



**NAVAL  
POSTGRADUATE  
SCHOOL**

**MONTEREY, CALIFORNIA**

**THESIS**

**OBSESSIVE-COMPULSIVE HOMELAND SECURITY:  
INSIGHTS FROM THE NEUROBIOLOGICAL  
SECURITY MOTIVATION SYSTEM**

by

Marissa D. Madrigal

March 2018

Thesis Advisor:  
Second Reader:

Rodrigo Nieto-Gomez  
Christopher Bellavita

**Approved for public release. Distribution is unlimited.**

THIS PAGE INTENTIONALLY LEFT BLANK

REPORT DOCUMENTATION PAGE			Form Approved OMB No. 0704-0188	
Public reporting burden for this collection of information is estimated to average 1 hour per response, including the time for reviewing instruction, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. Send comments regarding this burden estimate or any other aspect of this collection of information, including suggestions for reducing this burden, to Washington headquarters Services, Directorate for Information Operations and Reports, 1215 Jefferson Davis Highway, Suite 1204, Arlington, VA 22202-4302, and to the Office of Management and Budget, Paperwork Reduction Project (0704-0188) Washington, DC 20503.				
<b>1. AGENCY USE ONLY</b> (Leave blank)		<b>2. REPORT DATE</b> March 2018	<b>3. REPORT TYPE AND DATES COVERED</b> Master's thesis	
<b>4. TITLE AND SUBTITLE</b> OBSESSIVE-COMPULSIVE HOMELAND SECURITY: INSIGHTS FROM THE NEUROBIOLOGICAL SECURITY MOTIVATION SYSTEM			<b>5. FUNDING NUMBERS</b>	
<b>6. AUTHOR(S)</b> Marissa D. Madrigal				
<b>7. PERFORMING ORGANIZATION NAME(S) AND ADDRESS(ES)</b> Naval Postgraduate School Monterey, CA 93943-5000			<b>8. PERFORMING ORGANIZATION REPORT NUMBER</b>	
<b>9. SPONSORING /MONITORING AGENCY NAME(S) AND ADDRESS(ES)</b> N/A			<b>10. SPONSORING / MONITORING AGENCY REPORT NUMBER</b>	
<b>11. SUPPLEMENTARY NOTES</b> The views expressed in this thesis are those of the author and do not reflect the official policy or position of the Department of Defense or the U.S. Government. IRB number ___N/A___.				
<b>12a. DISTRIBUTION / AVAILABILITY STATEMENT</b> Approved for public release. Distribution is unlimited.			<b>12b. DISTRIBUTION CODE</b>	
<b>13. ABSTRACT (maximum 200 words)</b>  This thesis explores the impact of human neurobiology on the securitization process within the homeland security field. It proposes a model for how activation of the neurobiological security-motivation system can lead to securitization in response to a security speech act. It explores the model by qualitatively analyzing three examples of securitization processes in the homeland security field for security motivation markers: the 9/11 terrorist attacks, Russian social media propaganda, and the 2016 U.S. presidential election. This thesis found evidence that security motivation may be having an impact on security-related decisions within the homeland security field through its bias toward compulsive precautionary behavior rather than cognitive reassessment. It recommends 1) further study of security motivation triggers and duration of activation; 2) changes in the communication of potential threats by security practitioners; and 3) exploration of how trauma-informed practices can protect cognitive capacity and reduce compulsive security-related behavior.				
<b>14. SUBJECT TERMS</b> security motivation, security theory, obsessive-compulsive disorder, threats, securitization, neurobiology, psychology, evolution, homeland security, Russian election interference, 9/11, terrorism, Donald Trump			<b>15. NUMBER OF PAGES</b> 79	
			<b>16. PRICE CODE</b>	
<b>17. SECURITY CLASSIFICATION OF REPORT</b> Unclassified	<b>18. SECURITY CLASSIFICATION OF THIS PAGE</b> Unclassified	<b>19. SECURITY CLASSIFICATION OF ABSTRACT</b> Unclassified	<b>20. LIMITATION OF ABSTRACT</b> UU	

THIS PAGE INTENTIONALLY LEFT BLANK

**Approved for public release. Distribution is unlimited.**

**OBSESSIVE-COMPULSIVE HOMELAND SECURITY: INSIGHTS FROM THE  
NEUROBIOLOGICAL SECURITY MOTIVATION SYSTEM**

Marissa D. Madrigal  
Chief Operating Officer, Multnomah County, Oregon  
B.A., University of Washington–Seattle, 1998

Submitted in partial fulfillment of the  
requirements for the degree of

**MASTER OF ARTS IN SECURITY STUDIES  
(HOMELAND SECURITY AND DEFENSE)**

from the

**NAVAL POSTGRADUATE SCHOOL  
March 2018**

Approved by:           Rodrigo Nieto-Gomez  
                                  Thesis Advisor

Christopher Bellavita  
Second Reader

Erik Dahl  
Associate Chair for Instruction  
Department of National Security Affairs

THIS PAGE INTENTIONALLY LEFT BLANK

## **ABSTRACT**

This thesis explores the impact of human neurobiology on the securitization process within the homeland security field. It proposes a model for how activation of the neurobiological security-motivation system can lead to securitization in response to a security speech act. It explores the model by qualitatively analyzing three examples of securitization processes in the homeland security field for security motivation markers: the 9/11 terrorist attacks, Russian social media propaganda, and the 2016 U.S. presidential election. This thesis found evidence that security motivation may be having an impact on security-related decisions within the homeland security field through its bias toward compulsive precautionary behavior rather than cognitive reassessment. It recommends 1) further study of security motivation triggers and duration of activation; 2) changes in the communication of potential threats by security practitioners; and 3) exploration of how trauma-informed practices can protect cognitive capacity and reduce compulsive security-related behavior.

THIS PAGE INTENTIONALLY LEFT BLANK



# TABLE OF CONTENTS

<b>I.</b>	<b>INTRODUCTION.....</b>	<b>1</b>
<b>A.</b>	<b>RESEARCH QUESTION .....</b>	<b>1</b>
<b>B.</b>	<b>PROBLEM STATEMENT .....</b>	<b>1</b>
<b>C.</b>	<b>LITERATURE REVIEW .....</b>	<b>4</b>
<b>1.</b>	<b>Human Neurobiological Threat Management Systems.....</b>	<b>5</b>
<b>2.</b>	<b>Obsessive-Compulsive Disorder—Symptoms and Treatment .....</b>	<b>6</b>
<b>3.</b>	<b>Security Theory and the American Security System.....</b>	<b>7</b>
<b>4.</b>	<b>Desecuritization.....</b>	<b>10</b>
<b>D.</b>	<b>RESEARCH DESIGN .....</b>	<b>10</b>
<b>II.</b>	<b>THE SECURITY MOTIVATION SYSTEM.....</b>	<b>13</b>
<b>III.</b>	<b>HOMELAND SECURITY—A SECURITY COMPLEX AND COLLECTIVE SECURITY MOTIVATION SYSTEM.....</b>	<b>19</b>
<b>A.</b>	<b>AN OVERVIEW OF HOMELAND SECURITY .....</b>	<b>19</b>
<b>B.</b>	<b>DECISION MAKING IN HOMELAND SECURITY .....</b>	<b>20</b>
<b>C.</b>	<b>HOMELAND SECURITY ACTORS .....</b>	<b>21</b>
<b>D.</b>	<b>OBJECTS .....</b>	<b>23</b>
<b>E.</b>	<b>FACILITATING CONDITIONS AND RULE-BREAKING BEHAVIOR.....</b>	<b>24</b>
<b>F.</b>	<b>SECURITIZATION AS A RESULT OF SECURITY MOTIVATION .....</b>	<b>25</b>
<b>IV.</b>	<b>EVIDENCE OF SECURITY MOTIVATION AT WORK IN THE HOMELAND SECURITY COMPLEX .....</b>	<b>27</b>
<b>A.</b>	<b>9/11 AND HOMELAND SECURITY OCD .....</b>	<b>29</b>
<b>B.</b>	<b>RUSSIAN FACEBOOK ADVERTISING.....</b>	<b>32</b>
<b>C.</b>	<b>2016 PRESIDENTIAL ELECTION .....</b>	<b>34</b>
<b>V.</b>	<b>FINDINGS, RECOMMENDATIONS, AND CONCLUSION .....</b>	<b>39</b>
<b>A.</b>	<b>FINDINGS .....</b>	<b>39</b>
<b>B.</b>	<b>RECOMMENDATIONS, OR HOW WE CAN LEARN NOT TO BE SUCKERS.....</b>	<b>40</b>
<b>1.</b>	<b>Recommendation 1: Study Security Motivation’s Impact on Security Theory.....</b>	<b>40</b>
<b>2.</b>	<b>Recommendation 2: Don’t Let the Packets Get Scrambled—The Order of Information Matters.....</b>	<b>42</b>

3.	<b>Recommendation 3: Explore How Security Motivation Interacts with a Networked World.....</b>	<b>43</b>
C.	<b>CONCLUSION .....</b>	<b>44</b>
	<b>APPENDIX A. COMPARATIVE ANALYSIS OF THE SMS AND HOMELAND SECURITY COMPLEX .....</b>	<b>47</b>
	<b>APPENDIX B. ANALYSIS OF RUSSIAN SOCIAL MEDIA ADS RELEASED BY HOUSE OF REPRESENTATIVES .....</b>	<b>53</b>
	<b>LIST OF REFERENCES .....</b>	<b>55</b>
	<b>INITIAL DISTRIBUTION LIST .....</b>	<b>59</b>

## LIST OF FIGURES

Figure 1.	Szechtman and Woody’s 2011 Neural Circuit Model of the Security Motivation System .....	14
Figure 2.	Security Motivation within the Homeland Security Complex.....	28

THIS PAGE INTENTIONALLY LEFT BLANK

**LIST OF TABLES**

Table 1. Case Study Matrix—Security Motivation in the Homeland Security  
Complex .....39

THIS PAGE INTENTIONALLY LEFT BLANK

## EXECUTIVE SUMMARY

Humans have evolved complex neurobiological threat management systems over time to aid in survival. One such system is called the security motivation system. This system is theorized to generate powerful emotions, trigger physiological changes, and drive compulsive pre-cautionary behavior. This thesis studies the role of security motivation in the context of security theory, proposes a model for understanding how security motivation shapes the homeland security complex, and provides recommendations for how to improve decision making in the security field.

The United States is faced with a nearly limitless universe of potential threats, but has only limited resources with which to address them. One of the most important activities we undertake as a society is the allocation of resources to address those threats. However, a clear-eyed view of the actual risk we face from various vectors often eludes us. The study of the security motivation system—the neurobiological system that governs our individual response to potential threats—illuminates why a rational distribution of resource to risk is difficult to achieve. Security motivation is driven by powerful emotions that propel behavior and sometimes block our ability to rationally assess information.

The human security motivation system is an adaptive, useful tool for detecting subtle threat signals in our environment and triggering precautionary behavior to help us survive. However, security motivation also drives action over cognitive processing, hampers our ability to reassess new information, and is vulnerable to manipulation. Its qualities and characteristics shape homeland security through individual and collective action at every point in the securitization process that involves humans. This information not only has an impact on the homeland security field, but security studies in general.

This thesis answers the question: What can the study of neurobiological threat detection systems in the human brain teach us about their potential impact on homeland security? It conducts a comparative analysis of the security motivation system and homeland security in a security theory frame of reference. It then proposes and explores a model for the role of security motivation in the securitization process in the homeland

security complex through the examination of three security speech acts in the United States: 1) the terrorist attacks of 9/11, 2) the 2016 Russian social media disinformation campaign, and 3) the 2016 American presidential election.

The proposed model for the impact of security motivation in the homeland security complex is as follows:

1. Signals of a threat are received by a group of people, which is considered an audience within the homeland security complex.
2. If the signals presented to the group are characteristic of the types of threats the security motivation system is attuned to (concrete, novel, uncertain), a portion of the audience will move into a security-motivated state. This state will compel them to take some kind of action and will override their ability to cognitively reassess the threat as overblown if new information is presented.<sup>1</sup>
3. If the speech actor has used the language of security and included a “possible way out” of the existential threat (i.e., a policy change or breaking of the rules, which must be authorized by the audience), that proposed action will provide a ready outlet for the individual’s compulsion to take precautionary measures.
4. If the portion of the audience in an active security-motivated state reaches a critical mass, the group may collectively authorize extraordinary precautionary measures to ward against the threat. The authorization by an individual in the audience is a precautionary action that may then begin to shut security motivation down.

In each case study, evidence of threat-related anxiety and precautionary behavior in response to that threat were found, as shown in Table 1.

---

<sup>1</sup> Within a group of people, variation exists. Differences in experience of emotion, position, neurobiology and context between individuals in the group will naturally result in different reactions to the threat signals.



Table 1. Case Study Matrix—Security Motivation in the Homeland Security Complex

Case Study	Threat Signals	Audience	Threat Signal Characteristics Likely to Trigger Security Motivation	Proposed Action or Securitization	Evidence of Action to Address the Threat
9/11	Terrorist attacks <sup>2</sup>	American public <sup>3</sup>	Novel, unpredictable tactics generating massive uncertainty	Public spending to combat terrorism <sup>4</sup>	Publicly approved anti-terrorism spending over \$1 trillion over 16 years <sup>5</sup>
Russian social media disinformation ads <sup>6</sup>	Warnings of potential threat to targeted audiences	American social media users	Warnings of potential threats to physical safety and security	Varies—Like, Share, or participate in events	Ads communicating a clear threat and a call to action had the highest click-through rates
2016 presidential election	Campaign messages from candidate Trump <sup>7</sup>	American presidential voters	Warnings of threats to physical safety and security	Vote for Trump (build wall on southern border, limit immigration, fight terrorism)	Vote tallies/exit poll surveys correlating with support for Trump, with belief in validity of threats described in Trump campaign messages <sup>8</sup>

<sup>2</sup> Wikipedia, s.v. “September 11 Attacks.”

<sup>3</sup> “Bin Laden: Goal Is to Bankrupt U.S.,” CNN, accessed September 16, 2017, [www.cnn.com/2004/WORLD/meast/11/01/binladen.tape/](http://www.cnn.com/2004/WORLD/meast/11/01/binladen.tape/).

<sup>4</sup> CNN.

<sup>5</sup> Brill, “15 Years after 9/11.”

<sup>6</sup> House of Representatives, “HPSCI Minority Exhibit A.”

<sup>7</sup> Trump, “2016 RNC Draft Speech.”

<sup>8</sup> Huang et al., “Election 2016: Exit Polls.”

In conclusion, a large body of literature across disciplines has documented changes in human perception, physiology, and behavior in response to potential threats.<sup>9</sup> Humans have evolved to make different decisions when they feel threatened.<sup>10</sup> But the feelings driving our behavior do not necessarily reflect objective reality, nor do they tabulate the cost of unnecessary individual or collective security measures. The human bias toward precaution has served us well over our evolutionary timeline, but as Osama bin Laden proved, our adversaries can manipulate us into taking actions that violate our social and moral principles in the name of security.

Knowledge of how security motivation works at the individual level can help homeland and national security professionals become more self-aware, and can allow us to improve our emotional intelligence and enhance our ability to predict behavior in response to threat cues. This knowledge can also be extrapolated to forecast collective reactions to certain kinds of threats. It is this understanding of the interaction between security motivation and the homeland security complex that can help the United States behave more objectively and ultimately remain free from manipulation by those who would do us harm.

---

<sup>9</sup> Steven L. Neuberg, Douglas T. Kenrick, and Mark Schaller, "Human Threat Management Systems: Self-Protection and Disease Avoidance," *Neuroscience and Biobehavioral Reviews* 35, no. 4 (March 2011): 1042–51.

<sup>10</sup> Douglas T. Kenrick et al., "Goal-Driven Cognition and Functional Behavior: The Fundamental-Motives Framework," *Current Directions in Psychological Science* 19, no. 1 (February 2010): 63–7.

