Looking Back, Looking Forward: Perspectives on Terrorism and Responses to It

Strategic Multi-layer Assessment[1] Occasional White Paper
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[1] SMA provides planning support to Combatant Commands (CCMD) with complex operational imperatives requiring multi-agency, multi-disciplinary solutions that are not within core Service/Agency competency. The SMA office has developed a proven methodology merging multi-agency expertise and information to address complex operational requirements that call for multi-disciplinary approaches utilizing skill sets not normally present within any one service/agency. The SMA process uses robust multi-agency collaboration leveraging intellectual/analytical rigor to examine factual/empirical evidence with the focus on synthesizing existing knowledge. The end product consists of actionable strategies and recommendations, which can then be used by planners to support course of action Development. SMA is accepted and synchronized by Joint Staff, J3, DDGO and executed by OSD/ASD (R&E)/RSD/RRTO.

This report represents the views and opinions of the contributing authors. The report does not represent official USG policy or position.

Contents

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Mr. Mubin Shaikh

Foreword

LTG Michael Flynn

I am pleased to write the foreword for the latest in the series of Strategic Multi-Layer Assessment (SMA) white papers sponsored by the Joint Staff Deputy Director for Global Operations titled "Looking Back, Looking Forward: Perspectives on Terrorism and Responses To It."

While the collection of views presented here do not necessarily represent my own, those of the Defense Intelligence Agency or Joint Staff, I wholeheartedly endorse professional efforts that provide senior leaders critical academic, scientific, military and commercial perspectives in addressing terrorism and effective responses to it.

To be sure, the world is a dangerous, often unpredictable place and it will remain so for the foreseeable future. The last 12 years of focused interagency efforts against a range of asymmetric, transnational terrorist threats has given our military forces an intimate appreciation of our combined operational capabilities and limitations. Some of the views in this white paper suggest new language, new definitions, new capabilities, and new ways of thinking to better frame and respond to terrorism. I welcome a rigorous discussion and debate. We have to constantly adapt to an ever-changing operational environment.

We must also remember that the complexity of the security environment America and her allies face demands several things. Among them are:

1. A holistic, comprehensive understanding of operating environments. This includes an unprecedented understanding of the social-cultural environment of human populations and motivations that drive behavior

2. A highly disciplined and adaptive military force commanded by dynamic leaders proficient in the art and science of war and fully immersed in interagency skills and attributes

3. The ability to access, analyze, and exploit classified and unclassified captured records to support research, both within and outside the government

4. Regionally focused officer and enlisted military personnel with highly proficient language and cultural skills coupled with the opportunity to employ those skills for mission accomplishment

5. Traditional and contemporary intelligence analysis that is able to address the range of pressing national security objectives encompassing people, technology, processes and outcomes

6. The ability to understand, defend against, and decisively respond to cyber threats

7. The ability to prevent the proliferation of weapons of mass destruction

8. The ability to access the global commons while countering anti-access area denial threats

9. The ability to build relationships with a multitude of actors across the whole of government and the international community

10. The flexibility and agility to innovate on the fly in order to develop elegant solutions to the most difficult problems we are likely to face

I commend this white paper to you and look forward to the dialogue that follows.

LTG Michael T. Flynn
Director, Defense Intelligence Agency

Introduction

Brig Gen David B. Béen

As I write the introduction to this Strategic Multi-Layer Assessment (SMA) titled "Looking Back, Looking Forward: Perspectives on Terrorism and Responses to It," the Joint Force remains engaged in the longest continuous period of warfare in American history.

This white paper develops in greater detail key concepts that appeared in a previous SMA report my office published in late June 2013 titled "Over a Decade Later…What Now? What Next? A Strategic Multi-layer Assessment of Terrorism in its Current and Future Manifestations." Together, the two documents represent an impressive collection of critical, contemporary thinking on the subject of Terrorism.

The timing of this publication could not be better considering that U.S. military forces will complete their scheduled drawdown from Afghanistan in the 2014-2015 time frame. The context also matters.

From 2001 to present, our Service men and women have earned an unprecedented amount of combat and operational experience fighting Al-Qa'ida, its affiliates, and ideological adherents around the world. It is therefore wholly appropriate that we as a Joint Force not only capture the experience of our troops, but the experience of our DoD civilians, academics, scientists, and commercial service providers who have been with us all along.
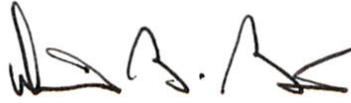
Though this study does not necessarily represent my personal views or those of the Joint Staff, it does reflect my belief in rigorous analysis, informed debate, top-flight research, and the field experience of our military professionals.

You the reader bear a certain responsibility as well. These ideas merely represent potential combat power. It is up to the Geographic Combatant Commands, functional commands, intelligence agencies, interagency partners, and others to decide what, if anything, to do with this information. I encourage you to reach out to the Joint Staff point of contact for this report should your organization like to explore one of the concepts further or speak with the authors in greater detail.

I want to thank the Director, Defense Intelligence Agency, Lieutenant General Mike Flynn for writing the preface. His points are spot on and reflect the mix of human and technical skills and capabilities required to fight and win our Nation's wars.

Last, I am grateful for the funding support the SMA program receives from the Office of the Secretary of Defense, Acquisition, Technology, and Logistics (OSD-AT&L) and their continued cooperation with the office of the Joint Staff, J-39, Deputy Director for Global Operations (DDGO). Without OSD-AT&L there would be no SMA program and we are humbled to play a role in serving the Joint Force and larger U.S. defense enterprise.

I hope this white paper is valuable to you and your organization.

