people intent on mayhem from other groups of the same size and structure who are planning a family reunion.").

[82] Aurora Wallace, *Mapping City Crime and the New Aesthetic of Danger*, 8 J. VISUAL CULTURE 5, 6 (2009).

[83] *Id.*

[84] Jerry Ratcliffe, *Implementing and Integrating Crime Mapping Into a Police Intelligence Environment*, 2 INT'L J. POLICE SCI. & MGMT. 313, 314 (1999-2000).

[85] *See* Wendy Ruderman, *Crime Report Manipulation of Common Among New York Police, Study Finds*, NEW YORK TIMES, June 28, 2012.

Maps do not only represent 'reality' but play an active role in the production of 'reality.'"[86]

B. Data Collection

Social network mapping depends upon the collection of large amounts of data such that automated, algorithm-directed collection becomes necessary.[87] This collection accesses open sources such as articles culled from the Internet[88] and processed for categorization according to human-constructed thesauri "that enable[] greater generalization of the concepts used."[89] These sources are heterogeneous,[90] which creates consistency problems. Just as code creates the architecture of the Internet,[91] and thus determines how and to what extent people can access information online, compilation of data for social network mapping operates within a structure that limits how much data can be accessed and selectively compiles only certain types of data. This leads to what might be called "relationship distortion,"[92] meaning that actual interpersonal linkages may not be depicted in the network and the linkages that are depicted do not necessarily depict reality.

Evidence of the data collection problem is found in a network analysis that Carley performed, the depiction of which she entitled "Al Qaeda 2002 Actor-to-Actor Network."[93] This network linked Ariel Sharon to Yasir Arafat in apparent affinity with Al Qaeda and each other, despite the facts that neither man was a member of Al Qaeda and that the two men did not share views such that their linkage reflected affinity. Carley's analysis also linked Osama bin Laden to Saddam Hussein, even though bin Laden viewed Hussein as a non-Muslim secularist and Hussein viewed Al Qaeda as a threat, with no affinity between the two or any connection for purposes of counterterrorism.[94] Bin Laden was also linked to Jose Padilla,[95] who emerged to be little more than a well-traveled terrorist hanger-on.[96] Despite this, Padilla, bin Laden, and even Israeli Prime Minister Benjamin Netanyahu were listed together as "emergent leaders of the group."[97] According to Carley, given the position of these men, "it should be difficult to recover from the loss of these individuals given their extensive expertise and position in terms of complex tasks."[98] While Carley's specific model may be

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[86] Nils Zurawski & Stefan Czerwinski, *Crime, Maps and Meaning: Views from a Survey on Safety and CCTV in Germany*, 5 SURVEILLANCE & SOCIETY 51, 55 (2008).
[87] Carley, *supra* note 71, at 19; Taipale, *supra* note 63, at ¶ 84.
[88] Krebs, *supra* note 76, at 45.
[89] Carley, *supra* note 71, at 9.
[90] Mohammad Al Hasan, Link Prediction Using Supervised Learning, 9 (unpublished manuscript) (on file with author).
[91] *See generally* Neal Kumar Katyal, *Digital Architecture as Crime Control*, 112 YALE L.J. 2261 (2003); LAWRENCE LESSIG, CODE 2.0 1 (2006) ("Code is law.").
[92] *See* Wallace, *supra* note 82, at 15.
[93] Carley, *supra* note 71, at 14.
[94] Daniel Benjamin, *Saddam Hussein and Al Qaeda are Not Allies*, NEW YORK TIMES, Sept. 30, 2002.
[95] Carley, *supra* note 71, at 15.
[96] *See throughout* United States v. Jayyousi, 657 F.3d 1085 (11th Cir. 2011).
[97] Carley, *supra* note 71, at 17.
[98] *Id.*

amenable to technical fixes, it also suggests that the whole enterprise of predictive models, if they depend upon automation and algorithms is of dubious reliability.

C. Determining Link Relevance

It is easy to find links, but difficult to judge their relevance.[99] This is so in part because the amount of data of rare network events like terrorist groupings, compared to the massive amount of surrounding, innocent network behavior, is so small that samples to inform a network model are difficult to find. This can result in noisy data results, which deteriorate the performance of the analysis.[100]

Compounding this data rarity problem is the fact that networks often depend on "weak ties,"[101] so that networks "consist[] of clusters tightly bound internally by strong ties and loosely linked to other clusters by weak ties."[102] If the prevailing view of terrorist networks is one of diffuse cells, then their connection by weak ties means that the relevance and probativeness of these weak ties are uncertain. Weak ties indicate some connection, which would cause law enforcement agents to view these ties as probative, but these ties, being weak, may imply no criminal *mens rea*.

These weak ties can also depend upon tenuous conclusions. One commentator, for example, has observed that the number of languages a person can speak might determine where he is placed in a terrorist network.[103] This produces the problem of "fuzzy boundaries," which describes the difficulty of determining who to include and who not to include in a network,[104] and the related "pizza delivery guy problem," which describes the difficulty of distinguishing regular interpersonal contact from significant contact.[105] In the end, social network mapping entails the same problem associated with imputing a person's individual criminal intent based on generalizations about that person's affinity group: based on the group's perceived criminality, the individual might look guilty, but attributing criminal intent and proving criminal elements requires an individual approach.

III. Network Analysis and Its Positive Feedback Loop

In any complex system, multiple feedback loops operate that can reinforce, cancel out, or otherwise inform one another.[106] This is so in the context of the system of law enforcement, in which general law enforcement is intertwined with counterterrorism

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[99] Hayes, *supra* note 69.
[100] Al Hasan, *supra* note 90, at 9.
[101] The ability to diffuse, for example, a terrorist ideology among people depends upon weak ties, which are connections between clusters of people who are strongly tied together. *See* Mark Granovetter, *The Strength of Weak Ties*, 78 AM. J. SOCIOLOGY 1360, 1366 (1973). One problem with creating terrorist social network maps is that weak ties may reflect formal connections among people, but do not necessarily indicate ideational affinity or shared criminal intent.
[102] Hayes, *supra* note 69.
[103] Al Hasan, *supra* note 90, at 3.
[104] Krebs, *supra* note 76, at 44.
[105] Bohannon, *supra* note 63.
[106] Carol Ormand, *What Constitutes a Complex System?*, available at http://serc.carleton.edu/NAGTWorkshops/complexsystems/introduction.html#systems.

moves.[107] This intertwinement entails widespread surveillance and intelligence-gathering networks,[108] the international exchange of biometric and biographic data on suspected criminals,[109] United Nations-sponsored agreements,[110] inter-agency information sharing,[111] massive data-mining, often with the help of commercial-database companies,[112] potential overreach as a result of religious profiling,[113] and other information exchanges.[114]

These moves are certainly part of effective law enforcement, but they also contribute to feedback loops by providing expansive and diffuse data inputs that may appear to reflect criminality but in fact do not. The result is that law enforcement agencies detect and capture more criminals and terrorists, but they also produce more false positives. It remains to be seen whether the altered ratio of true positives to false positives produces a Kaldor-Hicks improvement,[115] and, if it does, whether the true positives are worth the cost of the false positives, both in terms of efficient and effective law enforcement and in terms of just outcomes.

A. General Crime Mapping's Positive Feedback Loop

Crime mapping has obvious strategic advantages in assisting law enforcement agencies in deploying assets to address and, ideally, lower the crime rate. Supporting this notion, Frank Zimring, discussing New York City's dramatic crime drop, challenged the assumption that crime prevented by police on one block will simply shift to the next

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[107] Beau D. Barnes, *Confronting the One-Man Wolfpack: Adapting Law Enforcement and Prosecution Responses to the Threat of Lone Wolf Terrorism*, 92 B.U. L. REV. 1613, 1632 (2012); David S. Kris, *Law Enforcement as a Counterterrorism Tool*, 5 J. NAT'L SECURITY L. & POL'Y 1 (2011); Matthew C. Waxman, *Police and National Security: American Local Law Enforcement and Counterterrorism After 9/11*, 3 J. NAT'L SECURITY L. & POL'Y 377 (2009).

[108] Craig Roush, *Quis Custodiet Ipsos Custodes? Limits on Widespread Surveillance and Intelligence Gathering by Local Law Enforcement After 9/11*, 96 MARQ. L. REV. 315 (2012).