## ACKNOWLEDGMENTS

No one succeeds alone. I'd like to particularly thank and acknowledge my parents, Elizabeth and Salvador Madrigal; my two very patient, brilliant, and beautiful children who put up with more than their fair share of my distracted, harried thesis-writing state; my wonderful and supportive sister, Kimberly Madrigal; my brother, Alexis Madrigal; my incredible colleagues at Multnomah County who lovingly supported me and believed in the value of my studies and their contribution to our organization; my Naval Postgraduate School professors and advisor Rodrigo Nieto Gomez, who created a treasured intellectual space where I could imagine, think, and create; my Center for Homeland Defense and Security cohort 1611—I cannot imagine life without all of you in it; and last but not least, thank you to my entire community of friends and loved ones in Portland, Oregon, who encouraged me to keep going.

THIS PAGE INTENTIONALLY LEFT BLANK

# I. INTRODUCTION

## A. RESEARCH QUESTION

This thesis answers the question: What can the study of neurobiological threat detection systems in the human brain teach us about their potential impact on homeland security?

## B. PROBLEM STATEMENT

The security motivation system (SMS) is a human evolutionary success story. Scientists believe this neurobiological threat-detection system in our brains evolved in response to black swan events over our evolutionary timeline.<sup>1</sup> As such, it may be studied as a model of a system that has helped humans survive rare, deadly events in the past—and it may provide clues about how we may react to them in the future.

The SMS's process begins in the brain's prefrontal cortex. It is activated by subtle cues in the environment or signals of potential danger. Activation triggers a feeling of anxiety and motivates people to engage in precautionary behavior to seek more information about the potential threat.<sup>2</sup> It also alerts the parasympathetic nervous system, moving the body into a pre-fight-or-flight state. If no threat is found, the precautionary behavior deactivates the system, sending a dose of calming serotonin through the body and completing the neurobiological loop.<sup>3</sup> It is theorized that obsessive-compulsive disorder (OCD) develops when this system malfunctions and precautionary behavior does not close

---

<sup>1</sup> Erik Z. Woody and Henry Szechtman, "Adaptation to Potential Threat: The Evolution, Neurobiology, and Psychopathology of the Security Motivation System," *Neuroscience and Biobehavioral Reviews* 35, no. 4 (March 2011): 1019–33.

<sup>2</sup> There is a dispute in the literature about the nature of emotion. Some scientists question whether defined emotions such as anxiety or fear are indeed universally hard-wired or if they are learned. Julie Beck, "What Are Emotions, Even?," *Atlantic*, February 24, 2015, <http://www.theatlantic.com/features/archive/2015/02/hard-feelings-sciences-struggle-to-define-emotions/385711/>.

<sup>3</sup> Woody and Szechtman, "Adaptation to Potential Threat."

the loop, leaving people stuck in a state of anxiety and repetitive behavior that is sometimes harmful.<sup>4</sup>

This thesis studies the SMS and explores how its design, components, and processes may be influencing decisions in the homeland security system.<sup>5</sup> Specifically, I believe this exploration could illuminate why we prioritize some perceived threats over others and how bad actors may manipulate our neurobiological processes to achieve their goals.

It is essential to understand the interplay of the SMS and the homeland security system because the United States is faced with uncertain threats to the homeland and limited resources with which to respond to them. The government must determine the best use of resources in a complex, dynamic environment, much like an individual budgeting for his or her food, shelter, and security.

Ideally, limited resources are distributed in a way that addresses the greatest risks to the people of the United States. However, the source of our greatest risks is the subject of debate. Some have argued that U.S. spending on homeland security is out of proportion with risk, citing that death from a terrorist attack is but one kind of preventable death that threatens Americans. The leading causes of death in the United States are diseases, but public spending per disease death pales in comparison to the spending per death due to terrorism since 9/11.<sup>6</sup> One of Bin Laden's stated goals was to "bankrupt" the United States

---

<sup>4</sup> Henry Szechtman and Erik Woody, "Obsessive-Compulsive Disorder as a Disturbance of Security Motivation," *Psychological Review* 111, no. 1 (January 2004): 111–27.

<sup>5</sup> The security motivation system has also been called a "defense system" by Trower, Gilbert, and Sherling, and a "hazard precaution system" by Boyer and Liénard. See Peter Trower, Paul Gilbert, and Georgina Sherling, "Social Anxiety, Evolution, and Self-Presentation: An Interdisciplinary Perspective," in *Handbook of Social and Evaluation Anxiety*, ed. Harold Leitenberg, 11–45 (New York: Plenum Press, 1990); Pascal Boyer and Pierre Liénard, "Why Ritualized Behavior? Precaution Systems and Action Parsing in Developmental, Pathological and Cultural Rituals," *Behavioral and Brain Sciences* 29, no. 6 (2006): 613.

<sup>6</sup> Heart disease kills 700,000 per year. Cancer kills 600,000 people per year. Mike P. Sinn, "Anti-terrorism Spending 50,000 Times More Than on Any Other Threat," Think by Numbers, October 4, 2016, <https://thinkbynumbers.org/government-spending/false-sense-of-insecurity/>.

by forcing it to spend resources to fight intractable wars.<sup>7</sup> If American overspending is a terrorist objective, we must examine and understand why we are vulnerable to it.

The anxiety of the American public may be a telltale sign of mass activation of the population's security motivation systems, which may be having a profound effect on security decisions. Opinion polls conducted in the United States illuminate a persistent disconnect between the public's anxiety about terrorism and the actual risk that an American will be the victim of terrorism. In a 2015 poll, 49 percent of Americans were concerned they could personally be affected by a terrorist attack.<sup>8</sup> The actual odds of being a victim of a terrorist attack in the United States in 2016 was 1 in 45,808; the odds of being a victim of a terrorist attack committed by an undocumented immigrant was even more remote, at 1 in 138,324,873.<sup>9</sup> Public anxiety supports spending policies that meet Bin Laden's objectives but perhaps not our own—and it may be driven by neurobiological processes over which we have little conscious control.

However, it may be that the security motivation system also has positive impacts on our collective ability to manage threats. Rafe Sagarin writes, "There is no technological solution that can prepare us for the risks of a highly variable and unpredictable world as well as the ancient natural process of adaptation."<sup>10</sup> The SMS is an adaptive success that has not been widely studied outside the neurobiological and psychological field. I suggest that the SMS provides a rare opportunity to study a tried and true threat management success and to apply what we know of its function (and malfunction) at the individual level to create a lens through which we view the function (and malfunction) of the homeland security field at the system level.

---

<sup>7</sup> "Bin Laden's War against the U.S. Economy," *Washington Post*, April 27, 2011, [www.washingtonpost.com/blogs/wonkblog/post/bin-ladens-war-against-the-us-economy/2011/04/27/AFDOPjff\\_blog.html](http://www.washingtonpost.com/blogs/wonkblog/post/bin-ladens-war-against-the-us-economy/2011/04/27/AFDOPjff_blog.html).

<sup>8</sup> "Gallup Review: U.S. Public Opinion on Terrorism," Gallup, November 17, 2015, [www.gallup.com/opinion/polling-matters/186665/gallup-review-public-opinion-terrorism.aspx](http://www.gallup.com/opinion/polling-matters/186665/gallup-review-public-opinion-terrorism.aspx).

<sup>9</sup> Dave Mosher and Skye Gould, "How Likely Are Foreign Terrorists to Kill Americans? The Odds May Surprise You," *Business Insider*, January 31, 2017, <http://www.businessinsider.com/death-risk-statistics-terrorism-disease-accidents-2017-1>.

<sup>10</sup> Rafe Sagarin, *Learning From the Octopus: How Secrets from Nature Can Help Us Fight Terrorist Attacks, Natural Disasters, and Disease*, 1st ed. (New York: Basic Books, 2012).

A successful exploration of the SMS's potential impact on the homeland security system will identify vulnerable components of the homeland security system. It may uncover how information flow through our threat management systems might be improved to enable decisions to retire potential threats. It could also discover that our system generally mirrors and functions like the SMS, which would be confirmation that our collective effort is designed in a way that has been successful for our species in the past. Perhaps most importantly, the study of the SMS within the homeland security field could demonstrate the connection between our neurobiology and American security policy, providing a holistic view of the factors at play in shaping the homeland security field.

Finally, it is possible the study of the SMS does not illuminate anything new—that it only draws conclusions that have already been drawn in other ways. However, if security motivation can be placed in the context of the homeland security system successfully, it will provide a new way of looking at our homeland security system and allow us to invest our limited resources in more powerful ways.

### **C. LITERATURE REVIEW**

I have called this principle, by which each slight variation, if useful, is preserved,  
by the term Natural Selection.

—Charles Darwin, *Origin of the Species*

A review of literature from the neurobiological, psychological, and security fields suggests sufficient information exists to provide grounds for a nuanced exploration of security motivation and its potential impact on the homeland security system using a securitization theory frame of reference. This preliminary review includes research on human neurobiological threat management systems, symptoms and treatment of obsessive-compulsive disorder, security theory, and homeland security.



## 1. Human Neurobiological Threat Management Systems

Scientists have theorized that a distinct module in the human brain is responsible for responding to potential threats.<sup>11</sup> Shaped by human adaptation to rare, deadly events, this system drives anxiety, motivates precautionary behavior, and primes humans for fight-or-flight responses if an imminent threat is found. This system is distinct from fear-based “predatory defense systems.” Those systems evolved in reaction to different selective pressures and their fight-or-flight responses are triggered by clear and present danger.<sup>12</sup> Called the “security motivation system” (SMS) in the most recent and expansive research, scholars Eric Z. Woody and Henry Szechtman argue its design, function, and vulnerabilities are having an impact on the security system through influence on individual human behavior.<sup>13</sup>

Woody and Szechtman have identified biological markers, such as variability in the respiratory sinus arrhythmia, that may signal SMS activation.<sup>14</sup> Wisman and Shrira have hypothesized it can be triggered consciously or unconsciously through olfactory cues.<sup>15</sup> Woody and Szechtman argue when the SMS malfunctions and fails to shut down, people experience symptoms of obsessive-compulsive disorder (OCD).<sup>16</sup> Further, they have demonstrated activation rates of the SMS are the same in people with and without OCD, but that the time people with OCD spend engaging in precautionary behavior is much longer.<sup>17</sup>

---

<sup>11</sup> Different neurobiological threat detection system theories have been given different names: Woody and Szechtman call their module the security motivation system, while other scholars in earlier research use the terms “defense system” or “hazard precaution system.”

<sup>12</sup> Woody and Szechtman, “Adaptation to Potential Threat.”

<sup>13</sup> Erik Z. Woody and Henry Szechtman, “A Biological Security Motivation System for Potential Threats: Are There Implications for Policy-Making?,” *Frontiers in Human Neuroscience* 7 (September 2013), <https://doi.org/10.3389/fnhum.2013.00556>.

<sup>14</sup> Woody and Szechtman, “Adaptation to Potential Threat.”

<sup>15</sup> Arnaud Wisman and Ilan Shrira, “The Smell of Death: Evidence That Putrescine Elicits Threat Management Mechanisms,” *Frontiers in Psychology* 6 (August 2015): 1274.

<sup>16</sup> Szechtman and Woody, “Obsessive-Compulsive Disorder.”

<sup>17</sup> Andrea L. Hinds et al., “In the Wake of a Possible Mistake: Security Motivation, Checking Behavior, and OCD,” *Journal of Behavior Therapy and Experimental Psychiatry* 49, part B (December 2015): 133–40.

## 2. Obsessive-Compulsive Disorder—Symptoms and Treatment

OCD is an anxiety disorder characterized by uncontrollable, obsessive thoughts and repetitive, compulsive behaviors that may interfere with a person's life. Genetics, brain structure, and environment may predispose people to OCD.<sup>18</sup> In some cases of acute-onset OCD, it is theorized that an autoimmune response triggered by a strep infection damages circuitry in the brain.<sup>19</sup>

Therapists may provide cognitive behavioral therapy tailored to the particular anxieties triggering obsessive-compulsive behavior, but the underlying neurobiological circuit malfunctions the same way in all OCD patients.<sup>20</sup> Woody and Szechtman have proposed a specific model for the malfunction rooted in neurobiology and evolutionary psychology.<sup>21</sup> Further, they hypothesized that patients with OCD possess a “faulty stopping mechanism.” They tested the theory through a series of experiments measuring the length of time required for “checking behavior” to return an individual's security motivation to the baseline as measured by their respiratory sinus arrhythmia. Patients with OCD were unable to return to the baseline despite long periods of repetitive precautionary behavior.<sup>22</sup>

Security motivation theory is not without critics. Prudon complains that Woody and Szechtman lack consistency in their assumptions about the intervals between threat cues. He also criticizes their characterization of the stopping mechanism and its role in OCD

---

<sup>18</sup> “Obsessive-Compulsive Disorder,” National Institute of Mental Health, accessed June 4, 2017, <https://www.nimh.nih.gov/health/topics/obsessive-compulsive-disorder-ocd/index.shtml>.

<sup>19</sup> “Possible Causes of Sudden Onset OCD in Kids Broadened,” National Institute of Mental Health, accessed June 4, 2017, <https://www.nimh.nih.gov/news/science-news/2012/possible-causes-of-sudden-onset-ocd-in-kids-broadened.shtml>.

<sup>20</sup> Eda Gorbis, “Neurobiology,” Westwood Institute for Anxiety Disorders, accessed June 4, 2017, <http://hope4ocd.com/neurobiology.php>.

<sup>21</sup> Szechtman and Woody, “Obsessive-Compulsive Disorder.”

<sup>22</sup> Hinds et al., “Security Motivation, Checking Behavior, and OCD.”

while acknowledging OCD as a behavior-termination disorder.<sup>23</sup> An emerging school of thought on emotions asserts that emotions are not hard-wired or universal, but rather constructed. This area of study could have implications for Woody and Szechman's theory that a specific emotion—*anxiety*—is a core driver of security motivation. Lisa Barrett writes,

Emotion isn't a simple reflex or a bodily state that's hard-wired into our DNA, and it's certainly not universally expressed. It's a contingent act of perception that makes sense of the information coming in from the world around you, how your body is feeling in the moment, and everything you've ever been taught to understand as emotion. Culture to culture, person to person even, it's never quite the same. What's felt as sadness in one person might as easily be felt as weariness in another, or frustration in someone else.<sup>24</sup>

### 3. Security Theory and the American Security System

The concept of security has been the subject of debate in the fields of national security and foreign affairs for decades. Some say we must know what security is before we can create conditions to attain it. David Baldwin argues in favor of a clear concept of security to facilitate rigorous analysis and policy debate; “if one has no concept of security, one cannot know whether one is threatened with losing it or not.”<sup>25</sup> Others, such as Richard

---

<sup>23</sup> Prudon takes issue with some particulars in Woody and Szechman's theory, namely the role of the brainstem in shutting down the system. He affirms the lack of termination as playing a role in OCD and proposes an alternative model. For the purposes of this thesis, which examines the general existence of the SMS against the general existence of the homeland security complex, the exact neurobiological mechanisms that shut down the system are less important than the fact that there is (somewhere) a shut-down mechanism that fails in cases of OCD. Peter Prudon, “The Security Motivation System According to Woody and Szechman and its Application to OCD: A Critique and Alternative,” *Journal of Obsessive-Compulsive and Related Disorders* 2, no. 2 (April 1, 2013): 99–108.

<sup>24</sup> It is important to acknowledge that while Woody and Szechman specifically name the emotion at the center of the SMS as anxiety or weariness, not everyone will feel that emotion the same way, nor will it be triggered by the same things. The activation of the SMS is a dynamic process dependent on cues, context, and social conditioning. All the factors that Lisa Barrett argues make the experience of emotions different to different people will affect the function of the SMS. Ddnriel Lende, “Lisa Barrett: Facing Down Ekman's Universal Emotions,” *Neuroanthropology*, June 30, 2013, <http://blogs.plos.org/neuroanthropology/2013/06/30/lisa-barrett-facing-down-ekmans-universal-emotions/>.

<sup>25</sup> David A. Baldwin, “The Concept of Security,” *Review of International Studies* 23 (1997): 8, [http://journals.cambridge.org/article\\_S0260210597000053](http://journals.cambridge.org/article_S0260210597000053).