DAVID B. BÉEN
Brig Gen, USAF
Deputy Director for Global Operations, J39

Executive Summary & Key Insights

Dr. Hriar Cabayan, Dr. Valerie Sitterle, & LTC Matt Yandura

This white paper is a follow-on report to a recent publication entitled "*Over a Decade Later…What Now? What Next? A Multi-Layer Assessment of Terrorism in its Current and Future Manifestation.*" [2] The previous paper was primarily an analytical product intended to provide insight into what current social science research and over a decade of practical experience suggest regarding the most effective counterterror strategies. It was based on comments made during multiple, semi-structured telephone interview sessions conducted between 06 May and 12 June 2013. The current white paper includes a series of articles by authors who participated in the previous white paper. These articles expand on the main themes raised in the previous report and cover topics ranging from strategic and adaptive considerations of terrorism to analytical considerations.

The various contributors to this volume advance insights that are summarized below:

1. There is a body of research relating the strategic application of systems thinking, complexity theory, and complex adaptive systems theory to strategic planning in business and a variety of organizational constructs. These have implications in the deliberate planning of regional and global strategies and, critically, to our current counterterrorism strategy.

2. We frequently seek clarity by way of attributing political or particular ideological reasons and affiliations behind terror acts when such attribution is really viewing the present and future through the lens of the past. Looking forward, real resilience requires having a narrative of our own that projects a purpose beyond responding to adversity. Furthermore, we will continue to be perplexed by the enemy in our counterterrorism strategy as long as we are unclear as to our own purpose and direction.

3. The convergence of rapidly advancing scientific sectors (biotech, nanotech, energy, materials, etc.) combined with the availability of CBCT (Cyber-Based Communication Technology) could produce an entirely new generation of threat capabilities. The evolving socio-technical ecosystem is transforming temporal and spatial characteristics from individual to trans-State behaviors, simultaneously creating new paradigms for emergence and support of terror activities on a global scale.

4. As terrorism adapts to the market place, we need to move from "terrorist" towards an understanding of market entry and risk mitigation. The "cost" of terror and of counterterror activities is an increasingly important perspective. Turning the lens on ourselves, we need to ask what it will take to compete, to grow, and to expand our own market share, and re-establish our national identity as a global consumer brand of choice.

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[2] Published by Strategic Multilayer Assessment (SMA) July 2013. Can be accessed at SMA Sharepoint Site: https://nsiteam.net/x_sma/default.aspx.

5. There is a need for much better psychosocial intelligence on foreign public opinion regarding key issues. Open-source intelligence can be used to provide such intelligence for counterterrorism. Findings from on-going efforts highlight the importance of testing theories and hypotheses about the bases of terrorism and political violence with statistical data on people's attitudes, beliefs, sentiments, and other characteristics.

6. Thematic Content Analysis (TCA) of activist, militant, and terrorist groups has demonstrated the usefulness of such analyses to assess groups' acceptance of, and proneness to, violence. An approach based on this concept and using measures of integrative cognitive complexity has been operationalized and proven successful for primary prevention. Efforts are underway for deploying this capability on the Internet.

7. Lone-actor terrorists have been relatively rare thus far. They may, however, exhibit personality and social traits that would support a useful profile, unlike group-based terrorists who vary in a myriad of ways. Recent research suggests two possible profiles of lone-actor terrorists: the disconnected-disordered and caring-compelled profiles.

8. Similarly, there is presently no empirically based psychological or demographic profile of individuals that perpetrate terrorist acts indicating a predisposition toward joining violent extremist organizations. Based on what limited empirical evidence is available, however, a set of individual psychological risk factors for individual radicalization may be proposed. While more study is needed before these may be established as firm indicators, these individual-level attributes may provide a starting point toward profiling individual willingness to participate in or perpetrate political violence.

9. There are a myriad of theories and frameworks to explain why and how individuals may radicalize to violence, and many shortcomings remain that limit the validity and generalizability of the findings. Advances in qualitative methodologies offer a framework for improving the understanding of the complexity inherent in the phenomena of radicalization and non-radicalization. Improved understanding of the multiple potential pathways into radicalism and terrorism should lead to better-tailored CVE (countering violent extremism) policies that are more effective and efficient.

10. There is a need to build teams—Joint and Interagency (and community) partners—to understand the information that comes from complex environments in order to organize counterterror practices in ways that inform and influence the behavior of friends and adversaries.

Brief Topic Overviews

Rethinking Counterterrorism: The Need for Systemic Strategic Planning and a Strategic Campaign to Address Violent Islamist Extremism that Manifests Itself in Terrorist Acts--CAPT Wayne Porter (NPS): There is a body of research related to strategic planning in an uncertain and dynamic environment. This research includes, among other topics, analyses of the strategic planning and thinking process, organizations and strategic change, multi-national corporation strategic planning in times of turbulence and uncertainty, backcasting for strategic planning of sustainable development, cognitive biases on

6

strategic planning, and sensemaking in the boundaries of stability and instability, order and chaos. Further research is needed, though, in analyzing the potential benefit of employing methods of system thinking and complexity in the deliberate planning of regional and global strategies. Critically, this applies to our current counterterrorism strategy and the phenomenon of ideologically based violent extremism. While this paper focuses primarily on radical Islamist extremism, the concepts discussed apply equally to any ideologically based extremist network seeking to employ terrorism.

War on Terror or a Search for Meaning?—Dr. Bill Durodié, Professor & Program Head, Conflict Analysis & Management Programs, School of Humanitarian Studies, Royal Roads University: The events of 9/11 necessitated a response. What shape that took was determined by the meaning attributed to those events, in its turn influenced by the mood of the times. Unfortunately, these latter elements reflected the sense of confusion that gripped the West in the aftermath of the Cold War. This paper argues that we will continue to be perplexed by the enemy in the war on terror so long as we are unclear as to our own purpose and direction. Indeed, the perpetrators of such acts today appear more influenced by Western dystopianism than Eastern mysticism. Real resilience requires having a narrative of our own that projects a purpose beyond responding to adversity.