[109] Steven C. Bennett, *Storm Clouds Gathering for Cross-Border Discovery and Data Privacy: Cloud Computing Meets the U.S.A. Patriot Act*, 13 SEDONA CONF. J. 235, 250 (2012).

[110] U.S. Dep't of State Press Release, Statement of Secretary of State Hillary Rodham Clinton, The Law of the Sea Convention (Treaty Doc. 103-39): The U.S. National Security and Strategic Imperatives for Ratification (May 23, 2012), *at* http://www.state.gov/secretary/rm/2012/05/190685.htm.

[111] Waxman, *supra* note 107, at 377.

[112] Elspeth A. Brotherton, *Big Brother Gets a Makeover: Behavioral Targeting and the Third-Party Doctrine*, 61 EMORY L.J. 555, 571-72 (2012).

[113] Sahar F. Aziz, *Caught in a Preventive Dragnet: Selective Counterterrorism in a Post-9/11 America*, 47 GONZ. L. REV. 429, 436, 448 (2011-2012); Lisa Fernandez, *Local Groups Allege Biased Training Colors FBI Dealings with American Muslims*, MERCURYNEWS.COM, http://www.mercurynews.com/top-stories/ci_ 19122246 (last updated Oct. 16, 2011); Dina Temple-Raston, *Terrorism Training Casts Pall over Muslim Employee*, NPR (July 18, 2011), http:// www.npr.org/2011/07/18/137712352/terrorism-training-casts-pall-over-muslim-employee.

[114] Valsamis Mitsilegas, *Immigration Control in an Era of Globalization: Deflecting Foreigners, Weakening Citizens, Strengthening the State*, 19 IND. J. GLOBAL LEGAL STUD. 3, 51 (2012).

[115] It would in no case produce Pareto efficiency, since any increase in accurate targeting of suspects would make the suspect worse off.

block.[116] This observation means that detailed crime mapping should be taken seriously as a legitimate tool of effective law enforcement.

Crime mapping's effectiveness is also a source of its major criticism—that it brands certain neighborhoods as crime hot spots, resulting in a higher law enforcement presence and more intensive policing, which in turn results in a higher absolute and relative crime rate, a continued mapping of that neighborhood as a crime hot spot, and thus a further deployment of assets in that neighborhood.[117] This produces a positive feedback loop that provides an explanation for persistent racial profiling[118] and, indeed, the overrepresentation of African-American males throughout the criminal justice system.[119]

B. Counterterrorism's Positive Feedback Loop

Counterterrorism moves in the context of domestic criminal law are part of a much more complex system, which includes four interrelated feedback loops (A, B, C, and D, in the diagram below), which, since 9/11, have emerged in chronological sequence, and have come to reinforce each other.[120] This system can be depicted thusly:

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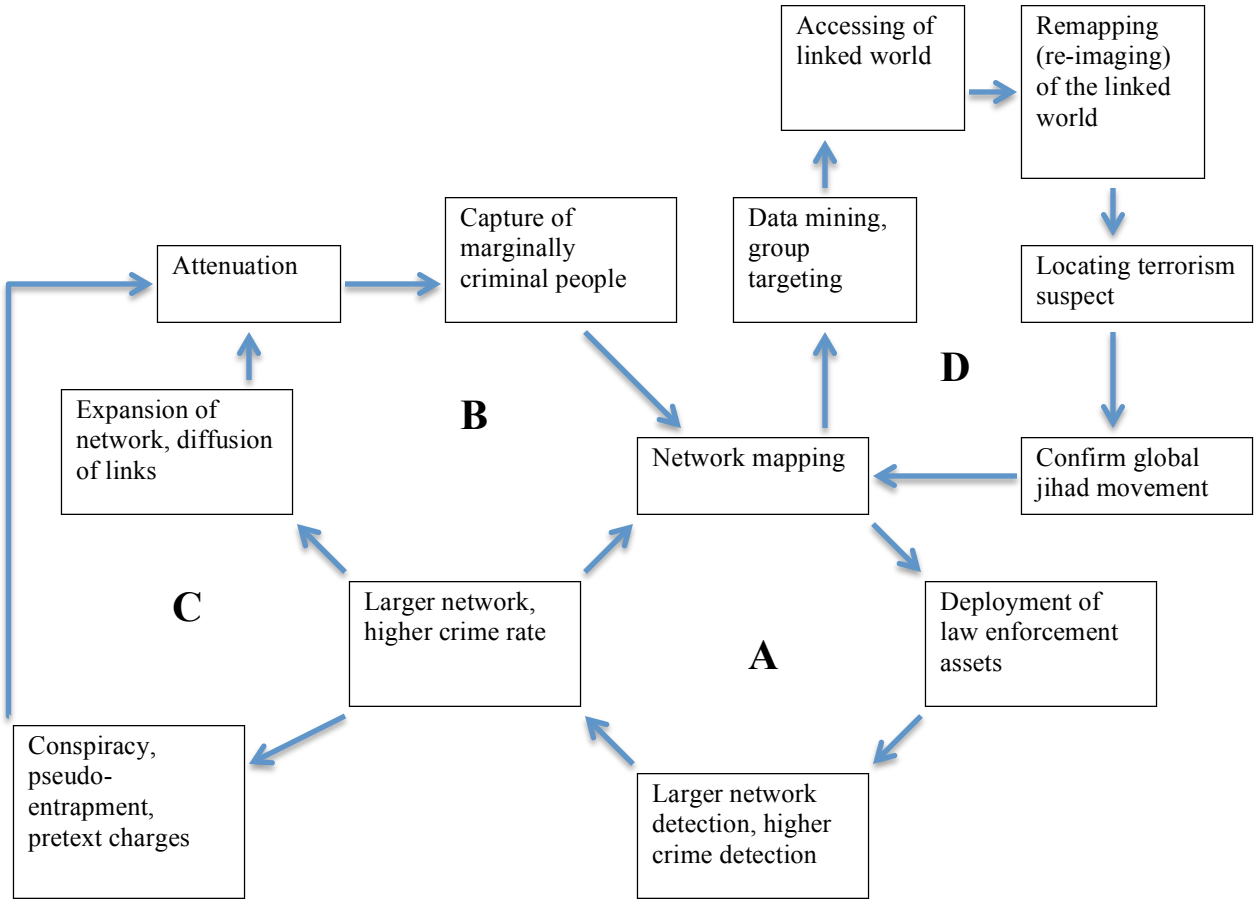
[116] Frank Zimring, *The City that Became Safe: New York and the Future of Crime Control*, SCI. AM., Aug. 9, 2011, available at http://www.scientificamerican.com/podcast/episode.cfm?id=the-city-that-became-safe-what-new-11-08-09.

[117] *See* Andrew Guthrie Ferguson, *Crime Mapping and the Fourth Amendment: Redrawing "High-Crime Areas"*, 63 HASTINGS L.J. 179, 229 (2011).

[118] *See id.* at 228.

[119] WILLIAM J. STUNTZ, THE COLLAPSE OF AMERICAN CRIMINAL JUSTICE 4-5 (2011); William J. Stuntz, *Race, Class, and Drugs*, 98 COLUM. L. REV. 1795, 1795 (1998).

[120] Domestic counterterrorism law enforcement is not entirely distinct from general criminal law enforcement. The Patriot Act has little formally to do with terrorism and was a prosecutor's wish-list years in the making. *See* Nat Hentoff, *Why Should We Care? It's Only the Constitution: Terrorizing the Bill of Rights*, THE VILLAGE VOICE 3 (Nov. 9, 2001), at http://www.villagevoice.com/issues/0146/hentoff.php, and products of NSA counterterrorism surveillance are being used in general criminal investigations. *See* NACDL Press Release, *Nation's Criminal Defense Bar Alarmed by Reports of NSA Surveillance Data Use and Intentional, Systematic Non-Disclosure in Domestic, Non-Terror-Related Criminal Cases*, Aug. 5, 2013, at http://www.nacdl.org/NewsReleases.aspx?id=28870. Bidirectional osmosis is occurring. Counterterrorism is, however, uniquely broad, politically and psychologically motivated, and produces comparatively easy elision of traditional criminal norms. *But see* William J. Stuntz, *The Pathological Politics of Criminal Law*, 100 MICH L. REV. 505 (2001).