Ullman, suggest security may be defined by whether or not people are willing to give up something to get it.<sup>26</sup>

Some say security is a physical and emotional state. “Security is both a feeling and a reality. And they’re not the same,” writes Bruce Schneier.<sup>27</sup> Buzan, Wæver, and de Wilde’s securitization framework provides a variation on that perspective: “Objective security assessment is beyond our means of analysis; the main point is that actors and their audiences securitize certain issues as a specific form of political act.”<sup>28</sup> In other words, security is whatever someone says it is, as long as a critical mass of people believe it.<sup>29</sup> The literature is rife with discussion about what security is or is not in terms of a state of being, but only Buzan, Wæver, and de Wilde’s securitization theory comes close to describing security in terms of a system of interacting components with a defined process for moving from a normal state to a heightened state of awareness and action.<sup>30</sup>

Definitions of American homeland security abound as well. Some have attempted to define homeland security based on what Christopher Bellavita called “claims about what homeland security emphasizes or ought to emphasize.”<sup>31</sup> Mueller and Stewart define the boundaries of homeland security in terms of U.S. spending to mitigate potential threats at the federal, state, and local level.<sup>32</sup> Nadav Morag writes that, according to the *National Strategy for Homeland Security*, the field is charged with managing “most threats to the stability and normal operation of government and society at the local, state, and/or federal

---

<sup>26</sup> Richard H. Ullman, “Redefining Security,” *International Security* 8, no. 1 (1983): 129–53.

<sup>27</sup> Bruce Schneier, “The Psychology of Security,” in *Progress in Cryptology – AFRICACRYPT 2008 Lecture Notes in Computer Science*, vol. 5023, ed. S. Vaudenay, 50 (Berlin: Springer, 2008).

<sup>28</sup> Barry Buzan, Ole Wæver, and Jaap de Wilde, *Security: A New Framework for Analysis* (Boulder, CO: Lynne Rienner Publishers, 1998), 33.

<sup>29</sup> Buzan, Wæver, and de Wilde.

<sup>30</sup> Buzan, Wæver, and de Wilde.

<sup>31</sup> Christopher Bellavita, “Changing Homeland Security: What Is Homeland Security?,” *Homeland Security Affairs* 4, article 1 (June 2008), <https://www.hsaj.org/articles/118>.

<sup>32</sup> John Mueller and Mark G. Stewart, *Terror, Security, and Money: Balancing the Risks, Benefits, and Costs of Homeland Security*, 1st ed. (New York: Oxford University Press, 2011), 1.

levels of government,” minus “the issues not brought about directly by disasters, health emergencies or terrorism.”<sup>33</sup>

The study of threats provides another window into how one might understand security. Securitization theory requires belief in an “existential threat,” one sufficiently deadly enough that dealing with it excuses the breaking of rules and norms that guide behavior.<sup>34</sup> Literature in social sciences that studies the human reaction to threat seems to align with that framework. Gordon and Arian argue it is not logic but emotions that drive decision making under threat: “the stronger the threat, the more belligerent the policy choice.”<sup>35</sup>

Social scientists have also demonstrated that many different categories of issues can be perceived as threatening. In their paper, “Integrated Threat Theory and Intercultural Attitudes,” scholars Walter G. Stephan, Rolando Diaz-Loving, and Anne Duran summarize the body of literature, which suggests there are four different types of “subjectively perceived threats” that may catalyze prejudice in all in-groups: 1) realistic threats to the survival, power, or safety of the in-group and its members; 2) symbolic threats, in which differences between in-group and out-group beliefs, customs, or norms are interpreted as threats to the “world-view” of the in-group; 3) intergroup anxiety concerns such as fear of embarrassment or ridicule caused by interaction with an out-group; and 4) negative stereotyping, which the authors describe as an “implied threat to the in-group” as a result of intergroup contact.<sup>36</sup>

---

<sup>33</sup> Nadav Morag, *Comparative Homeland Security: Global Lessons* (Hoboken, NJ: John Wiley & Sons, 2011), 2.

<sup>34</sup> Buzan, Wæver, and de Wilde, *Security*.

<sup>35</sup> Carol Gordon and Asher Arian, “Threat and Decision Making,” *The Journal of Conflict Resolution* 45, no. 2 (April 2001): 196.

<sup>36</sup> Walter G. Stephan, Rolando Diaz-Loving, and Anne Duran, “Integrated Threat Theory and Intercultural Attitudes: Mexico and the United States,” *Journal of Cross-Cultural Psychology* 31, no. 2 (March 2000): 241.

#### 4. Desecuritization

The literature on desecuritization is far less voluminous than literature that studies securitization. Desecuritization is the movement of an issue from the realm requiring extraordinary measures to the realm of normal politics. Buzan, Wæver, and de Wilde provide an example of desecuritization from Hobbes—the Leviathan, in which “the logic of existential threat and the right to use force over economic or political relationships were reserved to the state and thus were largely desecuritized among the citizens.”<sup>37</sup> Desecuritization can also be preemptive when an audience prevents an issue from being securitized in the first place.

Desecuritization is not to be confused with failed securitization, when an argument by an actor fails to gain currency with a critical segment of audience. “The appetite for securitization varies in direct relationship to the competing claims for desecuritization: the attention of the executive, the public imagination, the public purse, and bureaucratic windows of opportunity are all limited.”<sup>38</sup>

#### D. RESEARCH DESIGN

##### (1) Object of the Study

The object of my study is the homeland security complex and a system operating within it: the security motivation system. This thesis answers the question: What can the study of neurobiological threat detection systems in the human brain teach us about their impact on the homeland security system?

##### (2) Selection Criteria and Rationale

The homeland security system is a collective federal, state, and local effort to manage certain kinds of deadly threats to the United States. The security motivation system is a collection of components in the human body that work together to detect and manage

---

<sup>37</sup> Buzan, Wæver, and de Wilde, *Security*, 209.

<sup>38</sup> Mark B. Salter, “When Securitization Fails: The Hard Case of Counter-Terrorism Programs,” in *Securitization Theory: How Security Problems Emerge and Dissolve*, ed. Thierry Balzacq, 116–32 (New York: Routledge, 2011), 116.

deadly threats to individuals.<sup>39</sup> While the SMS influences our individual behavior, it may also be influencing the shape and scope of threat management systems we have designed in the homeland security field. Security motivation provided adaptive advantage to our ancestors and helped us survive. Its very existence is proof of its success.<sup>40</sup> But the scholars who have studied it have also cautioned that its innate qualities could be interacting with modern technology in ways that create new security vulnerabilities. By exploring the design and function of the SMS I hope to identify how security motivation might be interacting with the homeland security system in hopes of improving national security efforts.

### (3) Study Limitations and Scope

This study is exploratory and is limited to qualitative analysis. The absence of a consistent model of homeland security may serve as another limitation, making it difficult to conceptualize the system in a way that will satisfy all practitioners.

### (4) Instrumentation

I used available literature on the SMS, security theory, and the homeland security field.

### (5) Steps of Analysis

I conducted a comparative analysis of the SMS as and the homeland security field in a security theory frame of reference. The fields that have given rise to the SMS theory and homeland security theory are vastly different. While the SMS and homeland security system both manage threats, the fields use different terminology to describe system components with similar functions. For example, the field of neurobiology uses the term “stimuli” to describe pieces of information that may trigger threat management through activation of the SMS. The national and homeland security fields use the word “intelligence” to describe information that may trigger threat management through the

---

<sup>39</sup> Woody and Szechtman, “Adaptation to Potential Threat.”

<sup>40</sup> Woody and Szechtman.

homeland security system. In order to provide the clearest comparison between the SMS and homeland security systems and identify where the systems interact, I have translated each into security theory terms. Having described the systems using a common language, I was able to examine similarities, differences, and potential vulnerabilities in each system's processes and functions.

I then proposed and provided evidence for a model of how activation of the neurobiological security motivation system can lead to securitization in response to a security speech act. I tested the model by qualitatively analyzing three examples of securitization processes in the homeland security field for security motivation markers: the 9/11 terrorist attacks, Russian social media propaganda, and the 2016 U.S. presidential election.

#### (6) Intended Output

Through this process, I hope to illuminate the intersection of and differences between the SMS and homeland security system. I believe a thorough examination of the SMS and its interaction with the homeland security system can provide a neurobiological underpinning for securitization theory and demonstrate that human security investments are not necessarily driven by logic but by successful political arguments that trigger the SMS. Finally, I provide recommendations for how to change the model of the homeland security system to better reflect the risks faced by the United States.



## II. THE SECURITY MOTIVATION SYSTEM

The SMS is a complex neurobiological system of systems that evolved to manage threats to the self or others. It picks up subtle threat cues in the environment and compels us to take precautions in response. The system is adaptive because it allows humans to detect and react to hints of potential danger *before* they are faced with an imminent threat.<sup>41</sup> Security motivation generally operates in the background of our consciousness, or in what Nobel prize–winning psychologist Daniel Kahneman termed System 1.

Once activated by stimuli that signal a potential threat, the body moves to an altered state between resting and fight-or-flight. Only physical action—precautionary behavior such as checking, probing, or washing the hands—will gradually shut down the system. Woody and Szechtman write, “The security motivation system involves special types of perceptual processing quite unlike those for recognizing imminent danger.”<sup>42</sup>

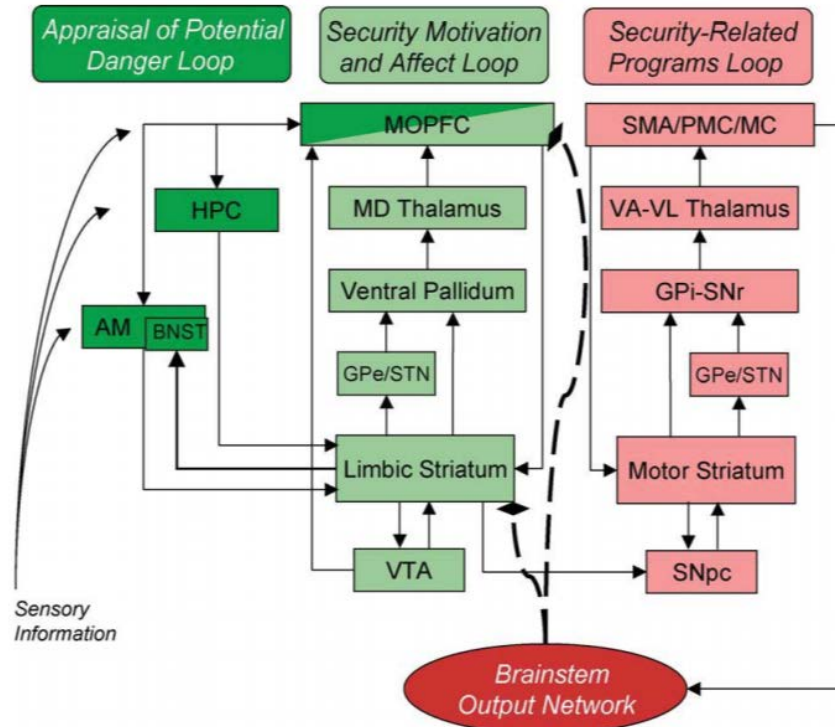
The neurobiological-circuit model of security motivation proposed by Woody and Szechtman, shown in Figure 1, includes: 1) The appraisal of potential danger loop, 2) security motivation and effect, 3) security-related programs loop, and 4) brainstem output.<sup>43</sup>

---

<sup>41</sup> Woody and Szechtman, “Adaptation to Potential Threat”

<sup>42</sup> Woody and Szechtman, “Biological Security Motivation System.”

<sup>43</sup> Woody and Szechtman, “Adaptation to Potential Threat.”



From Szechtman and Woody: “Each of the 4 distinct subcircuits (loops) subserves one of the functional components in Figure 1 and identified by corresponding colors. The dashed line indicates possible sites of yedasentience feedback inhibition. Abbreviations: AM, amygdala; BNST, bed nucleus of the stria terminalis; GPe, external segment of the globus pallidus; GPi, internal segment of the globus pallidus; HPC, hippocampus; MC, motor cortex; MD Thalamus, mediodorsal thalamic substantia nigra pars reticulata; STN subthalamic nucleus; VA ventroanterior thalamic nucleus; VL, ventrolateral thalamic nucleus; VTA, ventral tegmental area.”

Figure 1. Szechtman and Woody’s 2011 Neural Circuit Model of the Security Motivation System<sup>44</sup>

The function of the appraisal of potential danger loop is to note subtle signals in the environment and evaluate them for danger against an individual’s history and current context. If it is determined that a potential threat exists, the security motivation and effect subsystem is activated and may remain so for an extended time.<sup>45</sup> The types of signals or cues the SMS is likely to respond to are those that hint at hidden risks, novel threats, or uncertainty. “The security motivation system is particularly sensitive to concrete and

<sup>44</sup> Source: Woody and Szechtman.

<sup>45</sup> Woody and Szechtman.

surprising or novel changes in the environment, and relatively insensitive to relatively abstract and gradual changes (which can become familiar and therefore lack novelty).”<sup>46</sup> Indeed, other examinations of the psychology of security flag uncertainty as a hallmark of overestimation or exaggeration of threat.<sup>47</sup>

The security motivation and effect subsystem produces two outputs when activated: 1) emotion (anxiety or wariness, which is in and of itself a cue), and 2) a trigger for security-related programs, which “serves as a repository of species-typical programs for the protection of self and others.”<sup>48</sup> The discomfort of powerful emotions like anxiety is a motivating and self-reinforcing mandate for action. Hinds et al. demonstrated this in an experiment that used objective and subjective measures to observe security motivation triggered by mild stimuli. The urge to engage in threat-reducing behavior was not curbed by cognitive reappraisal. Only action returned the body to its baseline.<sup>49</sup>

The security-related programs loop is a “motor loop” in which precautionary behavior is organized and implemented. Examples of these kinds of threat-reducing behaviors are hand washing, checking, and in modern times even sharing information with friends on social media.<sup>50</sup> “Checking and surveillance behaviors not only gather information, but also have a pre-emptive, defensive role, in the sense that predators depend on surprise,” write Woody and Szechtman.<sup>51</sup> The physical act of performing these behaviors triggers motor and visceral output, which evokes a feeling of “goal attainment” and inhibits both the appraisal and security motivation loops.

---

<sup>46</sup> Woody and Szechtman, “Biological Security Motivation System.”

<sup>47</sup> Jane Kellett Cramer, “National Security Panics: Overestimating Threats to National Security” (dissertation, MIT, 2002), <https://dspace.mit.edu/handle/1721.1/8312>.

<sup>48</sup> Woody and Szechtman, “Adaptation to Potential Threat.”

<sup>49</sup> Andrea L. Hinds et al., “The Psychology of Potential Threat: Properties of the Security Motivation System,” *Biological Psychology* 85, no. 2 (October 2010): 331–37.

<sup>50</sup> Erik Z. Woody and Henry Szechtman, “Unintended Consequences of Security Motivation in the Age of the Internet: Impacts on Governance and Democracy,” *Journal of Cognition and Culture* 16, no. 5 (November 2016): 365–82.

<sup>51</sup> Woody and Szechtman, “Adaptation to Potential Threat,” 1020.

The motor and visceral output or brainstem output network “plays an essential role in the generation of the negative feedback that inhibits the security motivation and appraisal loops and is experienced as yedasentience.”<sup>52</sup> This is the off-switch that allows us to gradually return to a normal or resting state. However, Woody and Szechtman note that security behavior is “inherently open-ended.” They also warn that in modern society’s state of connectedness through media, humans are bombarded by threatening stimuli, which keeps security motivation in a constantly active state, preventing cognitive reappraisal. Put another way, the physical and neurobiological changes we experience in a security-motivated state prevent us from cognitively evaluating the true risk of a threat.<sup>53</sup>

It is theorized that when the brainstem output network off-switch malfunctions, individuals may experience symptoms of OCD. OCD is a diagnosis given to people who engage in compulsive precautionary behavior for an extended period of time, beyond what is needed to ensure their safety and security.<sup>54</sup> For example, in a normal system an individual who believes he or she may have been exposed to disease may experience a strong urge to wash his or her hands. The act of hand washing sends a calming dose of serotonin to the brain and gradually calms the system. Woody and Szechtman theorize that in individuals with OCD, the act of hand washing does not trigger serotonin release, resulting in individuals repeating the precautionary behavior over and over again—sometimes to the point of harming themselves.<sup>55</sup> Further, constant triggers in the modern environment may result in what is effectively an obsessive-compulsive state.<sup>56</sup>

In summary, security motivation operates in System 1, the automatic, subconscious part of the brain that operates in the background without our awareness. “Even though the intuitive feelings generated by the security motivation system are vivid, immediate and phenomenologically compelling, to the individual, they are not the same as objective

---

<sup>52</sup> Yedasentience is the term Woody and Szechtman have coined to label the satiety-signal in the security motivation system. Woody and Szechtman, “Adaptation to Potential Threat,” 1024.