Technology, Society, and the Adaptive Nature of Terrorism: Implications for Counterterror--Dr. Valerie Sitterle (Georgia Tech), Dr. Rodrigo Nieto-Gomez (NPS), Maj David Blair (Harvard University): As technology continues to advance and increasingly permeate society, generating violence that makes a societal group feel vulnerable is not difficult. Generating the desired interpretation of that violence is hard, however, and is critical to the coupling we need between future U.S. counterterrorism (CT) and information operations (IO) strategy. This latter space, with all of its socio-technical nuances, is where threats we classify as "terrorists" have excelled. This paper will begin by explaining the nature and importance of socio-technical complexity and its relevance to terroristic adaptation. A true socio-technical confluence perspective, distinct from the traditional view that treats the dimensions as distinct elements that happen to coexist, promotes awareness of active and passive influences that exist bi-directionally between the social and technological elements. The cyber realm then becomes both a means through which terroristic attacks are conducted or directly targeted and an ecosystem. In this latter view, individual and community (up to state and even trans-state) patterns of organization are transformed via completely new paradigms across temporal and spatial scales of communication and information sharing across societal sectors. This has significant ramifications for emergence of terror cells, their coordination, and passive support of their activities in a global scale. Behavior of terror cells in this complex environment may be more intuitively understood from an entrepreneurial business model analogy, which naturally expands into a consideration of the multiple dimensions associated with both conducting terror and striving to build protective measures against it. Since adaptation is a hallmark of living systems, the U.S. cannot stifle innovative advances by a terroristic adversary through reliance on a static U.S. counterterror strategy. Rather, the U.S. must lead disruptive innovation in order to drive strategic surprise and strain the capacity of these threat groups to adapt.

Market Economies and the Collision of Narratives…Approaching Terrorism Through Branding and Marketing Methodologies--Mr. Scott Kesterson, Asymmetric Warfare Group: Terrorism has become a

7

global franchised business, and, in terms of brands, al-Qa'ida (AQ) is king. Their brand has come to guarantee global positioning, brand name recognition, easy recruiting, as well as abundant financial resourcing. With the loss of Osama bin Laden, however, al-Qa'ida's brand supremacy is now vulnerable to new tiers of competition; their brand that could have been characterized by adaptability, innovation, and persistence has suffered a loss of consumer confidence. As terrorism adapts to the market place, our conversations need to move from "terrorist" towards an understanding of market entry, branding, and risk mitigation. What are the market factors that create brand durability for terrorism? What are the value propositions that these markets are responding to? What are the market elements that allow for growth and the ability to franchise? Turning the lens on ourselves, we then need to ask what it will take to compete, to grow, and to expand our own market share and re-establish our national identity as a global consumer brand of choice.

Counterterrorism and Muslim Public Opinion--Dr. David R. Mandel (DRDC Toronto): A widely shared view is that counterterrorism must address the psychosocial and cultural aspects of Islamic violent extremism if it is to succeed strategically. Another is that we need much better psychosocial intelligence (what might be called PSYINT) on Muslim public opinion regarding key issues. In this paper, the author draws on open source polling data collected from large numbers of Muslim citizens in multiple predominantly Muslim states, as well as in Israel and the Palestinian territories, over multiple post-9/11 years in order to assess the current counterterrorism climate and anticipate its future. Original analysis of polling data from the Pew Research Center's Global Attitudes Project was conducted for the 2011 calendar year. The analytic exercise illustrates how open source intelligence (OSINT) can be used to provide PSYINT for counterterrorism. The findings, many of which were counterintuitive, highlight the importance of testing theories and hypotheses about the bases of terrorism and political violence with statistical data on people's attitudes, beliefs, sentiments, and other characteristics. The exercise also underscores how much work could be done with the available data. The present report merely illustrates some types of analyses that could be conducted in the service of improving defense and security through behavioral science.

Can Thematic Content Analysis Separate the Pyramid of Ideas from the Pyramid of Action? A Comparison Among Different Degrees of Commitment to Violence--Dr. Peter Suedfeld, Mr. Ryan W. Cross, and Mr. Carson Logan (The University of British Columbia): The publicly accessible messages of 15 extremist groups were coded by Thematic Content Analysis (TCA). Orientations toward violence included activist, militant, and terrorist groups; their goals derived from animal rights, Islamist, territorial, or white supremacist ideologies. TCA is a set of scientifically rigorous methods for converting running text into quantitative data, analyzable by standard statistics. A measure of cognitive integrative complexity (IC) showed significant declines across groups as they increased in their acceptance of violence, higher power imagery for terrorist compared to the other groups, and high importance among terrorists on the values of self-direction (autonomy), character (virtue, sincerity, honor), and benevolence (caring for those close to oneself). The results demonstrate the usefulness of IC coding to assess groups' acceptance of, and proneness to, violence.