Part A of this feedback loop is, relative to the others, normatively untroubling because it is bounded by legitimate law enforcement moves and the detection of actual crime. To the extent that detection of actual crime informs the network, there is little internal concern (if counterterrorism moves target one group over another—say, Muslims over white separatists—then this feedback loop becomes externally concerning because it distorts the reality of terrorism and entails racial, ethnic, or religious profiling). In the wake of 9/11, it made sense to engage in network mapping and employ expansive law enforcement techniques designed to discern the contours of that network.

Valdis Krebs offered the first expression of this feedback loop in the post-9/11 era.[121] His social network was confined to nineteen nodes, each representing one of the 9/11 hijackers, and connected to each other by levels of affinity. This early, successful attempt at network mapping would result in deployment of law enforcement assets, through which a larger network, consisting of Osama bin Laden, Zachiarias Moussaoui, and many others would be added. This network mapping was normatively untroubling because the people in the network were clearly criminal, their associates who were added were clearly criminal or highly likely to be criminal, and the network was based on an actual criminal event. Quantitatively, the network map was limited to that crime.

[121] Philip vos Fellman, *The Complexity of Terrorist Networks*, 2, available at http://www.necsi.edu/events/iccs6/papers/1ba0e6bb2b52fbe3dba2218138a4.pdf; Valdis Krebs, "Uncloaking Terrorist Networks," FIRST MONDAY, (2001), http://www.orgnet.com/hijackers.html.

Part B is more troubling because it quantitatively magnifies the positive loop effects. The feedback loop becomes magnified because it still captures within the network those who are active terror organization members and/or have committed actual acts intended to be addressed by counterterrorism moves, but does so on a much broader scale. What this means is that marginal players may be detected and prosecuted, where before they may have been left undetected and unprosecuted.

Carley's 2002 social network map of Al Qaeda illustrates two problems with an expanded network. First, the expanded network includes people like Jose Padilla who may have had an affinity relationship with Al Qaeda and who may even have committed crimes, but who are such tangential members of the group that their inclusion in the network suggests a level of involvement that is misleading or exaggerated. Second, the expanded network, based as it is on a certain level of automated data collection, contains stark inaccuracies. Carley's network, for example, includes Ariel Sharon as a member, and Benjamin Netenyahu as a key player, whose elimination would undermine Al Qaeda.

This new, expansive result may not be a net good for law enforcement or public safety. Expending law enforcement resources to pursue Sharon and Netenyahu for their support of Al Qaeda is clearly a wasteful endeavor, and many of the marginal players pose no real present or future danger. Pursing them also imposes an opportunity cost on law enforcement agents, who might have otherwise investigated truly and immediately dangerous people. It could also reduce the public's perception of the legitimacy of law enforcement moves, meaning that the public would be less likely to cooperate with law enforcement. Finally, it could lead to injustice at the margins, as small-time players are prosecuted when justice might favor exercise of prosecutorial discretion not to charge.[122]

Part C introduces a qualitative difference to the loop and is therefore more normatively problematic than parts A and B because it brings people into the network who, for reasons discussed below, perhaps ought not to be there.

Part C builds upon parts A and B, as law enforcement continues to pursue not only terrorists, but also their associates, and their associates' associates (the NSA's hop analysis instantiates Part C). This increases the perceived size of the terrorist network, continually drawing more and more people into it. Not only does this feedback loop operate on the principle of attenuation, but this loop also invents links between defendants and terrorism networks that do not, in reality, exist. It does so through the use of conspiracy,[123] pseudo-entrapment,[124] and pretextual charges such as immigration

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[122] These problems in the terrorism context are the same as those of attempts to thwart the drug trade and any other ongoing, complex, multiperson criminal enterprise. Marginal players in narcotics and other criminal networks have been called "small fish", Josh Bowers & Paul H. Robinson, *Perceptions of Fairness and Justice: The Shared Aims and Occasional Conflicts of Legitimacy and Moral Credibility*, 47 WAKE FOREST L. REV. 211, 270 (2012), and "low-hanging fruit," Miriam Hechler Baer, *Cooperation's Cost*, 88 WASH. U. L. REV. 903, 942 (2011), whose capture may delegitimize law enforcement efforts, Bowers & Robinson, *supra* note 122, and, because small fish are easily replaceable, be ineffective in any event. Michael J. Ellis, *Disaggregating Legal Strategies in the War on Terror*, 121 YALE L.J. 237, 241 (2011). The relative ease with which small fish are captured also may disincentivize capture of the most culpable people because, for prosecutors, one terrorism charge equals any other for statistical purposes, but the agency costs of a big fish capture are much higher. William J. Stuntz, *the Unequal Relationship Between Criminal Procedure and Criminal Justice*, 107 YALE L.J. 1, 28 (1997).

[123] The case of Tarik Shah is illustrative. *See* Indictment, United States v. Shah, 1:05-cr-00673-LAP (S.D.N.Y. Dec. 6, 2006); Plea Agreement, United States v. Shah, 1:05-cr-00673-LAP (S.D.N.Y. Apr. 2,

violations[125] and false statements[126] charges that are coded as terrorism related, but are in fact not.

Part D relies most heavily on modern data mining, targeting of groups, and Saidian Othering.[127] Part D is driven by a number of factors. The core reality of 9/11 and the terrorists involved in that attack produced the not-another-9/11 imperative, which, justifiably, drove law enforcement to seek out related Al Qaeda members. Suspects who were terrorists or who would likely engage in future terrorist acts were found. They were charged with substantive crimes, and the 9/11 social network was gradually extended. Extended social networks at some point cease to be bounded criminal conspiracies and become rhetorical tropes. To the extent that this social network includes only actual terrorists, those who are likely to participate in future terrorist acts, and those tertiary people who have taken positive actions toward actual criminal conduct, this social network and the law enforcement moves flowing from it are normatively untroubling. This normatively appropriate core, however, builds upon itself, producing part D of the loop that encompasses many other people outside of this terrorist core.

From the location of an actual suspect and the reification of the global jihad movement flow three key consequences. First, the ranks of terrorist groups may swell as

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2007); Alan Feuer, *Tapes Capture Bold Claims of Bronx Man in Terror Plot*, NEW YORK TIMES, May 8, 2007.

[124] The case of Rezwan Ferdaus is illustrative. *See* Letter, United States v. Ferdaus, at 3, No. 1:11-cr-10331-RGS (D. Mass. Oct. 31, 2012); Transcript of Detention Hearing, United States v. Ferdaus, at 9-10, 12, 14-15, 98-99, 118-19, 123 No. 1:11-cr-10331-RGS (D. Mass. Dec. 9, 2011); Transcript of Detention Hearing, United States v. Ferdaus, at 50-51, 57, 59, 67, 70-71 No. 1:11-cr-10331-RGS (D. Mass. Nov. 10, 2011); Indictment, United States v. Ferdaus, No. 1:11-cr-10331-RGS (D. Mass. Sept. 29, 2011); Jess Bidgood, *Massachusetts Man Gets 17 Years in Terrorist Plot*, NEW YORK TIMES., Nov. 2, 2012, http://www.nytimes.com/2012/11/02/us/rezwan-ferdaus-of-massachusetts-gets-17-years-in-terrorist-plot.html.

[125] The case of Sami Omar al-Hussayen is illustrative. *See* Second Superseding Indictment at 2, United States v. Al-Hussayen, No. CR 03-0048-C-EJL (D. Idaho Mar. 4, 2004); Maureen O'Hagan, *A Terrorism Case That Went Awry*, SEATTLE TIMES, Nov. 22, 2004. *See also* DAVID COLE, ENEMY ALIENS, DOUBLE STANDARDS AND CONSTITUTIONAL FREEDOMS IN THE WAR ON TERRORISM 26 (2006); Stephen Davis, *Deported from America*, NEW STATESMAN, Nov. 22, 2004, at 14 ("Under US laws passed in the mid-1990s and now being strictly enforced, minor and long-forgotten offences can lead to jail and eventual exile."); Statement of David Martin to the National Commission on Terrorist Attacks Upon the United States, Dec. 8, 2003, at http://www.9-11commission.gov/hearings/hearing6/witness_martin.htm (last visited Feb. 29, 2004) (arguing that discovery of an immigration violation as a result of a terrorism investigation should not be cause for complaint); Mary Beth Sheridan, *Immigration Law as Anti-terrorism Tool*, WASHINGTON POST, June 13, 2005, at A1 (reporting complaints that federal immigration authorities are selectively enforcing minor immigration violations (for example, overstaying a visa) against Muslims and Arabs for the purpose of gaining information or detaining people who could be planning terrorist attacks); Cam Simpson et al., *Immigration Crackdown Shatters Muslims' Lives*, CHICAGO TRIBUNE, Nov. 16, 2003, at C1 (reporting that since 9/11 there has been a 31.4% rise in removal orders for individuals from predominantly Muslim nations and only a 3.4% rise in removal orders for individuals from non-Muslim nations that compose 98% of illegal immigrants); FBI, *Uniform Crime Reports: Clearances*, http://www.fbi.gov/about-us/cjis/ucr/crime-in-the-u.s/2011/crime-in-the-u.s.-2011/clearances (last visited April 5, 2013) (describing the FBI's classification scheme, which may artificially inflate the number of terrorism cases).