<sup>53</sup> Woody and Szechtman, “Biological Security Motivation System.”

<sup>54</sup> National Institute of Mental Health, “Obsessive-Compulsive Disorder.”

<sup>55</sup> Hinds et al., “Security Motivation, Checking Behavior, and OCD.”

<sup>56</sup> Woody and Szechtman, “Unintended Consequences.”

reality, or are they necessarily closely aligned to conclusions derivable from formal logic,” write Woody and Szechtman.<sup>57</sup> Security motivation is calibrated to tolerate a high false-positive error rate, a neurobiological embodiment of the colloquialism “better safe than sorry.”<sup>58</sup> Like many human psychological biases, this bent toward the assumption that something is bad unless it is proven otherwise is highly adaptive, but it may create unexpected vulnerabilities for individuals and populations.<sup>59</sup> This thesis explores some of those potential vulnerabilities in the context of homeland security.

---

<sup>57</sup> Woody and Szechtman, “Biological Security Motivation System,” 2.

<sup>58</sup> Steven L. Neuberg, Douglas T. Kenrick, and Mark Schaller, “Human Threat Management Systems: Self-Protection and Disease Avoidance,” *Neuroscience and Biobehavioral Reviews* 35, no. 4 (March 2011): 1042–51.

<sup>59</sup> Martie G. Haselton and David C. Funder, “The Evolution of Accuracy and Bias in Social Judgment,” in *Evolution and Social Psychology*, eds. Mark Schaller, Jeffrey A. Simpson, and Douglas T. Kenrick, 15–37 (London: Psychology Press, 2014), [https://www.researchgate.net/publication/232481105\\_The\\_Evolution\\_of\\_Accuracy\\_and\\_Bias\\_in\\_Social\\_Judgment](https://www.researchgate.net/publication/232481105_The_Evolution_of_Accuracy_and_Bias_in_Social_Judgment).

THIS PAGE INTENTIONALLY LEFT BLANK

### **III. HOMELAND SECURITY—A SECURITY COMPLEX AND COLLECTIVE SECURITY MOTIVATION SYSTEM**

It is easy to consider governments and institutions as separate from people. We talk about them as structures apart from ourselves, when in fact institutions are formed, populated, and managed by people. A policy is not just a detached rule, but an idea generated by humans that will be implemented by other humans. This distinction matters because humans are flawed. We are not artificially intelligent robots. We do not make perfectly rational decisions every time. We are a bundle of neurons and hormones imperfectly perceiving the world around us and making decisions based on those perceptions.

The homeland security system, its workforce, influencers, institutions, and programs, are all made up of people. People who each have a security motivation system running in the background, scanning for potential threats and reacting to stimuli. As I argue in this thesis, it is impossible to separate the SMS from the homeland security system because homeland security is shaped by security motivation at the individual and group level. Understanding how security motivation works at an individual and population level may help us predict which security speech acts are likely to gain traction.<sup>60</sup> It may also help us devise strategies to avoid manipulation of our behavior and protect our cognitive ability to drive public resources toward the worst threats.<sup>61</sup>

#### **A. AN OVERVIEW OF HOMELAND SECURITY**

American homeland security, like the SMS, is a system of systems that aims to protect the United States against certain kinds of threats to the homeland. Nadav Morag calls homeland security “uniquely American” because “most other democratic countries do not distinguish as clearly between what in the United States was referred to by some as

---

<sup>60</sup> For a detailed list of component definitions and a comparative analysis of the security motivation system and the homeland security complex, see Appendix A.

<sup>61</sup> Woody and Szechtman, “Biological Security Motivation System.”

the ‘home game’ versus the ‘away game.’”<sup>62</sup> Homeland security is generally concerned with threats associated with terrorism, contagious disease, natural disasters, and border integrity, though arguments for larger and smaller scopes abound.<sup>63</sup>

The homeland security system can be considered a “security complex.”<sup>64</sup> According to security theory, a security complex is a “a constellation of security concerns; the different instances of securitization as such for the nodes among which the lines can be drawn and the complex mapped.”<sup>65</sup> Viewed in this manner, the American homeland security complex is defined by the amalgamation of local, state, and federal policy investments made to secure the United States against threats. It includes the actors and audiences necessary to deliver an issue from argument to political reality, such as people in positions of perceived authority, the public, voters, and the media. These components enable the securitization process and cycles.

## **B. DECISION MAKING IN HOMELAND SECURITY**

Securitization occurs when an audience is convinced by a security speech act that an existential threat exists and therefore decides to approve extraordinary measures to mitigate it. Buzan, Wæver, and de Wilde describe the audience as “those the securitizing act attempts to convince to accept exceptional procedures because of the specific security nature of some issue.”<sup>66</sup> In the American homeland security complex, this audience may be groups of people such as voters, the general public, Congress, or a subset of government such as the intelligence community. It may also be an individual such as the president who has executive authority to act independently to securitize certain issues. Whether large or small in size, the audience maintains the decision-making power to address a potential threat with precautionary measures—or not.<sup>67</sup>

---

<sup>62</sup> Morag, *Comparative Homeland Security*, 5.

<sup>63</sup> Morag.

<sup>64</sup> Buzan, Wæver, and de Wilde, *Security*.

<sup>65</sup> Buzan, Wæver, and de Wilde, 43.

<sup>66</sup> Buzan, Wæver, and de Wilde, 41.

<sup>67</sup> Buzan, Wæver, and de Wilde, 31.



Therefore, it is within the audience that security motivation exercises its greatest influence over the homeland security system. Each member of an audience possesses a security motivation system that can be activated with the right kind of stimulus. If we consider that activation of security motivation is the transition from a state capable of assessing information rationally to one oriented to compulsive action instead, one can imagine the power the right kind of security argument can have. Buzan, Wæver, and de Wilde write that securitization occurs when a “critical mass” of an audience is convinced action must be taken to address a threat, whether that threat is real or not. I propose the neurobiological security motivation system is the decision maker—it is the neurobiological process by which we are “convinced” an existential threat may exist. Once convinced, we are compelled to act and may approve securitization.

### **C. HOMELAND SECURITY ACTORS**

The second part of the homeland security complex that may be influenced by security motivation is in the population of securitizing and functional actors. Buzan, Wæver, and de Wilde define security “actors” as those “who securitize issues by declaring something—a referent object—existentially threatened.”<sup>68</sup> The actor may be an individual, institution or group, but must have some form of social capital that places him or her in a position to convince and influence audiences of people.

I argue it is possible that one reason actors decide to communicate potential threats is because they themselves have been stimulated by threat cues. If so, their speech act can be considered an act of compulsive precautionary behavior resulting from their own security-motivated state. Under the right conditions, one might imagine security motivation could travel through a population almost like a contagion, activation begetting activation. Indeed, security motivation may be contributing to the viral spread of certain kinds of messages on social media.<sup>69</sup> Moral panic is also a phenomenon that could be explained by

---

<sup>68</sup> Buzan, Wæver, and de Wilde, 36.

<sup>69</sup> Woody and Szechtman, “Unintended Consequences.”

traveling security motivation.<sup>70</sup> But regardless of the intention of the speech act, the actor unleashes the security motivation trigger.

In the vast landscape of American homeland security, there is a nearly infinite number of potential actors who may attempt to securitize political issues. Politicians, representatives of government at any level, representatives of particular identity groups, media figures—even terrorists themselves—may be considered actors in the homeland security complex.<sup>71</sup> To an individual within an audience, security speech actors are stimuli generators. They produce and broadcast information that must be processed and evaluated against the current context for validity.

Terrorists are particularly effective at generating stimuli likely to trigger security motivation. Jongman writes, “Terrorism is an anxiety-inspiring method of repeated violent action employed by (semi-) clandestine individual, group or state actors, for idiosyncratic, criminal or political reasons ... a threat and violence based communication process.”<sup>72</sup> Further, media may serve as facilitating actors or amplifiers of speech acts. “Maximum impact of an act of terrorism comes from widespread media coverage, which creates a climate of fear among the population, focusing government attention, economic resources, and military resources on fighting a ‘War on Terror,’” writes Kimberly Powell in an analysis of U.S. media coverage since 9/11.<sup>73</sup> I argue the so-called climate of fear Powell describes can be attributed to a critical mass of the population in an active security-motivated state. Our increasingly socially networked world also ensures that speech acts

---

<sup>70</sup> Erich Goode and Nachman Ben-Yehuda, “Moral Panics: Culture, Politics, and Social Construction,” *Annual Review of Sociology* 20, no. 1 (August 1994): 149–71.

<sup>71</sup> Buzan, Wæver, and de Wilde define actors as those “who securitize issues by declaring something—a referent object—existentially threatened”; “political leaders, bureaucracies, governments, lobbyists and pressure groups”; or their representatives. They must have “social capital.” Buzan, Wæver, and de Wilde, *Security*, 36, 32.

<sup>72</sup> A. J. Jongman, *Political Terrorism: A New Guide to Actors, Authors, Concepts, Data Bases, Theories, and Literature* (New York: Routledge, 2017), 28.

<sup>73</sup> Kimberly A. Powell, “Framing Islam: An Analysis of U.S. Media Coverage of Terrorism since 9/11,” *Communication Studies* 62, no. 1 (2011): 92, <http://doi.org/10.1080/10510974.2011.533599>.

can be amplified and proliferate across the world rapidly, maintaining collective open-ended activation.<sup>74</sup>

#### **D. OBJECTS**

Once the role of security motivation within actors and audiences is understood, one can explore what objects humans are likely to judge worthy of protection from threats. Integrated threat theory has demonstrated that individuals need not feel physically threatened to perceive an issue as an existential threat to self or others.<sup>75</sup> So-called referent objects are defined by Buzan, Wæver, and de Wilde as anything “to which one can point and say, ‘it has to survive, therefore it is necessary to.’”<sup>76</sup>

The object may be physical such as a person or a place. Or the object may be conceptual such as a nation, an ideal, or an identity. For example, in the United States many political arguments are made in the name of protecting the “American dream.” Consider the following quote from an essay entitled “Protecting the American Dream,” written by Edwin Feulner, the founder of the Heritage Foundation, a conservative think tank dedicated in part to advocating for national defense:

We live in an exceptional country. Our Founding Fathers laid the framework upon which Americans have risen to greatness through principles of liberty, the rule of law, and self-determination. However, there are some in the world who threaten America’s exceptionalism. Oppressive regimes still rule some nations. Rogue states openly declare aggression against the United States and our way of life.<sup>77</sup>

The objects Feulner declares at risk are not physical. He does not describe a physical threat to the United States or its people but rather an existential threat against our dominance, our exceptionalism, and American identity.

---

<sup>74</sup> Charlie Beckett, “Fanning the Flames: Reporting on Terror in a Networked World,” *Columbia Journalism Review*, September 22, 2017, [https://www.cjr.org/tow\\_center\\_reports/coverage\\_terrorism\\_social\\_media.php](https://www.cjr.org/tow_center_reports/coverage_terrorism_social_media.php).

<sup>75</sup> Stephan, Diaz-Loving, and Duran, “Integrated Threat Theory.”

<sup>76</sup> Buzan, Wæver, and de Wilde, *Security*.

<sup>77</sup> Edwin Feulner, “Protecting the American Dream,” The Heritage Foundation, accessed October 14, 2017, <http://www.heritage.org/defense/report/protecting-the-american-dream>.

Buzan, Wæver, and de Wilde define a threat as anything that is presented and perceived to be an existential threat, whether or not it actually is. They also describe speech acts as arguments for alternate futures.<sup>78</sup> In the homeland security complex, there are perceived threats to physical security that government is charged with managing through public policy: terrorism, challenges to American borders, natural disasters, and infectious disease.<sup>79</sup> In the social discourse, however, threats may be socially constructed. Threats may take the form of a religious, racial, or ethnic identity perceived to be in conflict with dominant American identities. Therefore, security motivation may be triggered by information that suggests a threat to many different kinds of referent objects.

#### **E. FACILITATING CONDITIONS AND RULE-BREAKING BEHAVIOR**

No element of the homeland security complex exists in a vacuum. Humans and their security motivation systems exist in a dynamic ecosystem of information and stimuli.<sup>80</sup> Humans constantly evaluate new information against the context of the ecosystem to make judgements about where our limited energy must be invested to survive. Neuberg, Kenrick, and Schaller write the following about human biological threat-management systems: “There are costs as well as benefits associated with any threat-managing response. Consequently, although threat-managing responses have the potential to be triggered by the sensory perception of a threat-connoting stimulus, that potential is not always realized. Threat-managing emotions, cognitions, and behaviors emerge more reliably and more strongly when circumstances suggest they are needed.”<sup>81</sup> For example, scientists studying fear reactions to sudden noises found that people were more likely to startle in a dark environment.<sup>82</sup>

---

<sup>78</sup> Buzan, Wæver, and de Wilde, *Security*.

<sup>79</sup> Morag, *Comparative Homeland Security*.

<sup>80</sup> Woody and Szechtman, “Unintended Consequences.”

<sup>81</sup> Neuberg, Kenrick, and Schaller, “Human Threat Management Systems,” 13.

<sup>82</sup> C. Grillon et al., “Darkness Facilitates the Acoustic Startle Reflex in Humans,” *Biological Psychiatry* 42, no. 6 (September 1997): 453–60.

Security theory terms these pieces of context “facilitating conditions.” This context aids actors in making successful securitization arguments.<sup>83</sup> The United States’s current context is rife with uncertainty. The rapid pace of technological change, demographic change, and the threat of extreme weather events due to climate change provide powerful fodder for actors seeking to frame political issues as existential threats.<sup>84</sup> The homeland security complex’s actors and audiences are steeped in that context and nothing the security motivation system evaluates for validity is considered without it.

Also critical to securitization is the notion that perceived threats are dealt with through the breaking of existing rules or enacting of “emergency actions or special measures.”<sup>85</sup> This breaking of rules is analogous to the body’s movement from resting to pre–fight or flight in a security-motivated state. In the homeland security complex, the “resting state” may be considered the status quo of existing rules, practices, and social mores. The pre–fight or flight state in the homeland security complex can be considered the period of time in which pre-conflict precautions or security measures are taken, before a threat is actually present.

## **F. SECURITIZATION AS A RESULT OF SECURITY MOTIVATION**

Securitization is defined as actions made with the intent of securing against a threat, whether or not the threat is real or the actions are effective in reducing or eliminating risk.<sup>86</sup> “There must be some public policy change, either in discourse, budget or in actual policy,” says Salter.<sup>87</sup> Through this framework, American security may be more easily understood as a collection of successful political arguments rather than a logically planned system.<sup>88</sup> Woody and Szechtman’s security motivation theory provides a neurobiological

---

<sup>83</sup> Buzan, Wæver, and de Wilde, *Security*.

<sup>84</sup> Richard Dobbs, James Manyika, and Jonathan Woetzel, *No Ordinary Disruption: The Four Global Forces Breaking All the Trends* (New York: PublicAffairs, 2016).

<sup>85</sup> Buzan, Wæver, and de Wilde, *Security*.

<sup>86</sup> Buzan, Wæver, and de Wilde.

<sup>87</sup> Salter, “When Securitization Fails,” 121.

<sup>88</sup> Through a comparative analysis of the SMS and homeland security, it may be possible to argue that the underlying mechanism for “convincing” an audience is the triggering of the SMS.

explanation for why some threats are more believable and therefore more politically viable than others.<sup>89</sup> For example, if security motivation is tuned to novelty, it makes logical sense that security speech acts describing novel threats would be more likely to convince members of an audience that a threat must be mitigated.