Prevention of Violent Extremism Based on Promoting Value Complexity, Informed by Neuroscience and Deployed on the Internet--Drs. Sara Savage and Jose Liht (University of Cambridge, UK): Researchers in counterterrorism are in a knowledge arms race that seeks to utilize the internet as a site for engaging with extremism and to harness neuroscience to inform counterterrorism strategies that can be deployed on-line. An approach to broad-based primary prevention that operationalizes Dr. Peter Suedfeld's construct of integrative complexity (IC), developed by Savage & Liht at the University of Cambridge, leverages value complexity as a means to increase the complexity of thinking about issues of potential cleavage between Muslim and British/western identities. The IC model shows significant empirical results (using integrative complexity and values coding) across three different cultural groups exposed to AQ-related extremism, intra-religious and inter-religious conflicts, respectively. The IC approach is suitable for deploying on the Internet. Integrative complexity has two aspects: differentiation and integration. Differentiation regarding issues exploited by extremists will be supported through a range of balanced, even-handed film clips of influential Muslim viewpoints linked with vetted websites covering viewpoints such as: a) Caliphate, b) Conservative/Salafi, c) Muslim Engaged with the West, and d) Hardline/extremist views. This approach relativizes extremist opinion without provoking reactance. Graphic and video game learning activities will help users to 'ladder down' to the values that underlie the different viewpoints so that participants learn to find trade-offs between values in conflict and larger integrative frameworks, thus leveraging the complexity with which they think about issues that radicalisers exploit. This develops pro-social conflict skills and neutralizes the mobilizing impact of extremist opinion. The paper concludes with a research design to neuro-image the impact of the IC approach when operationalised on-line. This neuroscience research will augment the significant cognitive and social psychological data already supporting the IC approach. A project to develop an on-line version of the IC model *Being Muslim Being British* is planned in the UK.

Lone-actor Terrorists: Two Possible Profiles--Drs. Clark McCauley and Sophia Moskalenko (Bryn Mawr College): Research has shown that group-based terrorists vary in many ways; there is no useful profile of group-based terrorists. Lone-actor terrorists are relatively rare but may have personality and social characteristics that would support a useful profile. This paper will review recent research to suggest two possible profiles of lone-actor terrorists: the disconnected-disordered profile and the caring-compelled profile.

Psychological Risk Factors of Terrorism--Maj. Jason Spitaletta (Johns Hopkins University): Counterterrorism is not necessarily about combating a phenomenon or its' tactical manifestation, rather it is countering those who perpetrate the associated acts. There is no empirically based psychological or demographic profile of such a person that would indicate a predisposition toward joining violent extremist organizations. There are, however, environmental, social, and individual characteristics whose presence may increase the likelihood of participating in an act of terrorism. What follows are a proposed set of individual psychological risk factors for individual radicalization. The behaviors or attributes described merely point to a possible increase in the willingness to participate in or actual perpetration of political violence. While derived from the limited available empirical evidence, additional research is still required to validate these risk factors and ultimately establish them as indicators and warnings of terrorist behavior.

Leveraging Advances in Qualitative Methodology to Analyze Radicalization: Dr. Peter S. Henne, Mr. Jonathan Kennedy, Dr. John P. Sawyer, and Mr. Gary A. Ackerman (DHS/START Consortium/University of Maryland): The dearth of scholarly work on radicalization at the turn of the century has been replaced with a plethora of frameworks and theories to explain why and how individuals radicalize to extremist violence. This dizzying menu of explanations often makes it difficult for scholars and policymakers to assess how the many hypothesized causes across various levels of analysis interact with each other to produce a wide range of radicalization outcomes. Worse yet, the inferential power, and thus the policy applicability, of these studies are severely limited by the failure to identify and study the proper population of "negative cases." Fortunately, there have been a number of qualitative methodological advances that can be used to bring greater structure to our understanding of radicalization. Specifically, this paper explores how the use of typological theories, two-level concepts, qualitative comparative analysis (QCA) and the possibility principle can serve as the starting point for integrating extant knowledge about radicalization and serve as a conceptual "first-step" to organize theories and evidence in preparation for a quantitative study.

Mechanics of the Toolbox: CVE Practice and Inform & Influence Activities--Mr. Mubin Shaikh (University of Liverpool, Tactical Decision-making Research Group): Public and practitioner discourse on countering violent extremism (CVE) speaks of "countering ideology" without providing the specific mechanics of how such a process would work. This article demonstrates how that is best achieved in a manner that respects the various mandates in which both the state and "other" cultural constructs interact with one another. As one definition of Inform and Influence Activities (IIA) has it, the Commander is to build teams—Joint and Interagency (and community) partners—to understand the information that comes from complex environments in order to influence the behavior of friends and adversaries.

Rethinking Counterterrorism: The Need for Systemic Strategic Planning and a Strategic Campaign to Address Violent Islamist Extremism that Manifests Itself in Terrorist Acts

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As an observer of the Joint Staff strategic planning process, I noted that long term, nonlinear and non-conventional strategic thinking was consistently deferred by senior decision makers. Understanding how those involved in strategic planning in the Department of Defense view concepts of system thinking provides valuable insight for broad applications among interdepartmental and private sector strategic planners who seek to develop strategic plans in a global and interconnected strategic environment. While there are many intergovernmental strategic documents intended to guide senior decision makers in strategic planning, such as the National Military Strategy, the Quadrennial Defense Review, the National Security Strategy, the Department of Defense Strategic Guidance, and the Quadrennial Diplomacy and Development Review, my reading of these documents indicates too little recognition of the systemic nature of today's strategic environment. National framing of the strategic environment has essentially remained unchanged since our governmental institutions and planning processes were reconfigured sixty years ago to contain the spread of global communism. In fact, it has been argued that President Eisenhower's Project Solarium was the last successful attempt to systemically address a long-range national security strategy (Brimley, Flournoy, 2006). Recognition of the complex and systemic nature of today's strategic environment may be lacking in U.S. Government strategic planning, and the current strategic Joint planning process appears to provide little room for outside collaboration with those currently employing system methodologies.