[126] *See* Barnes, *supra* note 107, at 1646-47; Aziz Z. Huq, *The Signaling Function of Religious Speech in Domestic Counterterrorism*, 89 TEX. L. REV. 833, 835 (2011); Steven R. Morrison, *Conspiracy Law's Threat to Free Speech*, 15 U. PA. J. CONST. L. 865, 888 (2013).

[127] EDWARD W. SAID, ORIENTALISM 1 (1979).

a result of the perceived injustices inherent in the government's war on terror.[128] Second, the government defines the scope of terrorist group membership more broadly, sweeping within its ambit more people. Third, the government becomes more imaginative in its law enforcement efforts, engaging in pseudo-entrapment, charging people with sometimes tenuous conspiracy crimes, charging people with pretextual crimes such as false statements and immigration charges, applying novel and expansive interpretations of crimes such as providing material support to terrorists, and arresting people as material witnesses.

These moves expand the scope of the global jihad movement and confirm and reinforce its supposed reality.[129] This movement, therefore, takes on evidentiary value independent of its individual actors.[130] This means that evidence of the movement is often admissible.[131] There is little that defendants can do to rebut this evidence; in the face of suspicious and unpopular reading materials and a movement associated with terrorism, it is difficult for a defendant to argue the absence of criminal intent. When the charge is conspiracy, evidentiary rules disadvantage the defendant,[132] and where pseudo-entrapment or pretextual charges brought the defendant to court, there may in fact be factual guilt, but not the level of culpability the charge presumes or the charge's connotations imply.

The global jihad movement's expansion encourages law enforcement to engage in further data mining and group targeting. These two concepts are similar in that they have law enforcement performing wide sweeps of conduct to uncover criminal activity. Group targeting is aesthetically more troubling because it is associated with racial profiling,[133] but data mining is more pernicious because of its prevalence, intrusiveness, and secrecy.[134] The series of data mining and collection structures mentioned above are used to collect massive amounts of data and organize them around the not-another-9/11 imperative and global jihad movement. They inform how law enforcement accesses the linked world; with an inherent confirmation bias, agents believe in and look for cyber-

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[128] *See* Michael Ignatieff, *Lesser Evils*, N.Y.TIMES MAG., May 2, 2004, at 46 ("If you want to create terrorists, torture is a pretty sure way to do so."); Michael Ignatieff, *Evil Under Interrogation*, FIN. TIMES (LONDON), May 15, 2004, at 25 ("Torture may help, if not to create terrorists, then to harden them in their hostility to the state responsible for their suffering.").

[129] This is not to say that a sociological reality that is global, conceived in jihad, and directed at a goal or set of goals—thus can be called a movement—does not exist. This is to say that law enforcement's *perception* of that reality is exaggerated and inaccurately defined.

[130] *See* In re Terrorist Attacks on September 11, 2001, --- F.3d ----, 2013 WL 1590255, *4 (2d Cir. 2013); American Freedom Defense Initiative v. Suburban Mobility Authority for Regional Transportation, 698 F.3d 885, 889 (6th Cir. 2012); United States v. Elmardoudi, 611 F.Supp.2d 864, 866 (N.D. Iowa 2007).

[131] Yates v. United States, 354 U.S. 298, 339 (1957) (Black, J., concurring in part and dissenting in part); Second Superceding Indictment at 17, United States v. Mehanna, No. 1:09-cr-10017-GAO (D.Mass. June 17, 2010).

[132] Krulewitch v. United States, 336 U.S. 440, 446 (1949) (Jackson, J., concurring); United States v. Dellosantos, 649 F.3d 109, 125 (1st Cir. 2011); Note, *The Objects of Criminal Conspiracy--Inadequacies of State Law*, 68 HARV. L. REV. 1056, 1056 (1955) (noting that conspiracy law allows prosecutors to sidestep certain technical impediments to conviction).

[133] Lucas McMillen, *Eye on Islam: Judicial Scrutiny Along the Religious Profiling/Suspect Description Reliance Spectrum*, 4 U. ST. THOMAS L.J. 114, 116 (2006).

[134] *See* Margaret B. Hoppin, *Overly Intimate Surveillance: Why Emergent Public Health Surveillance Programs Deserve Strict Scrutiny Under the Fourteenth Amendment*, 87 N.Y.U. L. REV. 1950, 1970 (2012).

jihad, online terrorism radicalization, and dots that connect terrorists. This remaps, or re-imagines, the linked world, which discerns people and conduct not along traditional evidentiary lines (can a crime be proven), constitutional lines (is conduct protected), or normative lines (should a person be prosecuted), but pursuant to an expansive prevention imperative. Based on this remapping, law enforcement increasingly focuses on the groups and communities from which prior suspects have come.[135] Because the 9/11 attackers were defined along religio-political lines, subsequent suspects overwhelmingly are Muslims, who often, but not always, express discontent with American policies, but probably do so at a rate no higher than the American population at large.[136] Investigations tend to reengage racial, ethnic, or religious profiling. Along with false positives, these investigations also uncover an amount of actual or possible crime, and produce suspects, thus further feeding part D of the loop.

IV. Components of the Counterterrorism Loop

The counterterrorism feedback loop, like others, in theory includes stabilizers that limit its reinforcement, positive drivers that reinforce the loop, and negative drivers that undermine the loop. It is questionable whether these elements exist to ensure that traditional justice-bearing criminal law norms are met.

A. Stabilizers

Stabilizers are parts of a system that regulate its inputs and outflows to ensure both a manageable flow and preferred outcomes. In the criminal justice system, stabilizers are supposed to ensure systemic efficiency (plea bargains, for example, are important stabilizers) and just outcomes (plea bargains are also controversial because they may lead to unjust outcomes). Typical stabilizers in criminal law feedback loops include evidentiary rules, constitutional rules, public policy, and public sentiment. In theory, these stabilizers should limit the extent to which the counterterrorism feedback loop self-reinforces, and do so in ways that promote the discovery of truth and production of fairness. In practice, in the domestic counterterrorism law enforcement context, it is unclear that any of them do so to the degree they normatively should.

Evidentiary and constitutional rules are supposed to ensure that relevant, probative, fair evidence is admitted at trial and exclude evidence that would lead either away from the truth or would result in procedural injustice. These rules normally have the external effect of guiding law enforcement agents to abide by the law and obtain relevant evidence fairly, and guiding prosecutors to use their discretion to prosecute when the evidence is good and forego prosecution when it appears that the evidence would not be substantially usable.

In the post 9/11 war on terror, the government often elides these evidentiary and constitutional stabilizers through the use of conspiracy charges, pretextual immigration or

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[135] *See* Ferguson, *supra* note 117, at 229.