For a speech actor, understanding humanity's security motivation buttons provides a powerful marketing advantage. Security theory maintains that because debates about security are debates about the future; it is impossible to argue *scientifically* that a threat is real. Instead, people argue for or against "alternate futures." Securitization is the act of convincing a critical mass of people of an alternate future in which an existential threat exists and that rules must be broken to address it.<sup>90</sup> Further, Buzan, Wæver, and de Wilde argue, "it is possible to ask with some force whether it is a good idea to make this issue a security issue—to transfer it to the agenda of panic politics—or whether it is better handled within normal politics."<sup>91</sup> Unfortunately, whether one asks with force or not, evaluating a "good idea" under the influence of security motivation's powerful emotions may be cognitively difficult.<sup>92</sup>

In summary, security motivation has the potential to influence the homeland security complex at any point in the structure or process where humans act and interact. By understanding the security motivation process and its ability to change our behavior, we can begin to predict how individuals and populations may react to security speech acts. In the next chapter, I examine three case studies in which a speech act resulted in securitization and argue that security motivation played a key role in the outcomes.

---

<sup>89</sup> Woody and Szechtman, "Biological Security Motivation System."

<sup>90</sup> Buzan, Wæver, and de Wilde, *Security*.

<sup>91</sup> Buzan, Wæver, and de Wilde, 34.

<sup>92</sup> Hinds et al., "The Psychology of Potential Threat."

#### **IV. EVIDENCE OF SECURITY MOTIVATION AT WORK IN THE HOMELAND SECURITY COMPLEX**

The security motivation system model predicts specific human behavior in response to potential threats.<sup>93</sup> That is, one would expect that threat cues would spur compulsive, precautionary behavior that can be identified and measured. It stands to reason, then, that potential threats presenting in the homeland security complex could trigger precautionary behavior that can be observed as well. Further, one would expect the types of potential threats that are securitized to be aligned with the types of threats security motivation is most attuned to: concrete, novel, or uncertain threats.

Together, the security motivation system model and security theory provide a complete rationale for how some potential threats move from individual consideration to collective action through the homeland security complex (see Figure 2). I propose the complete process as follows:

1. Signals of a threat are received by a group of people, which are considered an audience within the homeland security complex.
2. If the signals presented to the group are characteristic of the types of threats the security motivation system is attuned to (concrete, novel, uncertain), a portion of the audience will move into a security-motivated state. This state will compel them to take some kind of action and will override their ability to cognitively reassess the threat as overblown if new information is presented.<sup>94</sup>
3. If the speech actor has used the language of security and included a “possible way out” of the existential threat (i.e., a policy change or breaking of the rules, which must be authorized by the audience), that

---

<sup>93</sup> Hinds et al., “Security Motivation, Checking Behavior, and OCD.”

<sup>94</sup> Within a group of people, variation exists. Differences in experience of emotion, position, neurobiology, and context between individuals in the group will naturally result in different reactions to the threat signals.

proposed action will provide a ready outlet for the individual's compulsion to take precautionary measures.

4. If the portion of the audience in an active security-motivated state reaches a critical mass, the group may collectively authorize extraordinary precautionary measures to ward against the threat. The authorization by an individual in the audience is a precautionary action that may then begin to shut security motivation down.

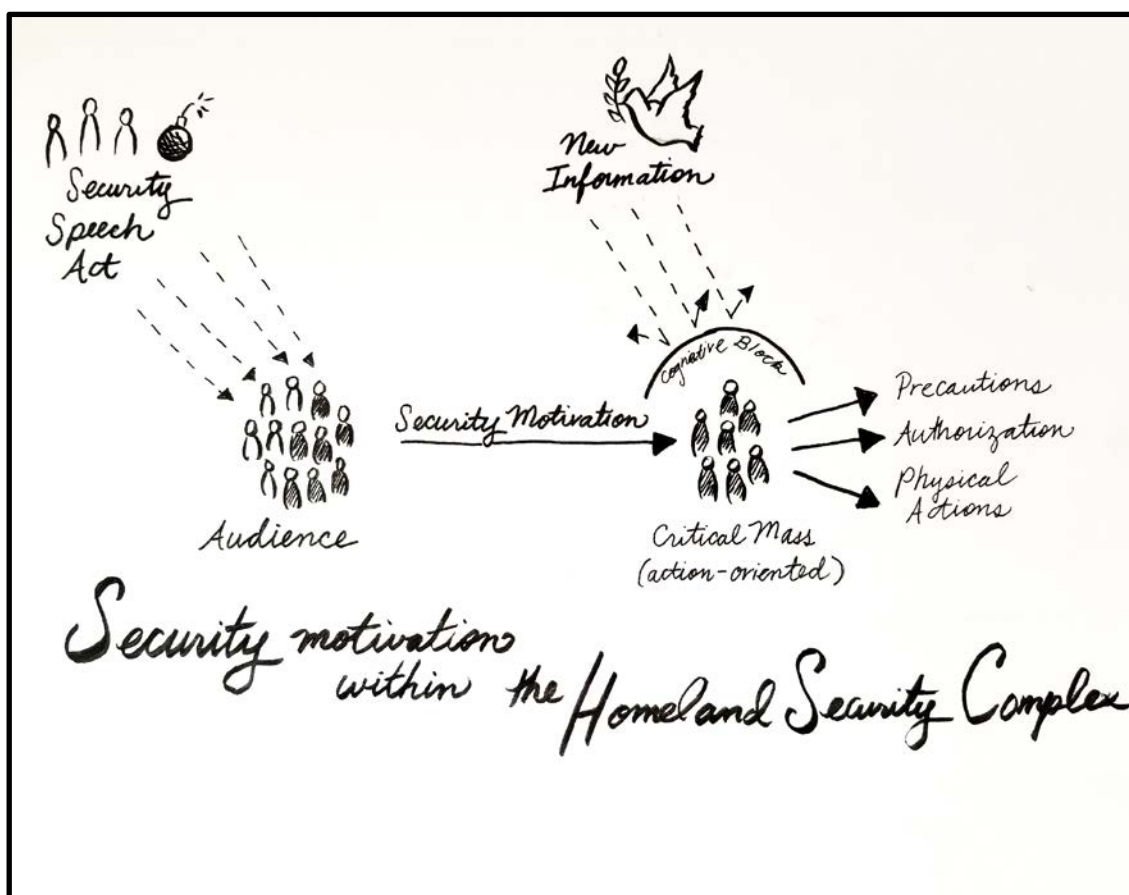


Figure 2. Security Motivation within the Homeland Security Complex



To test this hypothesis, I examine three different security speech acts that occurred in the homeland security complex. The following case studies intend to trace the fingerprint of security motivation at the individual and group level and demonstrate the power of its influence in our decision making.

#### **A. 9/11 AND HOMELAND SECURITY OCD**

The terrorist attacks committed by Al Qaeda on September 11, 2001, were spectacularly novel in their tactics, targets, and scope. Nineteen hijackers flew planes into the World Trade Center in New York, the Pentagon in Washington, DC, and a field in Pennsylvania. The attacks killed nearly 3,000 people, injured thousands more, and resulted in the most sweeping foreign and domestic policy changes since World War II.<sup>95</sup>

In early 2002, just months after the 9/11 and the 2001 anthrax attacks, Dr. Brad Schmidt and Jeffrey Winters described an American psyche “scarred” by terrorist attacks. They wrote:

We are having difficulty grappling with our sudden loss of security. In the weeks immediately after the attacks, a survey of 668 Americans by the Institute of Social Research in Ann Arbor, Michigan, reported that 49 percent of participants felt their sense of safety and security had been shaken. And some 62 percent of respondents said they had difficulty sleeping. In another poll of 1,015 Americans conducted by the Harvard School of Public Health and the Robert Wood Johnson Foundation, 57 percent had taken steps to protect themselves—*such as taking precautions when opening mail and avoiding public events*.<sup>96</sup> (emphasis mine)

This snapshot in time captures a majority of the American public in an active security-motivated state. It describes the powerful and anxious emotions evoked by Al Qaeda’s

---

<sup>95</sup> Wikipedia, s.v. “September 11 Attacks,” November 2, 2017, [https://en.wikipedia.org/w/index.php?title=September\\_11\\_attacks&oldid=808442808](https://en.wikipedia.org/w/index.php?title=September_11_attacks&oldid=808442808).

<sup>96</sup> An examination of the Robert Wood Johnson survey referenced in this quotation provides additional context. Fifty-seven percent of Americans reported taking precautions in response to bioterrorism in the wake of 9/11 and anthrax attacks. See Robert J. Blendon et al., “Public Response to the Anthrax Threats” (working paper, Harvard School of Public Health, 2001), [https://cdn1.sph.harvard.edu/wp-content/uploads/sites/94/2012/09/WP1Public\\_Response\\_Anthrax.pdf](https://cdn1.sph.harvard.edu/wp-content/uploads/sites/94/2012/09/WP1Public_Response_Anthrax.pdf); “Anxiety after 9/11,” *Psychology Today*, accessed October 29, 2017, <https://www.psychologytoday.com/articles/200201/anxiety-after-911>.

deadly act. More importantly, it documents widespread precautionary behavior in response to that anxiety, exactly as predicted by the security motivation system model.

In January of 2002, the United States population stood at just over 286 million people.<sup>97</sup> If the poll described in Schmidt and Winters's writing was representative of Americans nationwide, one can estimate that a majority of the public, roughly 163 million Americans, was in a security-motivated state and seeking to protect themselves from terrorism—despite the fact that the terrorist attacks of 9/11 killed less than .001 percent of the American population. In contrast, 2.4 million Americans died in 2001 of other causes, including 700,000 from heart disease, 100,000 from accidents, and 20,000 from assaults.<sup>98</sup>

The fact that over half of Americans were in a security-motivated state post-9/11 is not simply a statistic. In a democracy like the United States, agreement by a majority of the population is sufficient to authorize policy change through the election of public officials. It stands to reason, then, that security motivation affected more discrete parts of the homeland security complex post-9/11 as well, including the federal government and Congress. In this environment, not taking security measures could threaten the political viability of currently serving officials, triggering their security motivation systems and compelling action to maintain their elected status.

Indeed, in the wake of the attacks and through 2016, Americans spent in excess of \$1 trillion on federal counterterrorism programs.<sup>99</sup> The United States enacted new security measures at airports, reorganized the federal government to create the Department of Homeland Security, and launched military attacks on Iraq and Afghanistan in pursuit of Al Qaeda. Sixteen years later, those security measures are institutionalized, part of the new normal. But whether those measures have been effective at increasing American security is a subject of continual debate.<sup>100</sup>

---

<sup>97</sup> "US Population by Month," multpl, accessed October 29, 2017, <http://www.multpl.com/united-states-population/table?f=m>.

<sup>98</sup> Robert N. Anderson et al., "Deaths: Injuries, 2001," *National Vital Statistics Reports* 52, no. 21 (June 2004): 1–86.

<sup>99</sup> Steven Brill, "15 Years after 9/11, Is America Any Safer?," *Atlantic*, August 8, 2016, [www.theatlantic.com/magazine/archive/2016/09/are-we-any-safer/492761/](http://www.theatlantic.com/magazine/archive/2016/09/are-we-any-safer/492761/).

<sup>100</sup> Brill.

Mueller and Stewart write, “Policy discussions of homeland security issues are driven not by rigorous analysis but by fear, perceptions of past mistakes, pork-barrel politics, and insistence on an invulnerability that cannot possibly be achieved.”<sup>101</sup> This seemingly irrational response to a security threat is perfectly predictable when viewed through the lens of security motivation. Al Qaeda, ISIS, and other Islamic terrorists have maintained the advantage of novelty and surprise by continuously altering their tactics and targets.<sup>102</sup> By evolving their strategy, terrorists perform acts that security motivation is particularly sensitive to. As a result, Americans remain anxious. More importantly, in an active security-motivated state they remain unable to cognitively reassess the danger of terrorism.<sup>103</sup> In 2017, sixteen years after the attacks on the World Trade Center and Pentagon, 38 percent of Americans reported to Gallup that they were “less willing to attend large events due to terrorism,” matching levels post-9/11.<sup>104</sup>

Understanding this context is critical to predicting how security motivation will influence decision making in the United States going forward. Woody and Szechtman wrote the following about the effect of security motivation on cognitive reassessment: “Our work suggests that once the security motivation system is activated, it is not affected much by further cognitive information, but instead becomes highly action-oriented, driving, for example, checking and corrective behaviors rather than reappraisal.”<sup>105</sup> It is no wonder, then, that in the American population’s constantly security-motivated state we are unable to rationally evaluate the risk posed by terrorism in comparison to other types of preventable death.

---

<sup>101</sup> Mueller and Stewart, *Terror, Security, and Money*.

<sup>102</sup> Strategic Foresight Initiative, “Evolving Terrorist Threat: Long-Term Trends and Drivers and Their Implications for Emergency Management,” FEMA, September 2011, [https://www.fema.gov/pdf/about/programs/oppa/evolving\\_terrorist\\_threat.pdf](https://www.fema.gov/pdf/about/programs/oppa/evolving_terrorist_threat.pdf).

<sup>103</sup> Woody and Szechtman, “Biological Security Motivation System.”

<sup>104</sup> “Terrorism Fears Drive More in U.S. to Avoid Crowds,” Gallup, June 20, 2017, <http://news.gallup.com/poll/212654/terrorism-fears-drive-avoid-crowds.aspx>.

<sup>105</sup> Woody and Szechtman, “Biological Security Motivation System,” 3.

## B. RUSSIAN FACEBOOK ADVERTISING

On November 12, 2016, thousands of people converged on Manhattan’s Union Square to protest Donald Trump’s election.<sup>106</sup> They had signed up for the march on Facebook, making their way to the meeting place in response to an ad reading, “Stop Trump and his bigoted agenda! We must unite ... to stop HATE from ruling the land.” But this was no ordinary protest—it was manifested out of thin air by Russian agents who spent \$1.93 to advertise it and watch it go viral.<sup>107</sup>

In 2016, Russian operatives purchased \$100,000 in Facebook ads in alleged attempts to interfere with the American presidential election.<sup>108</sup> Speculation over the goals of the ads was rampant. Senator Mark Warner, vice-chairman of the Senate Intelligence Committee, said this of the Russian-linked ads: “Their aim was to sow chaos. In many cases, it was more about voter suppression rather than increasing turnout.”<sup>109</sup> Representative Adam Schiff of the House Intelligence Committee said, “The Russians were using these ads to sow division within our society.”<sup>110</sup> But a review of the ads released so far reveals the potential for a different Russian aim.<sup>111</sup> The content suggests an attempt not just to change our opinions of each other, but to change our behavior toward one another by activating security motivation.

---

<sup>106</sup> Erica Davies, Checkey Beckford, and Michael James George, “Thousands of Protesters Swarm Union Square in 4th Straight Day of Anti-Trump Demonstrations in New York City,” NBC New York November 12, 2016), <http://www.nbcnewyork.com/news/local/Protesters-Take-Over-Union-Square-in-4th-Straight-Day-of-Anti-Trump-Demonstrations-in-New-York-City-400935615.html>.

<sup>107</sup> Will Sommer, “Thousands Attended Protest Organized by Russians on Facebook,” *The Hill*, October 31, 2017, <http://thehill.com/policy/technology/358025-thousands-attended-protest-organized-by-russians-on-facebook>.

<sup>108</sup> Michelle Castillo, “\$100,000 in Russian-Bought Facebook Ads Could Have Reached Millions of Voters,” CNBC, September 29, 2017, <https://www.cnbc.com/2017/09/29/russian-facebook-ads-how-many-people-could-you-reach-with-100000.html>.

<sup>109</sup> Craig Timberg, Adam Entous, and Elizabeth Dwozkin, “Russian Operatives Used Facebook Ads to Exploit Divisions over Black Political Activism and Muslims,” *Philly.com*, September 25, 2017, <http://www.philly.com/philly/news/politics/presidential/russian-operatives-used-facebook-ads-to-exploit-divisions-over-black-political-activism-and-muslims-20170925.html>.