There is a body of research related to strategic planning in an uncertain and dynamic environment. This research includes analyses of the strategic planning process (Mintzberg 1994, Armstrong 1982), complexity in strategic change (Stacey 1995), oil firms' strategic planning for unpredictable change (Grant 2003), open systems and strategic planning (Jackson and Keys 1984), backcasting for strategic planning of sustainable development (Holmberg and Robert 2003), cognitive biases on strategic planning (Barnes 1983), sensemaking in the boundaries of stability and instability, order and chaos (Snowden and Kurtz 2003), Complex and Adaptive System of Systems engineering and modeling (Glass, Brown, et al 2011), and, strategic planning in small firms (Robinson and Pearce 1984). Further research is needed, though, in analyzing the potential benefit of employing methods of system thinking and complexity in the deliberate planning of regional and global strategies. Critically, this applies to our current counterterrorism strategy and the phenomenon of ideologically based violent extremism. While

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[3] Elements of this paper have been taken from research I am doing at Naval Postgraduate School and may appear in my forthcoming doctoral dissertation in Information Sciences. The views expressed in this article are those of the author and do not reflect the official policy or position of the United States Government or Department of Defense.

this paper focuses primarily on radical Islamist extremism, the concepts discussed apply equally to any ideologically based extremist network seeking to employ terrorism.

The benefit of understanding the complex nature of the environment would seem to be fundamental for strategic planners whose organizations are systemically part of this environment. Research in the areas of complexity and systems thinking covers a spectrum of concepts that frame regional and global environments, ranging from linear and deterministic approaches to predictability, to probabilistic constructs of complexity, chaos, bounded instability, and emerging systems. Common in much of this analysis is a focus on determining system boundaries, endogenous and exogenous impacts, identification and implementation of feedback loops, and an appreciation of the delays and time frames required to provide a sufficient understanding of relationships within and between systems. A primary objective of strategic planning is to inform decision makers of the complexity of the environment in which they, and their competitors, operate and to broaden the horizon of their strategic thinking. An efficacious strategic planning process must be focused on enhancing the ability of decision makers to make sense of an uncertain and complex environment. One tool that could prove useful in this process is system dynamics modeling, created by Jay Forrester at MIT. The concepts of system dynamics provide for the setting of boundaries and the analysis of endogenous systems in terms of the stock (quantities of material), flow (the rates at which these systems change), positive (self-reinforcing) and negative (self-correcting) feedback loops inherent in goal-seeking systems, and the delays associated with these interactions (Sterman 2000). By understanding the structure of these feedback loops, it may be possible to maintain the desired dynamic equilibrium of system behavior required to achieve or sustain stability amidst uncertainty. The Intelligence Advanced Research Projects Activity (IARPA), the Massachusetts Institute of Technology Sloan School, and others have already done work in this area (Choucri, Madnick, Siegel, et al 2007).

Making sense of any phenomenon often begins with an ontology or epistemology of understanding – a framework from which to form judgment. The Age of Enlightenment (also referred to as the Age of Certainty) placed heavy emphasis on observable phenomena that could be described or "explained" by laws of nature. Causal explanation of observed phenomena was largely based on the assumption of order in the physical universe and was eventually expanded to include systems of human behavior. Since the birth of enlightenment science, the distinction between order and chaos has had a profound influence on conceptual and practical thinking (Snowden and Kurtz 2003). Our understanding of the physical universe has advanced significantly since the early Age of the Enlightenment (illuminated by Copernicus, Kepler, Galileo, Newton, and Huygens, et al) and the Industrial Age (enabled by scientists such as Bernoulli, Kelvin, Faraday, and Maxwell). The paradigms of certainty and the reductionist approach to understanding cause and effect that characterized these periods were eventually eroded in the 19th and 20th Centuries by revolutionary thinkers such as Poincare, Einstein, Bohr, De Broglie, Schrodinger, Heisenberg, Feynman, Lorenz and others. By the first quarter of the 20th Century, the paradigm of "certainty" had been discarded through a revolution of thought and observation, and a more complex and non-deterministic universe was revealed.

Most people can accept that the purpose of science is to describe the structure and constituent characteristics of observable phenomena, perhaps even going so far as to *predict* behavior (through some inductive process of generalization). In other words, describing *what* something does or consists of and *how* it behaves. This is a migration from descriptive explanation to causal explanation and involves providing evidence that satisfies the conditionality of causal relationships: that *cause* temporally precedes *effect*; that cause covaries with effect; and, that no alternative explanations are plausible (Shadish, Cook, and Campbell 2002). A logical (though not, I would submit, necessarily practical) outcome of this is an expectation of *predictability* and *testability*. The value of theory, many would contend, lies in its explanation of observed phenomena and that, "By its very nature, a theory predicts." (Kerlinger, Lee, 2000).

But the predictability and testability of theory in a complex and non-linear environment that is characterized by uncertainty and chaotic behavior – behavior that is the result of non-linear dynamics in human activities creating deterministic, though non-repeating and largely non-predictive behavior – seems secondary to the importance of increasing our understanding of causal relationships that may be far removed in time and space. System dynamics practitioner, John Sterman, stated that, "The heuristics we use to judge causal relations lead systematically to cognitive maps that ignore feedbacks, multiple interconnections, time delays, and the other elements of dynamic complexity." He went on to assert that, "…people use various cues to causality including temporal and spatial proximity of cause and effect, temporal presence of causes, covariation, and similarity of cause and effect…These heuristics lead to difficulty in complex systems…" (Sterman 2000)

In an increasingly interconnected social environment, international organizations, US agencies, regional and multi-national companies will continue to benefit from strategic planning. Research in the areas of complexity and systems thinking has covered a spectrum of concepts that frame various strategic environments. What seems to be lacking in this research is a merger of social network and physical network theories focused on integrating hubs, nodes and connectors, system boundaries, endogenous and exogenous impacts, identification and implementation of feedback loops, and an appreciation of the delays and time frames required to provide a sufficient understanding of relationships within and between non-linear human systems. The benefit of understanding the structure and feedback mechanisms of interconnected (and often self-organizing) systems within any bounded environment would seem to be fundamental for strategic planners who hope to achieve desired outcomes while overcoming policy resistance.