[136] Richard Cohen, *Rep. Peter King's Hearings on Islamic Radicalization: Fuel for the Bigots*, WASH. POST, Mar. 8, 2011; CHARLES KURZMAN, MUSLIM-AMERICAN TERRORISM IN THE DECADE SINCE 9/11, 2 (2012) ("[T]he rate of radicalization [among Muslim Americans] is far less than many feared in the aftermath of 9/11.").

material witness arrests, or reference of defendants to military tribunals or indefinite detention as enemy combatants. Secretive FISA warrants, National Security Letters, and surreptitious collection of big data (which reflects the Justice Alito's Fourth Amendment concern in *United States v. Jones*[137]) also contribute to this elision. In the best of times, evidentiary and constitutional standards are not always met. The stakes in the post-9/11 era appear higher, justifying additional elision of stabilizing standards.[138]

Public policy and public sentiment in the war on terror evokes similar policy and sentiments as those during the Red Scare of the 1950s and the drug wars of the 1980s and 1990s. In all three periods, public policy and sentiment were shaped by a persistent fear of a massive, but poorly-discernable entity that threatened the fabric of the country. Communists were thought to be moving against every town, large and small, in America from their headquarters abroad. Inner city drug gangs occupied a land just as foreign, romanticized, and stereotyped[139] as the foreign communist hive and Edward Said's Orient.[140] Just as the Cold War was real, and narcotics certainly a problem, the 9/11 attacks provided a genuine basis upon which to build smart counterterrorism law enforcement policy. The not-another-9/11 imperative, felt by both governmental actors and private citizens, drove that policy.

The strength of the imperative provides no internal stabilizing force (as indicated by passage of the Patriot Act, its 2005 amendment, and the current troubling use of its business records provision to obtain massive amounts of telephone call data), and so it has contributed to the positive feedback loops. In response to the recent revelations about NSA surveillance, there has been unprecedented pushback, with members of Congress calling for legislation that would limit the NSA,[141] scale back Patriot Act provisions, and throw some light on secretive FISA court proceedings.[142] It remains, however, to be seen whether government and society will modify their response to the not-another-9/11 imperative to promote individual rights and just outcomes while continuing to protect against future terrorist attacks.

The presence of defense attorneys also serves a stabilizing force, in that they are responsible for ensuring not only that constitutional and evidentiary rules are followed but also that defendants have an opportunity to counter any evidence that is legally admitted. FISA courts, however, permit no defense counsel, and attorneys for Guantanamo detainees have been restricted in what they can discuss with their clients and discovered that their attorney-client conversations were being recorded by camp guards.[143]

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[137] 132 S.Ct. 945, 957 (2012) (Alito, J., concurring).
[138] *See generally* DAVID COLE & JAMES X. DEMPSEY, TERRORISM AND THE CONSTITUTION: SACRIFICING CIVIL LIBERTIES IN THE NAME OF NATIONAL SECURITY (2002).
[139] *See generally* LEON BING, DO OR DIE (1991).
[140] *See generally* SAID, *supra* note 127.
[141] Spencer Ackerman & Paul Lewis, *Congress Eyes Renewed Push for Legislation to Rein in the NSA*, THE GUARDIAN, Aug. 2, 2013.
[142] Aaron Blake, *Leahy Proposes New Oversight of Surveillance Programs*, WASHINGTON POST, June 24, 2013.
[143] Letta Tayler, *Attorney-Client Privilege? Not at Gitmo: The Perverse Rules Governing the September 11 Trials*, NEW REPUBLIC, June 28, 2013.

Limited law enforcement resources have traditionally played a stabilizing role. Justice Alito, concurring in the Supreme Court's recent GPS tracking case, *United States v. Jones*, wrote,

> In the pre-computer age, the greatest protections of privacy were neither constitutional nor statutory, but practical. Traditional surveillance for any extended period of time was difficult and costly and therefore rarely undertaken. . . . Only an investigation of unusual importance could have justified such an expenditure of law enforcement resources. Devices like the one used in the present case, however, make long-term monitoring relatively easy and cheap.[144]

The Seventh Circuit, similarly, was concerned that new technologies posed new threats to Fourth Amendment privacy because "fantastic [technological] advances" give "the police access to surveillance techniques that are ever cheaper and ever more effective."[145] Finally, Maryland Supreme Court Chief Judge Murphy observed the relationship between privacy rights and surveillance costs, writing, "In *every* Fourth Amendment decision, a citizen's privacy interest could have been more fully protected had the state adopted a more expensive alternative."[146]

B. Positive drivers

The interaction among a number of factors comprises a set of loop drivers. They include the not-another-9/11 imperative, systemic complexity (including Al Qaeda's disruption and atomization), confirmation bias, perceived and actual law enforcement successes, lack of competition in law enforcement, and a feedback loop operating among terrorists.

The September 11, 2001, attacks produced the not-another-9/11 imperative. This imperative requires that the domestic law enforcement apparatus take extraordinary steps to prevent another terrorist attack on the scale of 9/11. While constitutional, normative, and policy limitations on these efforts exist (such as the Fourth Amendment and citizens' concerns over privacy invasions), the not-another-9/11 imperative has increased people's comfort with government intrusions,[147] permitted the passage of laws like the USA Patriot Act,[148] shifted Fourth Amendment analyses in court,[149] changed FBI policies regarding how the agency treats First Amendment protected activities,[150] and facilitated support for racial profiling.[151] It has also driven the prevention paradigm of

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[144] United States v. Jones, 132 S.Ct. 945, 963-64 (2012).
[145] United States v. Garcia, 474 F.3d 994, 998 (7th Cir. 2007).
[146] Gadson v. State, 341 Md. 1, 23 (1995) (Murphy, CJ, dissenting).
[147] Jean Anne Tipps, *Constitutional Law—Fourth Amendment Search and Seizure—Government Surveillance, Developing Technology, and Constitutional Protection*, 80 TENN. L. REV. 211, 231 (2012); Kam C. Wong, *The USA Patriot Act: A Policy of Alienation*, 12 MICH. J. RACE & L. 161, 199-200 (2006).
[148] Paul Ohm, *The Argument Against Technology-Neutral Surveillance Laws*, 88 TEX. L. REV. 1685, 1712-13 (2010).
[149] Turkmen v. Ashcroft, --- F.Supp.2d ----, 2013 WL 153158, *29-30 (E.D.N.Y.); United States v. Ramos, 591 F.Supp.2d 93, 104 (D.Mass. 2008); Dara Jebrock, *Securing Liberty: Terrorizing Fourth Amendment Protections in a Post 9/11 World*, 30 NOVA L. REV. 279 (2006).
[150] Aziz, *supra* note 113, at 436, 438-41.
[151] Sharon L. Davies, *Profiling Terror*, 1 OHIO ST. J. CRIM. L. 45, 46-51 (2003).

counterterrorism law enforcement, which seeks to prevent crime before it happens,[152] and so entails controversial conspiracy charges, pseudo-entrapment, and pretextual immigration and false statement charges.

Domestic counterterrorism law enforcement is highly complex. This systemic complexity impacts the positive feedback loops in a few ways. First, operations affected by positive feedback loops tend decreasingly over time to fit with reality. Data could inform these operations, but complexity hinders learning from data.[153] Second, complexity prevents us from seeing the feedback loops inherent in a system.[154] Third, complexity, because it hinders learning, promotes confirmation biases, which allow positive feedback loops to persist.[155] Part of confirmation biases include thinking that is "static, narrow, and reductionist."[156] This is not to cast blame on law enforcement; production of confirmation biases are inherent in human thinking because we all are boundedly rational, especially when operating in dynamic systems.[157]

The United States' success in fighting Al Qaeda has introduced an additional complicating factor. Prior to and just after 9/11, Al Qaeda was a hierarchical, organized, formal structure, not unlike a corporation. The United States' successes in disrupting and atomizing Al Qaeda have produced Al Qaeda 2.0, which is decentralized, cellular, and spontaneous, spread less by formal recruitment and more by an idea.[158] It is much more difficult to recognize and counter such an organization, and adds complicating factors such as lone wolf terrorists, the possible danger of online recruitment (which is why Al-Aulaqi was assassinated), and doubt as to the organizational source of any terrorist attack.

Complexity breeds confirmation bias,[159] but so too does "experiential urgency."[160] In PTSD patients, this experiential urgency was the perception of threat, which triggered "survival mode."[161] Nationally, 9/11 can be said to be the United States' triggering event, and its continuing perception of a terrorist threat its urgency. Confirmation bias, then, "connotes the tendency to seek or interpret evidence in ways that support existing beliefs, expectations, or hypotheses."[162] Confirmation bias is expressed in people seeking "information that confirms their hypotheses and [avoiding] information that would disconfirm their hypotheses."[163]

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[152] Robert M. Chesney, *The Sleeper Scenario: Terrorism-Support Laws and the Demands of Prevention*, 42 HARV. J. ON LEGIS. 1, 26-30 (2005); Alberto Gonzales, U.S. Att'y Gen., Remarks at the World Affairs Council of Pittsburgh on Stopping Terrorists Before They Strike: The Justice Department's Power of Prevention (Aug. 16, 2006), available at http:// www.usdoj.gov/ag/speeches/2006/ag_speech_060816.html (calling the prevention of terrorism "a meaningful and daily triumph").