<sup>110</sup> Adam Entous et al., “Russian Operatives Used Facebook Ads to Exploit America’s Racial and Religious Divisions,” *Washington Post*, September 25, 2017, [https://www.washingtonpost.com/business/technology/russian-operatives-used-facebook-ads-to-exploit-divisions-over-black-political-activism-and-muslims/2017/09/25/4a011242-a21b-11e7-ade1-76d061d56efa\\_story.html](https://www.washingtonpost.com/business/technology/russian-operatives-used-facebook-ads-to-exploit-divisions-over-black-political-activism-and-muslims/2017/09/25/4a011242-a21b-11e7-ade1-76d061d56efa_story.html).

<sup>111</sup> See Appendix B for an analysis of Russian social media ads.

The security motivation system model predicts that messages perceived to be threatening to self or others will result in strong, anxious emotions that drive action.<sup>112</sup> In example after example, a subset of the Russian advertisements present threat cues capable of triggering security motivation. An advertisement for Texas Border Patrol claiming “rapists, drug dealers, human traffickers and others” were crossing the border illegally had a 24-percent click-to-impression ratio.<sup>113</sup> In contrast, a Russian ad imploring parents to “tell us why your kid supports Donald Trump” had a .05 percent click rate.<sup>114</sup>

In some cases, the ads presented immediate avenues for engaging in precautionary behavior and in all those cases would have robbed viewers of their cognitive capacity to rationally evaluate the risk of threat if triggered. Fourteen Russian-linked ads released by the House of Representatives Permanent Select Committee in 2017 were reviewed for security motivation triggers such as threatening language, descriptions, and images.<sup>115</sup> Advertisements that had both a description of a potential threat *and* a call to action, such as clicking or sharing with friends, enjoyed significantly higher click-to-view ratios.<sup>116</sup>

This limited sampling hints at the power of security motivation and how it can be hijacked by malicious actors. At the time of this writing, the full extent of Russian-linked ad content is not yet publicly available. But beyond a compulsive click or share, there appears to be evidence of at least one instance in which this potential manipulation of our security motivation resulted in the potential for real violence.<sup>117</sup> In May 2016, Russian operatives created protest and counter-protest Facebook events that resulted in a small but frighteningly real confrontation between pro-Muslim community members and anti-

---

<sup>112</sup> Woody and Szechtman, “Biological Security Motivation System.”

<sup>113</sup> “HPSCI Minority Exhibit A,” U.S. House of Representatives, accessed November 3, 2017, <https://democrats-intelligence.house.gov/hpsci-11-1/>.

<sup>114</sup> House of Representatives.

<sup>115</sup> House of Representatives.

<sup>116</sup> See Appendix B.

<sup>117</sup> Mike Glenn, “Dozens Turn out to Support Houston Muslims,” *Houston Chronicle*, May 22, 2016, <http://www.chron.com/news/houston-texas/houston/article/Dozens-turnout-to-support-Houston-Muslims-7926843.php>.

Muslimism activists.<sup>118</sup> The *Houston Chronicle* reported at the time that protesters were encouraged to bring their guns to the rally. One anti-Muslimism protestor even open-carried an AK-15 gun. When asked why he brought a firearm to the rally, Andrew Gomez told reporter Mike Glenn, “I’m just exercising my right to carry. I’m not threatening. I’m just taking my own precautions.”<sup>119</sup> Further study of the content of the ads through a security motivation lens is recommended to understand the true aim of the Russian government and its interference in the homeland security complex.

### C. 2016 PRESIDENTIAL ELECTION

In *Trumped: The 2016 Election that Broke all the Rules*, Larry J. Sabato, Kyle Kondik, and Geoffrey Skelley write:

Donald Trump broke almost all of the rules of politics to first lead and then win the Republican presidential nomination. He followed that triumph with a victory that was even more improbable: edging out heavily favored Hillary Clinton in one of the great upsets in presidential campaign history.<sup>120</sup>

Prior to President Trump’s election in November 2016, Woody and Szechtman analyzed Trump’s ascent through the Republican primary, noting that his manner of communication seemed to bypass critical thought and instead trigger security motivation.<sup>121</sup> In the general election against Democratic nominee Hillary Clinton, Trump offered a starkly different vision of the future than his opponent. Clinton’s slogan, “I’m with her,” made reference to the candidate herself. Clinton campaign advertisement designer Ida Woldemichael described the campaign’s slogan and communications strategy: “It’s about pushing forward positive messaging for women and inclusion.”<sup>122</sup>

---

<sup>118</sup> Alexis C. Madrigal, “15 Things We Learned from the Tech Giants at the Senate Hearings,” *Atlantic*, November 2, 2017, <https://www.theatlantic.com/technology/archive/2017/11/a-list-of-what-we-really-learned-during-techs-congressional-hearings/544730/>.

<sup>119</sup> Glenn, “Dozens Turn out to Support Houston Muslims.”

<sup>120</sup> Larry J. Sabato, Kyle Kondik, and Geoffrey Skelley, *Trumped: The 2016 Election that Broke All the Rules* (Lanham, MD: Rowman & Littlefield, 2017), Kindle loc. 39.

<sup>121</sup> Woody and Szechtman, “Unintended Consequences.”

<sup>122</sup> Meg Miller, “The Story behind ‘I’m With Her,’” Co.Design, April 11, 2017, [www.fastcodesign.com/90109190/the-story-behind-im-with-her](http://www.fastcodesign.com/90109190/the-story-behind-im-with-her).

President Trump framed his message in darker terms. His slogan, “make America great again,” and frequent speeches about the dangers posed by immigrants, terrorists, and other perceived threats framed his election as necessary to protect the country from further decline. President Trump told *Business Insider* this about his campaign slogan: “I felt that jobs were hurting .... I looked at the many types of illness our country had, and whether it’s at the border, whether it’s security, whether it’s law and order or lack of law and order. Then, of course, you get to trade, and I said to myself, ‘What would be good?’ I was sitting at my desk, where I am right now, and I said, ‘Make America Great Again.’”<sup>123</sup>

Throughout his successful campaign, Trump openly broke social mores, baffling pundits who expected each perceived gaff or scandal as the inevitable death knell of his candidacy.<sup>124</sup> But the security motivation system model and security theory could have predicted such behavior. Trump positioned himself and his election as necessary to protect the nation from various existential threats. Accordingly, he continued to gain traction with voters who do not condone his behavior but still felt his election was necessary.<sup>125</sup> Trump himself seemed to understand that his framing gave him permission to break the rules, saying, “I could stand in the middle of Fifth Avenue and shoot people and I wouldn’t lose voters.”<sup>126</sup>

Trump as security actor used the grammar of security.<sup>127</sup> For example, his acceptance speech at the Republican National Convention included the following markers:  
1) Defining an existential threat: “The attacks on our police, and the terrorism in our cities,

---

<sup>123</sup> Pamela Engel, “How Trump Came up with His Slogan ‘Make America Great Again,’” *Business Insider*, January 18, 2017, <http://www.businessinsider.com/trump-make-america-great-again-slogan-history-2017-1>.

<sup>124</sup> Kirby Goidel and Keith Gaddie, “Trumping Political Science? Lessons from Donald Trump’s Surprising Campaign,” *HuffPost* (HuffPost, January 31, 2016), [https://www.huffingtonpost.com/kirby-goidel/trumping-political-scienc\\_b\\_9125352.html](https://www.huffingtonpost.com/kirby-goidel/trumping-political-scienc_b_9125352.html).

<sup>125</sup> Buzan, Wæver, and de Wilde, *Security*.

<sup>126</sup> “The Most Controversial Quotes from Trump’s Campaign,” *Newsday*, November 9, 2016, <http://www.newsday.com/news/nation/donald-trump-speech-debates-and-campaign-quotes-1.11206532>.

<sup>127</sup> Buzan, Wæver, and de Wilde argue that a successful security speech act must “follow the security form, the grammar of security and construct a plot that includes existential threat, point of no return and a possible way out - the general grammar of security as such plus the particular dialects of the different sectors, such as talk identity in the societal sector, recognition and sovereignty in the political sector, sustainability in the environmental sector and so on.” Buzan, Wæver, and de Wilde, *Security*, 33.

threaten our very way of life”; 2) declaring a point of no return: “Our Convention occurs at a moment of crisis for our nation”; and 3) a possible way out: “I have a message for all of you: the crime and violence that today afflicts our nation will soon come to an end. Beginning on January 20, 2017, safety will be restored.”<sup>128</sup>

But while security theory provides a framework to understand the process of Trump’s unprecedented election from a securitization standpoint, understanding of the SMS provides a neurobiological reason *why* his arguments were convincing and seemed to some to overwhelm long-standing social rules. Human security motivation is attuned to even mild or subtle indicators of danger.<sup>129</sup> However, Trump’s warnings about the dire state of the country were concrete, direct, and graphic. It stands to reason, then, that Trump’s overt threat messages would have more than enough power to trigger an individual’s security motivation and spur that individual to action.

Indeed, nationwide exit polls showed a strong correlation between support for Trump and a belief that a border wall needed to be constructed to protect public safety, that illegal immigrants should be deported, and that the United States was not managing the terrorist threat posed by ISIS.<sup>130</sup> The historic record shows that Trump is not the first candidate to securitize his election. McCann conducted a study of American elections over a century and a half and demonstrated an environment perceived to be threatening can swing elections toward candidates with authoritarian characteristics.<sup>131</sup>

However, it is important to note that elections are complex. I do not argue that security motivation was the only factor in Trump’s success, but rather that it may have provided an important advantage in gaining a critical mass of supporters in key states.

---

<sup>128</sup> “Full Text: Donald Trump 2016 RNC Draft Speech Transcript,” *POLITICO*, July 21, 2016, <http://www.politico.com/story/2016/07/full-transcript-donald-trump-nomination-acceptance-speech-at-rnc-225974>.

<sup>129</sup> Hinds et al., “Security Motivation, Checking Behavior, and OCD.”

<sup>130</sup> Jon Huang et al., “Election 2016: Exit Polls,” *New York Times*, November 8, 2016, [www.nytimes.com/interactive/2016/11/08/us/politics/election-exit-polls.html](http://www.nytimes.com/interactive/2016/11/08/us/politics/election-exit-polls.html).

<sup>131</sup> S. J. H. McCann, “Threatening Times, ‘Strong’ Presidential Popular Vote Winners, and the Victory Margin, 1824–1964,” *Journal of Personality and Social Psychology* 73, no. 1 (1997): 160–70.



Trump was the popular vote loser.<sup>132</sup> His arguments did not resonate with everyone. In a different election, with different turnout or a different set of rules—election by popular vote instead of electoral college, for example—the outcome would have been different. Trump may still have triggered a set of people’s security motivation, but it might not have been enough to overcome the numerical advantage held by his opponent’s supporters. This helps explain why a candidate using speech capable of triggering security motivation might not win every time.

Justin Trudeau’s 2015 election as Canada’s prime minister is an example of an election in which the losing candidate used security motivating messages but failed to reach a critical mass of the electorate—and therefore failed to securitize the election. Conservative Party candidate Stephen Harper’s campaign messages included promises to ban Muslim headscarves in citizenship ceremonies and create a “barbaric practices” police hotline ostensibly aimed at Muslim Canadian residents.<sup>133</sup> Post-election analysis attributed Trudeau’s Liberal Party win to both his message of change and strategic voting by liberals in the New Democratic Party who threw their support to Trudeau to deprive Harper of a win.<sup>134</sup> However, Conservatives engaged by Harper’s law-and-order security messages still overwhelmingly supported Harper, earning the Conservative Party 99 seats or 31.9 percent of the vote compared to the 39 percent of the vote captured by the Liberal Party.<sup>135</sup>

Key to understanding these dynamics is that there are individual differences in threat sensitivity that may account for variation in security motivation activation, and therefore variation in the success of security speech acts at the population level. For

---

<sup>132</sup> Gregory Krieg, “It’s Official: Clinton Swamps Trump in Popular Vote,” CNN, December 21, 2016, <http://www.cnn.com/2016/12/21/politics/donald-trump-hillary-clinton-popular-vote-final-count/index.html>.

<sup>133</sup> John Barber, “Canada’s Conservatives Vow to Create ‘Barbaric Cultural Practices’ Hotline,” *Guardian*, October 2, 2015, <http://www.theguardian.com/world/2015/oct/02/canada-conservatives-barbaric-cultural-practices-hotline>; “Stephen Harper Unpopular—Except with Those Who Worship Him,” *Globe and Mail*, March 25, 2017, <https://www.theglobeandmail.com/news/politics/stephen-harper-unpopular-except-with-those-who-worship-him/article26714030/>.

<sup>134</sup> “Post-election Polls Point to Shifts behind Liberal Win: Éric Grenier,” CBC News, October 23, 2015, <http://www.cbc.ca/news/politics/grenier-election-poll-change-oct24-1.3286044>.

<sup>135</sup> “CBC News: Election 2015 Roundup,” accessed January 1, 2018, <http://www.cbc.ca/news2/interactives/results-2015/>.

example, studies show the more sensitive one is to threat, the more likely one is to resist social change and support conservative candidates and policies.<sup>136</sup> Further, some studies also show that creating a sense of physical security reduces resistance to liberal social policy and change.<sup>137</sup> These studies indirectly support security motivation theory. In the absence of potential threat, people are less cautious. In the face of threat, people will take precautions, up to and including supporting political policies they believe will keep them safe. Herein lies the nexus between security motivation theory and security theory.

---

<sup>136</sup> Jack Block and Jeanne H. Block, “Nursery School Personality and Political Orientation Two Decades Later,” *Journal of Research in Personality* 40, no. 5 (October 2006): 734–49.

<sup>137</sup> Jaime L. Napier et al., “Superheroes for Change: Physical Safety Promotes Socially (but Not Economically) Progressive Attitudes among Conservatives,” *European Journal of Social Psychology* (October 2017), <http://doi.org/10.1002/ejsp.2315>.

## V. FINDINGS, RECOMMENDATIONS, AND CONCLUSION

### A. FINDINGS

The review of these case studies suggests security motivation is driving precautionary behavior at the individual and population level and therefore authorizing securitization in the homeland security complex. I have hypothesized that threat signals capable of triggering the security motivation of a critical mass within the homeland security complex will result in precautionary action by that audience to mitigate the threat. Table 1 captures the security motivation markers at play in homeland security according to my hypothesis.

Table 1. Case Study Matrix—Security Motivation in the Homeland Security Complex

Case Study	Threat Signals	Audience	Threat Signal Characteristics Likely to Trigger Security Motivation	Proposed Action or Securitization	Evidence of Action to Address the Threat
9/11	Terrorist attacks <sup>138</sup>	American public <sup>139</sup>	Novel, unpredictable tactics generating massive uncertainty	Public spending to combat terrorism <sup>140</sup>	Publicly approved anti-terrorism spending over \$1 trillion over 16 years <sup>141</sup>
Russian social media disinformation ads <sup>142</sup>	Warnings of potential threat to targeted audiences	American social media users	Warnings of potential threats to physical safety and security	Varies—Like, Share, or participate in events	Ads communicating a clear threat and a call to action had the highest click-through rates

<sup>138</sup> Wikipedia, s.v. “September 11 Attacks.”

<sup>139</sup> “Bin Laden: Goal Is to Bankrupt U.S.,” CNN, accessed September 16, 2017, [www.cnn.com/2004/WORLD/meast/11/01/binladen.tape/](http://www.cnn.com/2004/WORLD/meast/11/01/binladen.tape/).

<sup>140</sup> CNN.

<sup>141</sup> Brill, “15 Years after 9/11.”

<sup>142</sup> House of Representatives, “HPSCI Minority Exhibit A.”

Case Study	Threat Signals	Audience	Threat Signal Characteristics Likely to Trigger Security Motivation	Proposed Action or Securitization	Evidence of Action to Address the Threat
2016 presidential election	Campaign messages from candidate Trump <sup>143</sup>	American presidential voters	Warnings of threats to physical safety and security	Vote for Trump (build wall on southern border, limit immigration, fight terrorism)	Vote tallies/exit poll surveys correlating with support for Trump, with belief in validity of threats described in Trump campaign messages <sup>144</sup>

It is important to note these studies are not a representative sample of security speech acts within the complex. But the cases in this thesis were selected in part because of their relevance to the current homeland and national security discourse. Together they provide a window into security motivation’s potential influence on security matters across the globe. They demonstrate that security motivation generates powerful emotions that drive behavior. This orientation to action is vital to understanding why security motivation can literally change the course of the nation and the world.