Much of the literature that relates complexity, uncertainty, and system thinking to strategic planning focuses on three major areas of study: making sense of a turbulent environment for decision makers; the application of system dynamics and theories of complexity, chaos, and emergence to the global environment; and, the evolution of the strategic planning process for large companies and organizations. A primary objective of strategic planning is to inform decision makers of the complexity of the environment in which they, and their competitors, operate and to broaden the horizon of their strategic thinking. By understanding the mechanisms of these feedback loops, it may be possible to sustain the desired dynamic equilibrium of the system required to achieve or maintain stability.

Complicating this effort are the dynamics inherent in complex systems and chaotic behavior that create instability, particularly in boundary areas between systems. Emergent patterns develop in what is commonly referred to as the edge of stability or the edge of chaos, and complexity can enable useful emerging patterns (Snowden and Kurtz 2003). Strategic planning has evolved over the past several decades in response to what is recognized as an increasingly uncertain and turbulent global environment. Less emphasis is now being placed on developing specific plans of actions for corporate or organizational control. Rather, the focus of strategic planning has shifted to enabling adaptability through increased environmental awareness and strategic thinking. This has resulted in less formal processes of strategic planning, with greater appreciation for creativity and innovation in the development of alternative future scenarios to enable flexibility in the face of uncertainty.

In the last decade of the 20th Century, the world experienced an epochal shift as profound in its effect as the age of enlightenment or the advent of the industrial age. But perhaps because it is difficult to assess a system recursively from within, the sweeping, paradigmatic, and cultural changes of the "Information Age" have never been fully recognized despite the fact they have fundamentally changed our strategic environment. This is most evident in the rising phenomenon of terrorism and global efforts to counter this threat and to provide for opportunity. The global connectivity and instantaneous communication enabled by the internet and social networking have rendered our previous strategies of "control" obsolete and, trapped within this 20th Century mind set, have precluded our ability to correctly identify the opportunities and challenges confronting us every day. What ties seemingly unrelated but tectonic global events together is literally the complexity and systemic nature of today's strategic environment. We must accept this complexity – and the uncertainty that accompanies it - and learn to adapt.

The world in which we live has changed, and our inability to recognize that change and to adapt could eventually lead to the extinction of our values and way of life, as surely as any species who fails to successfully evolve over generations. History is filled with well-intentioned failures. It is not for lack of effort, but for lack of vision and willingness to accept risk, that aspirations often fall short. Perhaps it is also the inability to simply let go of comfortable but obsolete wisdoms and to force ourselves to seek solutions that do not plot within the range of normal, or even identifiable, distributions. Innovation and imagination are the stuff of great scientific, sociological, and economic breakthroughs. I would submit this is also true for governments and militaries. And yet, as a nation we seem to be calcified by our own perceived invulnerability, so hyper-focused on the tactical that we have devalued the strategic.

An apparent shift to a focus on the *gestalt* of a system has evolved from the cyberneticists (Wiener, Von Neumann, et al), the organismic biologists (e.g. von Bertallanfy), and the system dynamics pioneers (led by Jay Forrester), through design theorists like Herb Simon, and chaos theorist Ed Lorenz, to the network and system theorists Strogatz and Watts, Milgram, Barabasi, Capra, and eventually to the complexity scientists Maury Gell-Man, Yaneer Bar-Yam and others. Throughout this process, an isomorphic mapping has taken place that applies the core concepts of thermodynamics and evolution to emergent behavior in open systems. The isomorphic merging of system science in biology and the understanding of dynamic equilibrium and entropy from thermodynamics formed the basis of new theories of complexity and chaos that introduced the non-linearity of relational behavior in organic and inorganic systems. This

14

approach to understanding complex systems and networks, explored by Granovetter (1973, 1985), Strogatz and Watts (1998), Barabasi (2003), Capra (1996), and many others, was at least partially the result of the next revolution in science, the Information Age – or the Age of Uncertainty. This is particularly significant in the study of complex, non-linear, relationships in human systems.

We must ask ourselves, "If we aren't willing to honestly accept our myopia, what hope is there to correct our vision?" Nonlinear thinking - the strategic connecting of dots – is consistently deferred by the urgency of more tactical concerns. And yet, what could be of more pressing urgency? It is as if we are willing to explore every data point on or near a trend line, without ever questioning the applicability of the x- and y-axes or the linearity of the plot. We must stop simply *reacting* to the now: struggling to restore the past, rather than embracing the future. There will always be another crisis. There will always be the urgency of now, and the temptation to seek *deterministic* (predictable) outcomes when the environment is *complex* and *systemic* in nature. But to miss opportunities by seeing *only* risk and threat, or by narrowly addressing only the most obvious and familiar aspects of complex problems, is worse than doing nothing. Examples of this complexity and our need to seek opportunities within it abound.