[153] John D. Sterman, *Learning from Evidence in a Complex World*, 96 AM. J. PUB. HEALTH 505, 506 (2006).

[154] *Id.*

[155] *Id.* at 513.

[156] *Id.* at 506.

[157] *Id.* at 510.

[158] United States v. Kassir, 2009 WL 2913651, * 3 (S.D.N.Y.).

[159] Sterman, *supra* note 153, at 506.

[160] Claude M. Chemtob et al., *Anger Regulation Deficits in Combat-Related Posttraumatic Stress Disorder*, 10 J. OF TRAUMATIC STRESS 17, 23 (1997).

[161] *Id.*

[162] Keith A. Findley, *Tunnel Vision*, in CONVICTION OF THE INNOCENT: LESSONS FROM PSYCHOLOGICAL RESEARCH 6 (Brian L. Cutler ed., 2011).

[163] *Id.*; *see also* Özge Pala & Jac A.M. Vennix, A Causal Look at the Occurrence of Biases in Strategic Change (unpublished manuscript) (on file with author).

Confirmation bias produces "context-inappropriate" responses[164] because it is "self-confirming."[165] It is also self-sustaining because it causes those who experience the bias to seek re-exposure to the perceived threat,[166] as we tend to look for evidence "consistent with prior beliefs rather than potential disconfirmation."[167] This may help explain why FBI profilers looked for Islamist terrorists after the 1995 bombing of the Alfred P. Murrah federal building in Oklahoma City,[168] and a lone Caucasian shooter during the Beltway sniper attacks in 2002.[169]

Confirmation bias contributes to positive feedback loops. As one commentator wrote,

> The more confirming evidence an organization collects, the more confident it becomes in its strategy and hence, opposes the change [in strategy]. . .[T]he commitment to the strategy leads to the search for confirming information that subsequently leads to confidence. The confidence withholds the organization from changing. . .Since every period with no change leads to higher commitment and higher resulting confidence, the organization does not withdraw from its current strategy. . .[T]he organization can go on with a low-fit strategy.[170]

Confirmation bias drives the positive feedback loop, but the feedback loop also drives the confirmation bias.[171]

Confirmation bias produces perceived, self-reinforcing law enforcement successes,[172] as it entails conspiracy charges, pseudo-entrapment, and pretextual charges. The heuristics associated with biased thinking lead to systematic errors, failure to update belief sets, underestimation of uncertainty, and excessive crediting of salient evidence.[173] It is possible that operation of confirmation biases increases the rate of false positives and false negatives.[174] Confirmation bias also, however, may produce more true positives because it may entail a "more efficient recognition of the presence of threat."[175] Discovery of these true positives drives positive feedback loops, and immunizes them somewhat from criticism. Given the not-another-9/11 imperative, people may be more

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[164] Chemtob et al., *supra* note 160, at 22.
[165] *Id.* at 23.
[166] *Id.*
[167] John D. Sterman, *Communicating Climate Change Risks in a Skeptical World*, 108 CLIMATIC CHANGE 811, 816 (2011).
[168] Amnesty International, *Threat and Humiliation: Racial Profiling, Domestic Security, and Human Rights in the United States*, 24 (Sept. 2004), available at http://www.amnestyusa.org/pdfs/rp_report.pdf.
[169] Elsbeth Bothe, *Facing the Beltway Snipers, Profilers were Dead Wrong*, THE BALTIMORE SUN, Dec. 15, 2002.
[170] Pala & Vennix, *supra* note 163.
[171] Sterman, *supra* note 153, at 510 ("The self-reinforcing feedback between expectations and perceptions has been repeatedly demonstrated. . .Often, however, the mutual feedback of expectations and perception blinds us to the anomalies that might challenge our mental models and lead to deep insight.").
[172] Pala & Vennix, *supra* note 163.
[173] Sterman, *supra* note 153, at 510; Sterman, *supra* note 167, at 816.
[174] Findley, *supra* note 162, at 6; *see also* Pala & Vennix, *supra* note 163.
[175] Chemtob et al., *supra* note 160, at 23.

comfortable with a larger ratio of false positives to true positives than they would otherwise be.[176]

To summarize this process, consider a study of military veterans suffering from PTSD.[177] Based on the trauma they experienced in war, their survival mode of functioning was often activated in inappropriate contexts.[178] Their survival mode entailed a threat-confirmation bias, increased vigilance, and a feedback loop that tended to validate the engagement of their survival mode.[179] Not only could they more efficiently recognize a threat, but they often actually sought re-exposure to threatening situations.[180] As they were re-exposed, their anger and aggression increased, which encouraged them to perceive the presence of threat.[181] From this one might discern a collective positive feedback loop that proceeds thusly: 9/11 attacks→citizenry and government primed to perceive a threat→engaged survival mode→anger→confirmation bias toward perception of threat→perception of threat→citizenry and government primed to perceive a threat.

The leap from individual mental processes to a collective process is not so far fetched; individual processes make up collective ones, and confirmation biases and feedback loops operate throughout the criminal justice system and elsewhere.[182] They impinge upon processes of seeking confessions from suspects, interpreting suspects' statements as inculpatory, production of false confessions, encouraging jailhouse snitches to testify falsely, and encouraging forensic technicians to interpret ambiguous data to support theories of guilt.[183] Even when presented with DNA evidence disproving the guilt of a suspect, "prosecutors sometimes persist in their guilt judgments and resist relief for the defendant."[184] One study found that fingerprint experts were influenced to interpret fingerprints consistently with other information provided to them prior to their forensic analysis.[185]

Furthermore, domestic counterterrorism law enforcement moves do not entail positive feedback loops in isolation, nor do they respond only to imagined threats. They respond

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[176] It is beyond the scope of this article to determine this ratio or its baseline, or to make a normative argument that the true positives are worth or not worth the cost of the false positives. That is, of course, an important question of systemic justice that has been and continues to be addressed. *See* John Ashcroft & John Ratcliffe, *The Recent and Unusual Evolution of an Expanding FCPA*, 26 NOTRE DAME J.L. ETHICS & PUB. POL'Y 25, 28 (2012); Nora Demleitner, *Immigration Threats and Rewards: Effective Law Enforcement Tools in the "War" on Terrorism?,* 51 EMORY L.J. 1059, (2002); Richard E. Myers II, *Challenges to Terry for the Twenty-First Century*, 81 MISS. L.J. 937, 955 (2012); Colin Watterson, *More Flies with Honey: Encouraging Formal Channel Remittances to Combat Money Laundering*, 91 TEX. L. REV. 711, 723 (2013).

[177] Chemtob et al., *supra* note 160.

[178] *Id.* at 22.

[179] *Id.* at 23.

[180] *Id.*

[181] *Id.* at 29.

[182] Findley, *supra* note 162, at 17 (confirmation bias exists in financial decision-making and medical diagnoses.); Kevin Kinghorn, *Spiritual Blindness, Self-Deception and Morally Culpable Nonbelief*, HEYJ XLVIII 527, 534 (2007) (confirmation bias in thinking about spiritual belief).

[183] Findley, *supra* note 162, at 2.

[184] *Id.* at 10 (Citing Daniel S. Medwed, *The Zeal Deal: Prosecutorial Resistance to Post-Conviction Claims of Innocence*, 84 B.U. L. REV. 125 (2004)).

[185] *Id.* at 17 (Citing I.E. Dror et al., *Contextual Information Renders Experts Vulnerable to Making Erroneous Identifications*, 156 FORENSIC SCI. INT'L 74 (2006)).

also to actual terrorist groups, which operate in their own feedback loops. One commentator has discussed such a feedback loop, observing that the loop is "predicated on the idea that when a terrorist ideology acts as a meaning-giving construct, it may result in events that increase the existential anxiety it was intended to relieve and reinforce the original ideology."[186] Law enforcement or military responses to terrorist groups, such as arrests,[187] drone strikes,[188] country invasions,[189] and actual or perceived human rights violations[190] can only feed terrorist existential anxiety, and thus the feedback loop. In the end, then, law enforcement feedback loops and terrorist feedback loops reinforce each other.