**B. RECOMMENDATIONS, OR HOW WE CAN LEARN NOT TO BE SUCKERS**

**1. Recommendation 1: Study Security Motivation’s Impact on Security Theory**

Security theory is concerned with *how* groups of humans decide to collectively protect themselves against existential threats.<sup>145</sup> Individually, our security motivation system decides whether or not we will take action to protect ourselves.<sup>146</sup> Therefore, knowledge of the security motivation’s strengths, weaknesses, and triggers is powerful

---

<sup>143</sup> Trump, “2016 RNC Draft Speech.”

<sup>144</sup> Huang et al., “Election 2016: Exit Polls.”

<sup>145</sup> Buzan, Wæver, and de Wilde, *Security*.

<sup>146</sup> Woody and Szechtman, “Adaptation to Potential Threat.”

information that could be used to craft arguments to manipulate individual and collective decision making in favor of securitization. By triggering security motivation, security actors may be able to successfully convince an audience to accept security measures that are otherwise irrational or even harmful.

Conversely, its very existence is proof that the security motivation system is a successful survival tool. Intentionally triggering security motivation could save lives. Public health and safety messages could be crafted to elicit life-saving action by emphasizing the elements of a threat that are most likely to trigger security motivation. For example, in advance of Hurricane Irma in 2017, media and public officials emphasized the novel quality of the storm. One meteorologist called it “one of the longest-lasting strong storms we’ve ever seen anywhere on the globe,” and “dangerous and unprecedented.”<sup>147</sup> Florida Governor Rick Scott warned, “This is way bigger than Andrew 25 years ago. It’s bigger in size, bigger in winds, and it’s way bigger in storm surge.”<sup>148</sup> By emphasizing the novel, unprecedented nature of the storm, the media and governor communicated in a way that was likely to trigger security motivation. Indeed, nearly one-third of Florida’s 7.3 million households evacuated ahead of the storm.<sup>149</sup>

By scientifically exploring the nuances of security motivation in a security theory framework, security practitioners could develop guidance to protect against exploitation of security motivation as well as save lives by communicating effectively when there is a dangerous threat. The duration of security motivation activation should also be studied. Hinds et al. found that respiratory sinus arrhythmia remained elevated without decay as long as individuals were prevented from taking precautionary action, but they did not measure beyond a twenty-two-minute period.<sup>150</sup> I believe it is important to understand

---

<sup>147</sup> “Gov. Scott: Everybody Must Take Hurricane Irma Seriously,” Fox News, September 7, 2017, <http://www.foxnews.com/transcript/2017/09/07/gov-scott-everybody-must-take-hurricane-irma-seriously.html>.

<sup>148</sup> Fox News.

<sup>149</sup> Dan Sweeney, “Floridians Likely Won’t Obey Evacuation Orders in the next Hurricane,” *Sun-Sentinel*, October 25, 2017, <http://www.sun-sentinel.com/news/florida/fl-reg-hurricane-evacuation-poll-20171025-story.html>; “U.S. Census Bureau QuickFacts Selected: Florida,” United States Census Bureau, accessed November 15, 2017, <https://www.census.gov/quickfacts/FL>.

<sup>150</sup> Hinds et al., “The Psychology of Potential Threat.”

how long (minutes, hours, days) security motivation can remain active because, as long as it is active, cognitive reassessment of new information is difficult. If we are capable of maintaining security motivation for longer periods of time, what is the effect on our long-term cognitive capacity? What effect does security motivation's constant readiness for fight or flight have on our bodies, brains, and decision-making? I recommend exploration of these questions in the security field.

## **2. Recommendation 2: Don't Let the Packets Get Scrambled—The Order of Information Matters**

In an experiment designed to test the activation and deactivation of security motivation, Hinds et al. exposed test subjects to bins of diapers that appeared to be contaminated. Some test subjects were told the diapers were harmless before exposure and some were informed only after exposure. The scientists discovered that test subjects who received the information after exposure remained in a security-motivated state until they were able to wash their hands. Those who received the information prior to the fake exposure never entered a security motivated state at all. Based on these experiments, Hinds et al. concluded that once security motivation is activated, it is difficult to cognitively reassess the reality of a threat based on new information. The powerful emotions and physiological changes driving security motivation require action to trigger a return to resting.<sup>151</sup>

The application of this knowledge to the security field is essential to making better threat assessments. When presenting information to decision makers, Woody and Szechtman recommend keeping the information that requires cognitive processing upfront: "We would hypothesize that to be effective, information putting potential threats into a broader critical perspective needs to come early, prior to exposure to the potential-threat stimuli."<sup>152</sup> We must protect our cognitive capacity for threat appraisal from adversaries who wish to drive our behavior toward their ends by evoking emotional over-reactions.

---

<sup>151</sup> Hinds et al.

<sup>152</sup> Woody and Szechtman, "Biological Security Motivation System."

While this thesis did not explore the role of prior trauma in security motivation, it is worth noting that studies show that traumatized individuals will engage in precautionary behavior in response to perceived threats that mimic their historic trauma.<sup>153</sup> Scientists studying collective trauma have found many Americans experience post-traumatic stress from indirect exposure to terrorism and that the effect is cumulative.<sup>154</sup> There is a large body of literature on trauma-informed practices to reduce anxiety and increase cognitive capacity by creating a sense of safety for people who have experienced traumatic events.<sup>155</sup> It may be that some of those approaches can be adapted to create more rational decision-making environments in the homeland security field.

### **3. Recommendation 3: Explore How Security Motivation Interacts with a Networked World**

From an evolutionary perspective, our security-related behavior was shaped by a less networked environment. Approaching potential threats with near-zero risk tolerance and maximum precaution in ancient times was rewarded with survival. Threats our ancestors encountered in ancient times were *always* personal, never filtered through a screen or from half a world away. But today, our threat sensors may be overly sensitive in a world that is constantly bombarding humanity with threat cues. That sensitivity could be driving emotional, rather than reasonable, responses to threats and throwing the careful balance between threat mitigation and normal activities out of whack.<sup>156</sup>

In the current context, which includes global communication networks and the internet, research should be conducted to test the following hypothesis from Woody and Szechtman:

---

<sup>153</sup> “PTSD,” Psychoneuroplasticity Center, accessed November 26, 2017, <http://pnpcenter.com/index.php/disorders/ptsd-post-traumatic-stress-disorder>.

<sup>154</sup> Dana Rose Garfin, “How the Pain of 9/11 Still Stays with a Generation,” *The Conversation*, September 9, 2016, <http://theconversation.com/how-the-pain-of-9-11-still-stays-with-a-generation-64725>.

<sup>155</sup> “Trauma-Informed Approach and Trauma-Specific Interventions,” Substance Abuse and Mental Health Services Administration, accessed January 15, 2018, [https://www.samhsa.gov/nctic/trauma-interventions#Seeking Safety](https://www.samhsa.gov/nctic/trauma-interventions#Seeking%20Safety).

<sup>156</sup> Woody and Szechtman, “Unintended Consequences.”

The virtually unlimited supply of such stimuli [cues of potential danger] on the internet would be expected to lead to a positive-feedback effect, in which probing, rather than exhausting the readily available cues, would turn up more and more cues, sustaining a sense of alarm rather than reducing it.<sup>157</sup>

Further, they propose that the ability to broadcast information to friends and family on social media networks provides a pathway for hyper-distribution and amplification of threat cues. “Partial, concrete information of uncertain relevance would propagate very rapidly and widely, and tend to outweigh more complete, rationally balanced information which is less likely to activate the security motivation system.”<sup>158</sup> As discussed previously, this seems to have occurred in the case of the Russian social media disinformation campaign. However, in that particular case the public did not yet know the effect of non-human influences such as bots or algorithms on the amplification of those messages. Therefore, as further study on security motivation is conducted, those non-human influences must be documented and accounted for.

## C. CONCLUSION

It’s a trap!

—Admiral Akbar, *Return of the Jedi*

This thesis aimed to answer the question: What can the study of neurobiological threat detection systems in the human brain teach us about their potential impact on homeland security? What I have learned is that the human security motivation system is an adaptive, useful tool for detecting subtle threat signals in our environment and triggering precautionary behavior to help us survive. However, security motivation also drives action over cognitive processing, hampers our ability to reassess new information, and is vulnerable to manipulation. Its qualities and characteristics shape homeland security through individual and collective action at every point in the securitization process that

---

<sup>157</sup> Woody and Szechtman, 376.

<sup>158</sup> Woody and Szechtman, 376.



involves humans. This information not only has an impact on the homeland security field, but also security studies and the filaments that bind our democracy together.

Scholars who study the rise and fall of democracies note that autocracies do not always arise as a result of military coups or violence. Rather, they result from the erosion and breaking of institutional norms within democratic structures at the hands of freely elected extremists who then seize control.<sup>159</sup> As security theory stipulates, one established way to justify the breaking of norms is to argue it is necessary to ensure the survival of the nation under threat.<sup>160</sup> Within any argument that contains a threat, there lies a neurobiological trigger for security motivation that can subconsciously override our rational judgement and compel us to authorize actions in the short term that may be dangerous to our freedom in the long term.

Today, our ancient security motivation system applies its lens to a world that would be wholly unrecognizable to our ancestors. It is a world in which hundreds of millions of people are bound together in social contracts that leverage collective power against threats. Nations wield trillions of dollars and almost unimaginable military power to protect and defend themselves from threats. But taking precautions is costly and, as French philosopher Anne Dufourmantelle said, “A life with absolute security—like zero risk—is a fantasy ... being alive is a risk.”<sup>161</sup> We must use our knowledge of security motivation to strike a healthy balance between security to reduce our risk and promote other activities that support a healthy, resilient society. In other words, we must avoid being trapped by our enemies in a constant state of anxiety and obsessive-compulsive spending on security.

In conclusion, a large body of literature across disciplines has documented changes in human perception, physiology, and behavior in response to potential threats.<sup>162</sup> Humans

---

<sup>159</sup> Steven Levitsky and Daniel Ziblatt, *How Democracies Die*, Kindle edition (New York: Crown, 2018).

<sup>160</sup> Buzan, Wæver, and de Wilde, *Security*.

<sup>161</sup> Amy Held, “French Philosopher Who Promoted Risk-Taking Dies Attempting Water Rescue,” NPR, July 24, 2017, <https://www.npr.org/sections/thetwo-way/2017/07/24/539056481/french-philosopher-who-promoted-risk-taking-dies-attempting-water-rescue>.

<sup>162</sup> Neuberg, Kenrick, and Schaller, “Human Threat Management Systems.”

have evolved to make different decisions when they feel threatened.<sup>163</sup> But the feelings driving our behavior do not necessarily reflect objective reality, nor do they tabulate the cost of unnecessary individual or collective security measures. The human bias toward precaution has served us well over our evolutionary timeline, but as Osama bin Laden proved, our adversaries can manipulate us into taking actions that violate our social and moral principles in the name of security.

Knowledge of how security motivation works at the individual level can help homeland and national security professionals become more self-aware, improve our emotional intelligence, and predict behavior in response to threat cues. This knowledge can also be extrapolated to forecast collective reactions to certain kinds of threats. It is this understanding of the interaction of security motivations within the homeland security complex that can help the United States behave more objectively and ultimately remain free from manipulation by those who would do us harm.

---

<sup>163</sup> Douglas T. Kenrick et al., “Goal-Driven Cognition and Functional Behavior: The Fundamental-Motives Framework,” *Current Directions in Psychological Science* 19, no. 1 (February 2010): 63–7.

## APPENDIX A. COMPARATIVE ANALYSIS OF THE SMS AND HOMELAND SECURITY COMPLEX

Terms	Definitions	Security Motivation System	Homeland Security	Differences	Similarities
<b>Security</b>	“The move that takes politics beyond the established rules of the game and frames the issue either as a special kind of politics or as above politics” <sup>164</sup>	The individual act of engaging in precautionary behavior (extra or special measures) to detect and/or ward against a possible threat.	The collective act of engaging in precautionary behavior (extra or special measures) to ward against possible threat.	The difference is scale: an individual acting on their own behalf versus a segment of society acting on society’s behalf.	The desired outcome is the same: to manage existential threats to self and others.
<b>Threat</b>	Something that is presented and perceived to be an existential threat, whether or not it actually is.	The SMS manages possible threats, not certain ones. Clear and present dangers are managed by the fight-or-flight response. <sup>165</sup>	The homeland security field is charged with protecting the United States from “most threats to the stability and normal operation of government and society at the local, state, and/or federal levels of government” minus the “issues not brought about directly by disasters, health emergencies or terrorism.” <sup>166</sup> Much of the system is directed at preventing the next threat, though some parts are involved in responding to threats (FEMA).	Because the SMS process is on an individual level, the loops process on a faster timeline. The SMS can be triggered in a manner of seconds and its cycle measured in minutes or hours. The homeland security loop timelines are longer, and in the case of institutionalized securitization can extend for decades or centuries (think military, intelligence, etc.). Because the SMS is a system within the homeland security system, it must be triggered and go through its process on an individual level at a sufficient percentage in a population (audience) before the homeland security system can be triggered on the societal level.	Both systems manage potential existential threats.

<sup>164</sup> Buzan, Wæver, and de Wilde, *Security*, 23.

<sup>165</sup> Szechtman and Woody, “Obsessive-Compulsive Disorder.”

<sup>166</sup> Morag, *Comparative Homeland Security*, 3.

Terms	Definitions	Security Motivation System	Homeland Security	Differences	Similarities
<b>Facilitating Conditions</b>	“The conditions under which the speech act works,” context, “grammar of security,” current conditions such as “tanks on the ground.” <sup>167</sup>	Context, personal or cultural history, current environment (for example, hearing a coyote howl when you’re alone in the forest, versus hearing one howl when you’re visiting a zoo).	Context, current conditions (rapid change, terrorism, technology, population growth, increasing diversity, group identity, cultural norms).	Again the difference here is in scale. In the SMS, the facilitating conditions will be personal to the individual. In the homeland security system, the facilitating conditions will be societal or cultural. Because the United States is not homogenous, facilitating conditions are highly contextual and will differ across society and at different levels of society.	In both systems, the context supports the speech act or argument. In both systems, facilitating conditions are those that illuminate the potential danger of given stimuli.
<b>Securitizing Actors</b>	“Who securitize issues by declaring something—a referent object—existentially threatened”; “political leaders, bureaucracies, governments, lobbyists and pressure groups.” They must have “social capital.” <sup>168</sup>	Stimuli, cues, sensory input (which we know instinctually—such as in the case of novelty—or through conditioning understand to be harbingers of potential doom).	Individuals in roles of formal or informal authority on behalf of the collectivity. They must have “social capital.” Representatives of government (state), representatives of particular identity or principle (Trump and those who want to “make America great again,” nationalists).	This is a question of who is communicating what to the audience. In the case of the SMS, the stimuli/cues/signals themselves communicate potential threats to the “appraisal of danger loop” in the brain and together with facilitating conditions convince or argue for the loop to allow activation of security-related programs. In the homeland security system, individuals (often representing collectivities) communicate an argument to an audience that the cues constitute a threat to an object.	In both systems, the actor initiates the appraisal, decision making, and security programs loop.
<b>Referent Object</b>	Anything “security actors can attempt to construct anything as a referent object” but “the referent object is that to which one can point and say, ‘it has to survive, therefore it is necessary to.’”	Self or others. <sup>170</sup>	Collective self or others (group, society, identity, family, nation).	Scale: individual versus societal.	The purpose of both systems is to protect the object from existential threat so that it may continue to survive. In both systems, existential threats can include threats to identity, ways of life, etc. <sup>171</sup>

<sup>167</sup> Buzan, Wæver, and de Wilde, *Security*, 32, 33.

<sup>168</sup> Buzan, Wæver, and de Wilde, 36, 32.