The Middle East and North Africa are experiencing a cultural and social upheaval unlike anything seen there in sixty years. Whether this is part of a long maturation process from post-colonial authoritarianism and repression to democratic self-determination, a period of Islamic enlightenment following a sort of post-Ottoman dark ages, or a reawakening of tribal and religious sectarianism remains to be seen. But whatever the basis, this movement is regional in nature and is sweeping like a cultural tsunami across North Africa and the Middle East, leaving the detritus of authoritarian regimes and Cold War relationships in its wake. In the meantime - though not necessarily directly related in a causal sense - an adaptive and complex network of violent Islamist anarchists and anti-modernists, as well as other ideologically based extremist groups, continue their disjointed campaigns against the west and secular regimes in South Asia, the Caucuses, Iraq, Yemen, the Levant, Somalia, Algeria, Mali, Nigeria, the Philippines, Malaysia, and Indonesia. Localized and transnational terrorism is their medium of expression – they seek to destroy and then to control. Their offer of a "better life" is not in this world. The objectives of these inimical networks are antithetical to our own, and it is inevitable that their activities will increasingly (albeit sporadically) manifest themselves on American soil. Running in the background of these monumental shocks to the global system, are the continued effects of economic crises, food shortages wrought by natural disasters and anthropogenic effects, rising fuel prices, transnational crime and narcotics trafficking, and the increasingly apparent effects of climatological variations, deforestation, and rising atmospheric carbon dioxide levels.

While NASA engineers, professional and amateur scientists, and generations of Americans who are products of the so-called Space Age lament the end of US space shuttle missions, and wonder what is next, many others believe this could represent the beginning of a challenging and equally exciting new era for American scientists and citizens alike. We are now emerging from the technological advancements of the Space Age and still witnessing the epochal and liberating impacts of the Information Age. Now is the opportunity to recognize the systemic and complex nature of the twenty first century – its shocks and resilient paths to a more sustainable future. Americans should embrace this

15

challenge and rededicate our technological innovation and economic leadership for national and global benefit. The demonstration of American commitment to a new model of sustainable prosperity and security must begin at home if it is to have a global impact.

In 2011, IBM announced the development of their first neurosynaptic computing chips that integrate hardware and software to replicate the brain's functions. The revolutionary new chip was noted as being a critical shift away from the traditional von Neumann computer architecture that separates CPU from memory. IBM Research's "Systems of Neuromorphic Adaptive Plastic Scalable Electronics" (SYNAPSE) is a cooperative project begun by Defense Advanced Research Program Agency (DARPA) in 2008, and DARPA has now pledged an additional $21M for the next phase of research. The concept of SYNAPSE is to create a multi-sensory system with size and power consumption to rival those of the human brain – using silicon in place of the neurons, synapses, and axons that transmit information – capable of dynamically rewiring itself as needed (IBM Press Release, 18 Aug 2011). Work such as this is driving computer science beyond computation and algorithms that mathematically map processes, toward non-linear cognitive adaptation and biomimicry at the speed of imagination. The potential for revolutionary / evolutionary progress such as this, makes discussions about strategies centered on control seem sophomoric. We must now ensure we can apply the *reason* to balance such progressive artificial *intelligence*.

The tools of influence in today's strategic environment are credibility and strength. These are very different from force and power, and they are derived from values – the values enumerated in our Bill of Rights, Constitution, and Declaration of Independence. In the Information Age -or Age of Uncertainty- the "say-do" gap, proselytizing values that our actions do not seem to reflect, is impossible and undesirable to maintain. If Wikileaks provided any lesson, it was that "controlling" the message is no longer possible in today's hyper-connected world. We must consistently apply our values or abandon hope of establishing credible influence and the moral strength necessary to effectively employ the tools of National power.

The bottom line is that coherency of purpose must be anchored in the values that characterize us as Americans and if we are to provide hope and opportunity to the rest of the world. Credible influence is earned through respect and strength, and this can only be demonstrated over time through consistency of action. In the Information Age, we must talk straight to partners and adversaries alike. Liberty, equality, and freedom of expression are values we cherish. Oppression, prejudice, and repression are inconsistent with our values. In confronting extremism and transnational crime, we can accept uncertainty by mastering complexity. The application of military force is a last resort: to be used with consistency when the security of the nation, or that of our partners, is at risk; or, perhaps when required to do so as a leader in the international community of nations to maintain global order and to protect gross violations of human rights. But other tools of influence – diplomacy, economic influence, education, technological innovation – are far more powerful in today's strategic environment when employed systemically, and reinforced through our policies and the free market.

Beyond the threat and risk inherent in today's global environment, there are opportunities for sustaining our prosperity and security at home and abroad. We must accept the interdependence of

16

globalization, and seek converging interests. Urbanization, crime, joblessness, and health care are not challenges we, alone, face in America. It is time to pursue solutions the rest of the world might emulate, and embrace the challenge of global competition. While it is clear that Islamist extremism (or any ideologically based form of violent extremism) is not a monolithic movement, its core principles provide connective tissue that loosely couple violent movements worldwide and domestically. Radical Islamism exists as a complex and adaptive network. Whether we are speaking in terms of economics, biologics, social sciences, or physics, complex dynamic networks spontaneously propagate without direction from a central intelligence. Complex networks are referred to as 'adaptive' or 'dynamic,' because they are self-organizing, constantly changing their interrelationships based upon the needs of individual agents and environmental impacts. While these networks emerge from common need preferences, a complex dynamic system is always greater than the sum of its parts. We need to interrupt that process by mounting a Strategic Campaign worldwide – founded on a coherent and systemic strategy - with Muslim partners to discredit and diminish the threat from radical Islamist extremists.

This Strategic Campaign might be structured along three *equally important* lines of influence. These three lines of influence represent three sectors of global society: the public/government sector; the private/commercial sector; and, the myriad International and Non-Governmental Organizations (lOs/NGOs) who share common interests and principles. Perhaps the most important single aspect among these lines of influence is consistency. Our efforts in all three must remain aligned and on-message. But our message must be supported and demonstrated by our actions. In this endeavor, actions mean far more than words. As a nation, we must work together with our global partners, especially those representing mainstream, Islamic/Muslim ideals, if we are to ultimately discredit and diminish the threat posed by radical and violent Islamist extremists worldwide. To be effective, all three lines of influence must be carefully synchronized and aggressively monitored by global polling, behavioral surveys, and tools of social science.