C. Negative drivers

Negative drivers operate in any system to undermine feedback loops, resulting ultimately in their negation, in the absence of countervailing positive drivers. In our age of overcriminalization and oversentencing, negative drivers that check feedback loops that result in more defendants and higher sentences[191]—even as crime rates are falling[192]—seem hard to come by. This generalized problem exists especially in the terrorism context, as the positive drivers operate to defeat the effectiveness of any potential negative drivers. There are two negative drivers that are specific to the domestic counterterrorism law enforcement context.

One commentator has offered that "top-down regulation" can break up a feedback loop.[193] Examples of top-down regulation in traditional criminal law include the requirement of Miranda warnings and the constitutional right to a jury trial. In the former case, law enforcement agents initially resisted Miranda[194]; later they found that it worked

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[186] Megan K. McBride, *The Logic of Terrorism: Existential Anxiety, the Search for Meaning, and Terrorist Ideologies*, 23 TERRORISM AND POL. VIOLENCE 560, 561 (2011).
[187] Neil MacFarquhar, *A NATION CHALLENGED: FAMILY LEGACY; 2 Sons of Imprisoned Sheik Took Up the Taliban Cause*, NEW YORK TIMES, Nov. 30, 2001.
[188] *See* Robert F. Worth et al., *Drones Strikes' Risks to Get Rare Moment in the Public Eye*, NEW YORK TIMES, Feb. 3, 2013.
[189] Scott Atran, *To Beat al Qaeda, Look to the East*, NEW YORK TIMES, Dec. 12, 2009.
[190] *See* Nicolo Nourafchan, *Judging Torture: Lessons from Israel*, 43 GEO. J. INT'L L. 1259, 1266 (2012); Gwynne L. Skinner, *Roadblocks to Remedies: Recently Developed Barriers to Relief for Aliens Injured by U.S. Officials, Contrary to the Founders' Intent*, 47 U. RICH. L. REV. 555, 594 (2013).
[191] Bureau of Justice Statistics, *Correctional Populations in the United States, 1996*, at 1, Apr. 1999, available at http://www.bjs.gov/content/pub/pdf/cpu96ex.pdf (approximately 500,000 adults in prison in the United States in 1985; over 1,000,000 in 1996); E. Ann Carson & William J. Sabol, Bureau of Justice Statistics, *Prisoners in 2011*, at 1, Dec. 2012, available at http://www.bjs.gov/content/pub/pdf/p11.pdf (over 1,500,000 prisoners in 2011).
[192] Edward L. Glaeser & Joshua D. Gottlieb, *Urban Resurgence and the Consumer City*, 43 URB. STUD. 1275, 1288-93 (2006); Emma Schwartz, *Crime Rates Shown to Be Falling*, U.S. NEWS & WORLD REP., June 11, 2008, http:// www.usnews.com/news/national/articles/2008/06/11/crime-rates-shown-to-be-falling; *Preliminary Semiannual Uniform Crime Report, Jan.-June 2011*, http:// www.fbi.gov/about-us/cjis/ucr/crime-in-the-u.s/2011/preliminary-annual-ucr-jan-jun-2011 (last visited Mar. 31, 2011); *Falling Crime Rates Challenge Long-Held Beliefs*, NPR (Jan. 3, 2012), http:// www.npr.org/2010/01/03/144627627/falling-crime-rates-challenge-long-held-beliefs.
[193] Chemtob et al., *supra* note 160, at 23.
[194] Lawrence Herman, T*he Supreme Court, The Attorney General, and the Good Old Days of Police Interrogation*, 48 OHIO ST. L.J. 733, 737 (1987).

to their favor because most suspects still talked after being given warnings,[195] and by giving the warnings, courts' default opinion was that confessions were knowing, voluntary, and intelligent.[196] In the latter case, plea bargains and associated systemic concerns have effectively elided defendants' recourse to juries, as 97% of federal cases end in a plea.[197] In both cases, top-down constitutional regulations were worked around to meet law enforcement agents' and prosecutors' perceived needs.

In domestic counterterrorism law enforcement, there is little top-down regulation. The not-another-9/11 imperative drives the executive and legislative branches, and the judicial branch has issued very few opinions that propose to slow down or stop feedback loops. Aside from ruling that the right to habeas corpus applied to Guantanamo detainees (a decision with marginal consequences for domestic counterterrorism law enforcement),[198] the Supreme Court has been remarkably unhelpful. The Court did reassert the protection of unpopular speech in *Humanitarian Law Project v. Holder*, but did so at the cost of some speech that might actually have decreased terrorist violence.[199] This case, furthermore, has not proven to be an effective deterrent to expansive prosecutions. One reason is that conspiracy charges are used in ways that elide First Amendment concerns.[200] Another reason is that lower courts have been sympathetic to government arguments that speech can comprise material support to terrorists.[201]

Another commentator has discussed confirmation bias and feedback loops in the context of private companies, offering that feedback loops theoretically can continue to support low-fit strategies unabated, but that in practice, inter-company competition forces individual companies to adapt to their environments or be defeated.[202] In the business of domestic counterterrorism law enforcement, however, there is little or no competition—the state has a monopoly. In fact, any interagency competition that might have existed prior to 9/11 has been criticized as stovepiping that prevents sharing of important data.[203] This stovepiping also certainly produced suboptimal outcomes, and the move to interagency cooperation probably improved the system of law enforcement. However, the decreased level of competition that resulted may have blunted the improvement to some degree.

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[195] Paul G. Cassell & Bret S. Hayman, *Police Interrogation in the 1990's: An Empirical Study of the Effects of Miranda*, 43 UCLA L. REV. 839, 860 tbl.3 (1996) (83.7% waiver rate); Richard A. Leo, *Inside the Interrogation Room*, 86 J. CRIM. L. & CRIMINOLOGY 266, 276 tbl.3 (1996) (78% waiver rate).

[196] *See* Welsh S. White, *Miranda's Failure to Restrain Pernicious Interrogation Practices*, 99 MICH. L. REV. 1211, 1217-21 (2001).

[197] Gary Fields & John R. Emshwiller, *Federal Guilty Pleas Soar as Bargains Trump Trials*, THE WALL STREET JOURNAL, Sept. 23, 2012.

[198] Hamdan v. Rumsfeld, 548 U.S. 557 (2006); Rasul v. Bush, 542 U.S. 466 (2004); Hamdi v. Rumsfeld, 542 U.S. 507 (2004).

[199] Holder v. Humanitarian Law Project, 130 S.Ct. 2705 (2010).

[200] Epton v. New York, 390 U.S. 29, 31 (1968) (Douglas, J., dissenting); Morrison, *supra* note 126.

[201] *See* United States v. Mehanna, 669 F.Supp.2d 160, 162 (D.Mass. 2009); Second Superseding Indictment at 2, United States v. Al-Hussayen, No. CR 03-0048-C-EJL (D. Idaho Mar. 4, 2004).

[202] Pala & Vennix, *supra* note 163.

[203] Nathan Alexander Sales, *Share and Share Alike: Intelligence Agencies and Information Sharing*, 78 GEO. WASH. L. REV. 279, 281 (2010).

Conclusion: National Security vs. Localism

There is no easy way to address the problems associated with the counterterrorism feedback loop, because the causes are many and unique. 9/11 provided a legitimate event upon which to build a counterterrorism infrastructure, and ongoing real threats justify its persistence. Fear-laden psychological reactions have persisted and have fed that infrastructure.[204] Politicians and media have often found advantages in stoking these fears.[205] There are no easy answers. One suggestion, however, is to adopt a local approach to domestic counterterrorism, similar to what Aziz Huq[206] and Matthew Waxman[207] advocate.

National security tends to be outward and distance looking. Post 9/11 law enforcement moves have been coded as national security, either as military actions or federal counterterrorism efforts directed from Washington.[208] Over time, it became apparent that expansive terrorist structures, instantiated in the spread of ideology rather than institutional structure and the encouragement of lone wolf, homegrown operators rather than cells connected to a center, required a mirroring law enforcement response. That response includes calls for more local responses, is coded as traditional law enforcement, and is a relatively novel approach.[209]

William Stuntz' work suggests that this localist approach may produce greater justice,[210] for a number of reasons.