<sup>170</sup> Szechtman and Woody, “Obsessive-Compulsive Disorder.”

<sup>171</sup> Stephan, Diaz-Loving, and Duran, “Integrated Threat Theory.”

Terms	Definitions	Security Motivation System	Homeland Security	Differences	Similarities
	Examples, “state, nation, civilization or some other larger community, principle or system.” <sup>169</sup>				
<b>Audience</b>	The group that is the recipient of the security speech act and that has the authority <i>among</i> them to decide whether to allow securitization: “those the securitizing act attempts to convince to accept exceptional procedures because of the specific security nature of some issue.” <sup>172</sup> The audience is the “judge of the act.”	The Brain—“appraisal of potential danger loop”—Hippocampus, Amygdala, Bed Nucleus of the Stria Terminalis <sup>173</sup>	A group of people, of which a critical mass must be convinced that an existential threat exists. In the United States this may be voters, the public, a subset of a subsystem (the intelligence community or policymakers with the authority to act on behalf of the state).	Scale: the components of the APDL of the individual must be convinced, versus a part of the collective society that must be convinced.	In both systems, the audience receives input to analyze for potential danger and is the <i>decider</i> or judge of whether or not action should be taken.
<b>Security Act</b>	“Self-based violation of rules.” <sup>174</sup>	Activation of the SMS.	Funding of the homeland and national security system, for new or institutionalized securitization (military, intelligence services, etc.).	Scale, timelines.	Types of behavior: checking, probing, sanitizing, securing.

<sup>169</sup> Buzan, Wæver, and de Wilde, *Security*, 36.

<sup>172</sup> Buzan, Wæver, and de Wilde, 41.

<sup>173</sup> Woody and Szechtman, “Adaptation to Potential Threat.”

<sup>174</sup> Buzan, Wæver, and de Wilde, *Security*, 26.

Terms	Definitions	Security Motivation System	Homeland Security	Differences	Similarities
<b>Rule-Breaking Behavior</b>	“Emergency actions or special measures.” <sup>175</sup>	Movement of the body beyond a normal resting state into a pre-fight-or-flight state that hovers between the parasympathetic and sympathetic nervous systems. Execution of precautionary behavior to ward against the threat. <sup>176</sup>	A changing of practice or norms.	For the SMS, the rule-breaking behavior is both a state (what is happening in the body in preparation for confrontation with an actual threat) and a set of behaviors that are not hunting/gathering/sleeping or day-to-day operations. In the United States, the institutionalization of the homeland security system makes it difficult to see it as rule-breaking, but by digging into the particulars it becomes more apparent. For example, secrecy (FISA court), lack of accountability, and a decreased level of scrutiny (lack of questioning) of expenditures in the system signals that these programs enjoy a special status beyond that given to other programs. Recently, there have also been examples of rule-breaking behavior related to social norms in the debate on immigration, relationships with longstanding foreign allies, etc.	In both cases, rule-breaking behavior is that which is outside the norm.
<b>Securitization</b>	“The intersubjective establishment of an existential threat with a saliency sufficient to have substantial political [policy] effects” <sup>177</sup>	Sufficient cues and context to motivate security-related programs	The establishment of terrorism, <i>some</i> natural disasters, and other “emergencies” as existential threats.	scale: the SMS may be triggered by the possibility of terrorism, but must rely on the societal response to the threat because it has no terrorism program at the individual level.	

<sup>175</sup> Buzan, Wæver, and de Wilde, 27.

<sup>176</sup> Woody and Szechtman, “Adaptation to Potential Threat.”

<sup>177</sup> Buzan, Wæver, and de Wilde, *Security*, 25.

Terms	Definitions	Security Motivation System	Homeland Security	Differences	Similarities
<b>Malfunction</b>	Investment of resources beyond what is reasonably necessary to mitigate a threat.	Obsessive-compulsive behavior—normal precautionary behavior performed on a timeline that extends beyond what is necessary to provide benefit to the individual. <sup>178</sup>	A distribution of funding toward security programs which is above what is necessary to ward against the threat or for a duration of time which is longer than necessary to manage a potential threat.		Overinvestment in some security activities at the expense of others, or at the expense of normal survival activities can result in other vulnerabilities and threats to survival

---

<sup>178</sup> Szechtman and Woody, “Obsessive-Compulsive Disorder.”

THIS PAGE INTENTIONALLY LEFT BLANK



## APPENDIX B. ANALYSIS OF RUSSIAN SOCIAL MEDIA ADS RELEASED BY HOUSE OF REPRESENTATIVES

HSPIC Sample Ad	Description	Speech Actor	Key Message	Direct Threat	Call to Action	Impressions	Clicks	Percentage of Clicks to Views	Platform
6	Illegal rapists crossing border	“Heart of Texas”	Rapists, drug dealers, and human traffickers are crossing the U.S.–Mexico border.	yes	yes	3361	808	24.04%	Facebook
11	Hillary is Satan	“Army of Jesus”	Hillary Clinton is evil and Jesus wants you to help defeat her.	yes	yes	71	14	19.72%	Facebook
10	Texas secedes	“Heart of Texas”	Texas should secede because the establishment is threatening everything they’ve fought for.	yes	yes	16168	2342	14.49%	Facebook
13	Stop Trump/stop racism—scared for their futures	“BM”	Trump’s election threatens your future because of racism, ignorance, and sexual assault	yes	yes	188	26	13.83%	Facebook
9	Bernie Clinton Foundation opinion	“Born Liberal”	Bernie Sanders says Clinton Foundation is a problem.	no	yes	1938	222	11.46%	Facebook
14	Bill Clinton’s black son	“Williams & Calvin”	Bill Clinton has an illegitimate son.	no	yes	15453	1471	9.52%	Facebook
1	Bernie hero	“LGBT United”	Color your own Bernie coloring page.	no	unknown	848	54	6.37%	Facebook
7	Trump for laughs	“Williams & Calvin”	Parody of Trump.	no	yes	716	42	5.87%	Facebook
2	Westboro Church counter-protest	“LGBT United”	Call to protest Westboro Baptist Church.	no	yes	4798	240	5.00%	Facebook
12	Hillary won’t understand veterans	“American veterans”	Hillary Clinton doesn’t care about veterans.	no	Yes—buy Tshirt	17654	517	2.93%	Instagram
8	Go Trump/Tea Party	“_america n.made”	Join Florida Trump rally.	no	yes	9244	85	0.92%	Instagram

HSPIC Sample Ad	Description	Speech Actor	Key Message	Direct Threat	Call to Action	Impressions	Clicks	Percentage of Clicks to Views	Platform
5	Kids shooting guns “follow this video if it makes you proud”	“_america n.made”	Teaching kids to use guns is not promotion of violence but confidence.	no	yes	108433	857	0.79%	Instagram
4	Kids for Trump	“_america n.made”	Send pictures of your kids supporting Trump.	no	yes	165121	78	0.05%	Instagram
3	Muslims for Bernie	“United Muslims of America”	Bernie Sanders is winning with help from Muslims.	no	unknown	11	0	0.00%	Facebook

Adapted from House of Representatives, “HPSCI Minority Exhibit A.”

## LIST OF REFERENCES

- Anderson, Robert N., Arialdi M. Miniño, Lois A. Fingerhut, Margaret Warner, and Melissa A. Heinen. "Deaths: Injuries, 2001." *National Vital Statistics Reports* 52, no. 21 (June 2004): 1–86.
- Baldwin, David A. "The Concept of Security." *Review of International Studies* 23 (1997): 5–26. [http://journals.cambridge.org/article\\_S0260210597000053](http://journals.cambridge.org/article_S0260210597000053).
- Beckett, Charlie. "Fanning the Flames: Reporting on Terror in a Networked World." *Columbia Journalism Review*, September 22, 2017. [https://www.cjr.org/tow\\_center\\_reports/coverage\\_terrorism\\_social\\_media.php](https://www.cjr.org/tow_center_reports/coverage_terrorism_social_media.php).
- Bellavita, Christopher. "Changing Homeland Security: What Is Homeland Security?" *Homeland Security Affairs* 4, article 1 (June 2008). <https://www.hsaj.org/articles/118>.
- Block, Jack, and Jeanne H. Block. "Nursery School Personality and Political Orientation Two Decades Later." *Journal of Research in Personality* 40, no. 5 (October 2006): 734–49.
- Boyer, Pascal, and Pierre Liénard. "Why Ritualized Behavior? Precaution Systems and Action Parsing in Developmental, Pathological and Cultural Rituals." *Behavioral and Brain Sciences* 29, no. 6 (2006): 595–613.
- Buzan, Barry, Ole Wæver, and Jaap de Wilde. *Security: A New Framework for Analysis*. Boulder, CO: Lynne Rienner Publishers, 1998.
- Cramer, Jane Kellett. "National Security Panics: Overestimating Threats to National Security." Dissertation, MIT, 2002. <https://dspace.mit.edu/handle/1721.1/8312>.
- Dobbs, Richard, James Manyika, and Jonathan Woetzel. *No Ordinary Disruption: The Four Global Forces Breaking All the Trends*. New York: PublicAffairs, 2016.
- Goode, Erich, and Nachman Ben-Yehuda. "Moral Panics: Culture, Politics, and Social Construction." *Annual Review of Sociology* 20, no. 1 (August 1994): 149–71.
- Gordon, Carol, and Asher Arian. "Threat and Decision Making." *The Journal of Conflict Resolution* 45, no. 2 (April 2001): 196–215.
- Grillon, C., M. Pellowski, K. R. Merikangas, and M. Davis. "Darkness Facilitates the Acoustic Startle Reflex in Humans." *Biological Psychiatry* 42, no. 6 (September 1997): 453–60.

- Haselton, Martie G., and David C. Funder. "The Evolution of Accuracy and Bias in Social Judgment." In *Evolution and Social Psychology*, edited by Mark Schaller, Jeffrey A. Simpson, and Douglas T. Kenrick, 15–37. London: Psychology Press, 2014.  
[https://www.researchgate.net/publication/232481105\\_The\\_Evolution\\_of\\_Accuracy\\_and\\_Bias\\_in\\_Social\\_Judgment](https://www.researchgate.net/publication/232481105_The_Evolution_of_Accuracy_and_Bias_in_Social_Judgment).
- Hinds, Andrea L., Erik Z. Woody, Ana Drandic, Louis A. Schmidt, Michael Van Ameringen, Marie Coroneos, and Henry Szechtman. "The Psychology of Potential Threat: Properties of the Security Motivation System." *Biological Psychology* 85, no. 2 (October 2010): 331–37.
- Hinds, Andrea L., Erik Z. Woody, Louis A. Schmidt, Michael Van Ameringen, and Henry Szechtman. "In the Wake of a Possible Mistake: Security Motivation, Checking Behavior, and OCD." *Journal of Behavior Therapy and Experimental Psychiatry* 49, part B (December 2015): 133–40.
- Jongman, A. J. *Political Terrorism: A New Guide to Actors, Authors, Concepts, Data Bases, Theories, and Literature*. New York: Routledge, 2017.
- Kenrick et al., Douglas T., Steven L. Neuberg, Vladas Griskevicius, D. Vaughn Becker, and Mark Schaller. "Goal-Driven Cognition and Functional Behavior: The Fundamental-Motives Framework," *Current Directions in Psychological Science* 19, no. 1 (February 2010): 63–7.
- Levitsky, Steven, and Daniel Ziblatt. *How Democracies Die*, Kindle edition. New York: Crown, 2018.
- McCann, S. J. H. "Threatening Times, 'Strong' Presidential Popular Vote Winners, and the Victory Margin, 1824–1964." *Journal of Personality and Social Psychology* 73, no. 1 (1997): 160–70.
- Morag, Nadav. *Comparative Homeland Security: Global Lessons*. Hoboken, NJ: John Wiley & Sons, 2011.
- Mueller, John, and Mark G. Stewart. *Terror, Security, and Money: Balancing the Risks, Benefits, and Costs of Homeland Security*, 1st edition. New York: Oxford University Press, 2011.
- Napier, Jaime L., Julie Huang, Andrew J. Vonasch, and John A. Bargh. "Superheroes for Change: Physical Safety Promotes Socially (but Not Economically) Progressive Attitudes among Conservatives." *European Journal of Social Psychology* (October 2017). <http://doi.org/10.1002/ejsp.2315>.
- Neuberg, Steven L., Douglas T. Kenrick, and Mark Schaller. "Human Threat Management Systems: Self-Protection and Disease Avoidance." *Neuroscience and Biobehavioral Reviews* 35, no. 4 (March 2011): 1042–51.

- Powell, Kimberly A. "Framing Islam: An Analysis of U.S. Media Coverage of Terrorism since 9/11." *Communication Studies* 62, no. 1 (2011): 90–112. <http://doi.org/10.1080/10510974.2011.533599>.
- Prudon, Peter. "The Security Motivation System According to Woody and Szechtman and its Application to OCD: A Critique and Alternative." *Journal of Obsessive-Compulsive and Related Disorders* 2, no. 2 (April 1, 2013): 99–108.
- Sabato, Larry J., Kyle Kondik, and Geoffrey Skelley. *Trumped: The 2016 Election that Broke All the Rules*. Lanham, MD: Rowman & Littlefield, 2017.
- Sagarin, Rafe. *Learning From the Octopus: How Secrets from Nature Can Help Us Fight Terrorist Attacks, Natural Disasters, and Disease*, 1st edition. New York: Basic Books, 2012.
- Salter, Mark B. "When Securitization Fails: The Hard Case of Counter-Terrorism Programs." In *Securitization Theory: How Security Problems Emerge and Dissolve*, edited by Thierry Balzacq, 116–32. New York: Routledge, 2011.
- Schneier, Bruce. "The Psychology of Security." In *Progress in Cryptology – AFRICACRYPT 2008 Lecture Notes in Computer Science*, vol. 5023, edited by S. Vaudenay, 50–79. Berlin: Springer, 2008.
- Stephan, Walter G., Rolando Diaz-Loving, and Anne Duran. "Integrated Threat Theory and Intercultural Attitudes: Mexico and the United States." *Journal of Cross-Cultural Psychology* 31, no. 2 (March 2000): 240–49.
- Strategic Foresight Initiative. "Evolving Terrorist Threat: Long-Term Trends and Drivers and Their Implications for Emergency Management." FEMA, September 2011. [https://www.fema.gov/pdf/about/programs/oppa/evolving\\_terrorist\\_threat.pdf](https://www.fema.gov/pdf/about/programs/oppa/evolving_terrorist_threat.pdf).
- Szechtman, Henry, and Erik Woody. "Obsessive-Compulsive Disorder as a Disturbance of Security Motivation." *Psychological Review* 111, no. 1 (January 2004): 111–27.
- Trower, Peter, Paul Gilbert, and Georgina Sherling. "Social Anxiety, Evolution, and Self-Presentation: An Interdisciplinary Perspective." In *Handbook of Social and Evaluation Anxiety*, edited Harold Leitenberg, 11–45. New York: Plenum Press, 1990.
- Ullman, Richard H. "Redefining Security." *International Security* 8, no. 1 (1983): 129–53.
- Wisman, Arnaud, and Ilan Shrira. "The Smell of Death: Evidence That Putrescine Elicits Threat Management Mechanisms." *Frontiers in Psychology* 6 (August 2015): 1274.

- Woody, Erik Z., and Henry Szechtman. "Adaptation to Potential Threat: The Evolution, Neurobiology, and Psychopathology of the Security Motivation System." *Neuroscience and Biobehavioral Reviews* 35, no. 4 (March 2011): 1019–33.
- . "A Biological Security Motivation System for Potential Threats: Are There Implications for Policy-Making?" *Frontiers in Human Neuroscience* 7 (September 2013). <https://doi.org/10.3389/fnhum.2013.00556>.
- . "Unintended Consequences of Security Motivation in the Age of the Internet: Impacts on Governance and Democracy." *Journal of Cognition and Culture* 16, no. 5 (November 2016): 365–82.

## **INITIAL DISTRIBUTION LIST**

1. Defense Technical Information Center  
Ft. Belvoir, Virginia
2. Dudley Knox Library  
Naval Postgraduate School  
Monterey, California