First, when localities must fund law enforcement efforts, they tend to seek fiscal efficiencies, and as the recent budget-motivated reduction of the prison population in California[211] (which was reinforced by a later Supreme Court ruling ordering the reduction in prison populations[212]), attests, cost savings can produce justice and a nuanced justice system can be less expensive than expansive tough-on-crime approaches.

Second, jurors who are drawn from defendants' communities may be more aware of the positive impact that defendants—despite their crimes—may have on their communities, as family members, workers, friends, and so forth.[213] Local jurors may, therefore, be more willing to treat prosecutions with a critical eye, or even nullify when justice demands it.[214]

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[204] *See* Aziz Z. Huq, *Political Psychology of Counterterrorism*, --- ANNUAL REV. L. AND SOC. SCI. --- (forthcoming) (on file with author);
[205] *Id.*
[206] Aziz Z. Huq, *The Social Production of National Security*, 98 CORNELL L. REV. 637 (2013).
[207] Matthew C. Waxman, *National Security Federalism in the Age of Terror*, 64 STAN. L. REV. 289 (2012).
[208] *See* Jillian Rayfield, *Graham, McCain: Hold Boston Suspect as Enemy Combatant*, SALON, Apr. 20, 2013 (Describing U.S. Senators' desire to hold alleged Boston Marathon bomber as an enemy combatant, despite fact that the suspect's ties to terrorism or terrorist groups was, at the time, unknown).
[209] *See* Huq, *supra* note 206; Waxman, *supra* note 207.
[210] STUNTZ, *supra* note 119, at 285-309.
[211] Randal C. Archibold, *California, in Financial Crisis, Opens Prison Doors*, NEW YORK TIMES, Mar. 23, 2010.
[212] Brown v. Plata, 131 S.Ct. 1910 (2011).
[213] United States v. Gorodetsky, --- F.R.D. ----, 2013 WL 663925, *1 (E.D.N.Y. 2013); People v. Towns, 2012 WL 7007013, *4 (Ill.App. 3 Dist. 2012); State v. Ramirez, 2011 WL 2348464, *25 (Tenn.Crim.App. 2011).
[214] Paul Butler, *Racially Based Jury Nullification: Black Power in the Criminal Justice System*, 105 YALE L.J. 677, 679 (1995) ("for pragmatic and political reasons, the black community is better off when some nonviolent lawbreakers remain in the community rather than go to prison. The decision as to what kind of

Third, local control over law enforcement and criminal justice may increase their perceived legitimacy because prosecutors and cops are more closely tied to communities. Increased communication between government and the populace produces both more cooperation in uncovering dangerous suspects and more nuance by not arresting or prosecuting where forebearance seems the better course, as it often is. It has become abundantly clear that in the counterterrorism context, good relations between the FBI and local Muslim communities are vital.[215]

Conversely, nationalized criminal justice tends to produce law enforcement approaches that contain a number of inefficiencies.[216]

First, nationalized criminal justice tends to be politicized.[217] Since prohibition, the media and national political figures have used a perpetual crime wave[218] to justify their existence. Whether the concern was alcohol, communism, drugs, or terrorists, nationalized crime moves respond not solely to demands of justice or nuanced policy needs, but also to politicized fears that are rarely reflective of reality. Relative to the actual danger, inordinate amounts of resources have been directed at these concerns.[219]

Second, nationalized criminal justice tends to dehumanize offenders by viewing them not as people or community members, but merely as criminals.[220] This approach discounts the value of leniency and dismisses alternative sentencing as an ineffective attempt at rehabilitation and an elision of retributivist principles.

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conduct by African-Americans ought to be punished is better made by African-Americans themselves, based on the costs and benefits to their community, than by the traditional criminal justice process, which is controlled by white lawmakers and white law enforcers.").

[215] Sally Howell, *(Re)bounding Islamic Charitable Giving in the Terror Decade*, 10 UCLA J. ISLAMIC & NEAR E. L. 35, 62-63 (2010-2011).

[216] Peter C. Carstensen, *Buyer Cartels Versus Buying Groups: Legal Distinctions, Competitive Realities, and Anti-Trust Policy*, 1 WM. & MARY BUS. L. REV. 1, 14 (2010) (Discussing "the inefficiencies of a central management trying to coordinate retailing operations in a number of diverse and dispersed local markets."); Clayton P. Gillette, *Fiscal Federalism, Political Will, and Strategic Use of Municipal Bankruptcy*, 79 U. CHI. L. REV. 281, 310 (2012) (Discussing "recent literature that analyzes how the inability of central governments to control local debt for which it has at least implied responsibility causes substantial overspending and inefficiencies at both national and subnational levels."); William F. Pedersen, *Regulation and Information Disclosure: Parallel Universes and Beyond*, 25 HARV. ENVTL. L. REV. 151, 151 (2001) ("Proponents of social cost disclosure programs claim they empower communities and citizen groups to address the problems disclosure reveals without the inefficiencies and the overriding of local preferences that inevitably attend national regulation.").

[217] STUNTZ, *supra* note 119, at 191.

[218] Katherine Beckett, *Setting the Public Agenda: "Street Crime" and Drug Use in American Politics*, 41 *Soc. Probs*. 425, 425 (1994) (arguing that politicians and the mass media play crucial roles in generating public concern about crime); Luz A. Carrion, *Rethinking Expungement of Juvenile Records in Massachusetts: The Case of Commonwealth v. Gavin G.*, 38 NEW ENG. L. REV. 331, 364 (2004); Mark Fishman, *Crime Waves as Ideology*, 25 SOC. PROBS. 531, 531 (1978) (arguing that "crime waves" are largely creations of the news media); Jerome H. Skolnick, *Passions of Crime*, AM. PROSPECT, Mar.-Apr. 1996, at 89, 89 (claiming that policymaking on crime is driven more by symbolism, culture, and politics than by evidence or logic).

[219] *See* DANIEL KAHNMAN, THINKING, FAST AND SLOW 143 (2011).

[220] *See* Albert W. Alschuler, *The Failure of Sentencing Guidelines: A Plea for Less Aggregation*, 58 U. CHI. L. REV. 901, 902-03 (1991) (noting that the "aggregation" of criminal law cases under the federal sentencing guidelines, in the form of high mandatory minimum sentences, led to a harm-based penology that "dehumanized the sentencing process.").

Third, nationalized criminal justice tends to be blind to local needs and concerns. Disgruntled members of the American populace who may tend toward terrorist conduct probably do not do so for the same reasons, or in the same ways. The missing Somali teens in Minneapolis in 2009, thought to have joined Al Shabaab[221]; lone wolves who took criminal action, like the Times Square would-be bomber Faisal Shahzad[222]; those who responded to a government sting and may be mentally ill, like Rezwan Ferdaus[223]; and those who responded to a government sting based on arrogant anger, like Tarik Shah,[224] would all probably respond differently to different interventions. Managing the domestic war on terror from Washington, as has been the case,[225] may not produce the nuanced justice that traditional criminal law demands. It is unclear, furthermore, that centralized policing ensures public safety more than localized approaches. It is clear, however, that the positive feedback loop engendered by massive, centralized policing creates inefficiencies and unjust outcomes.

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[221] Michael Martin & Dina Temple-Raston, *Somali Teens Go Missing in Minneapolis*, Feb. 2, 2009, available at http://www.npr.org/templates/story/story.php?storyId=100135879.
[222] Mark Mazzetti et al., *Suspect, Charged, Said to Admit to Role in Plot*, NEW YORK TIMES, May 4, 2010.
[223] Bidgood, *supra* note 124.
[224] Feuer, *supra* note 123 (Describing a jazz bassist, charged in a plot to provide close-combat training and medical assistance to Al Qaeda, as "a boastful, albeit somewhat bumbling, man, an almost inconceivable mix of bassist, ninja and would-be terrorist," who called himself "doggone deadly.").
[225] Ronald D. Lee & Paul M. Schwartz, *Beyond the "War" on Terrorism: Towards the New Intelligence Network*, 103 MICH. L. REV. 1446 (2005) (Describing counterterrorism moves as secretive, centralized in the Bush Administration, violative of civil liberties, and as military, rather than criminal justice actions.); *but see* USDOJ, *Joint Terrorism Task Force*, http://www.justice.gov/jttf/ (describing JTTFs as "small cells of highly trained, locally based, passionately committed investigators, analysts, linguists, SWAT experts, and other specialists from dozens of U.S. law enforcement and intelligence agencies.").