The first line of influence, the public/Government sector, must span the interagency, with Department of State in the lead. Each department- State, Defense, Justice, Commerce, Treasury, Agriculture, et al - has a unique role to play, but the message must remain coherent throughout: Radical and Violent Islamism is a deliberate corruption of Islamic teaching, and we support our own Muslim citizens and partners worldwide who are slandered and outraged by those who adhere to this hateful and destructive minority; further, we will work to undermine the illegal activities of radical Islamists worldwide, while at the same time, strongly supporting Muslim nations / governments, organizations, and people who are being exploited by the extremists, and whose principles and values are aligned with our own. This approach will include the incentivization of Islamist polity, education and literacy, science and technology, agriculture, and commercial pursuits. Our public / Government statements, engagements, operations, and actions must consistently demonstrate our principles, values, and honest good intentions for Muslims worldwide.

The private/commercial sector line of influence is focused on promoting an accurate portrayal of American tolerance and individual opportunities for Muslims through free market economies. This will involve encouraging US industry and media to increase their outreach within the domestic Muslim

17

population as well as to the international marketplace and wider Islamic audience (e.g. working with the National Advertising Review Council to encourage more advertisements that feature Muslim-American youth who use and enjoy popular products such as jeans, cell phones / iPods, perfumes). It is critical that we avoid the perception that we are "selling" a different (western) lifestyle, or that we do not respect traditional values. Rather, we seek to increase the job market and international trade that might offset the negative conditions that lead to: the urbanization at the expense of rural communities; migration from destitute homelands that lack sufficient opportunities for burgeoning youth populations; and, abject poverty and illiteracy that result from sufficient education and employment opportunity. By incentivizing commerce and academic institutions to seek partnerships in the wider Islamic community, we can exploit the vulnerability of a warped ideology that eschews modernism, freedom of expression, tolerance, justice, human dignity, and prosperity, and offers reward only after death.

In the third line of influence, we must engage with International Organizations and Non-Governmental Organizations to improve the lives of Muslims and populations worldwide, and to stem negative global stressors that create an environment in which radical Islamism can thrive. Whether in direct response to critical humanitarian crises, or in support of long term efforts to counter anthropogenic effects on our environment (atmosphere, soil, sea, water sources), illiteracy, urbanization, organized crime, human migration, pandemic disease, abject poverty, injustice, and exploitation we must strive to partner with all those who share core values and the will to address negative trends. When possible, we should partner with Islamic organizations, nations, and NGOs who seek to redress the ills that feed radical Islamism globally. Whether supporting Islamic nations, the African Union, or the Red Crescent, putting Muslims in position to counter the poisonous propaganda and perversion of religion is critical in countering violent jihad and the hateful ideology espoused by Islamist extremists.

The results of all three lines of influence must be closely monitored through the aggressive use of global polling, behavioral surveys, and related tools of the social sciences. This may call for a new approach to information gathering and analysis. Partnering with recognized pollsters internationally could improve our knowledge of, and sensitivity to, the effects these identified lines of influence achieve across the Muslim world, allowing us to dynamically re-allocate or redirect resources where necessary. Whether applying this Strategic Campaign to Afghanistan and Pakistan, or to Africa, Asia, the Broader Middle East or Europe, cyberspace or in the American homeland the message and approach should be consistent and the results readily measured / studied.

Across all lines of influence, our Strategic Campaign must leverage the Muslim community worldwide, beginning with that in the United States. Only Muslims can expose the virulent corruption of their religion and cultural ideologies. Non-Muslims in America and worldwide can support this effort by demonstrating even-handed religious and cultural understanding, addressing those negative stressors that most affect the third world and contribute to an environment in which extremist networks might successfully couple with sympathetic movements / individuals. Critical to this effort are education, health services, agricultural and energy innovation, and commercial stimuli for job creation and trade. Teaming with Gulf nations in the scientific quest for alternative energy, or teaming with academics and agricultural scientists in African nations to explore avenues for limited-water cultivation would provide

18

jobs, incentive, and positive partnerships between "western" and Islamic cultures that undermine the recruiting and propaganda of violent extremists.

This Strategic Campaign should be as much about synchronization of action and alignment of message, as it is about the message itself. Our message must be derived from a clearly defined strategy and applied consistently, globally by all levers of National influence and through all appropriate partnerships. Only by supporting Muslim partners willing to challenge the ideology of radical Islamists, and by helping Muslim cultures worldwide counter the negative trends that fuel extremism - while quietly continuing to pursue military action as needed - will we ultimately discredit and diminish the threat violent Islamist extremism poses to the United States and the peaceful development of the global community of nations.

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War on Terror or a Search for Meaning?

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The events of 9/11 necessitated a response. What shape that took was determined by the meaning attributed to those events, in its turn influenced by the mood of the times. Unfortunately, these latter elements reflected the sense of confusion that gripped the West in the aftermath of the Cold War. This paper argues that we will continue to be perplexed by the enemy in the war on terror so long as we are unclear as to our own purpose and direction. Indeed, the perpetrators of such acts today appear more influenced by Western dystopianism than Eastern mysticism. Real resilience requires having a narrative of our own that projects a purpose beyond responding to adversity.

Key Points

- The framework of meaning that held the West together much of the twentieth century has ended
- Presuming a political ideology behind terrorism analyses the present through the prism of the past
- Al Qa'ida and domestic nihilists are parasitic upon mainstream caricatures of Western degeneracy
- Extremism is the extreme expression of mainstream ideas and Islam is their motif not their motive
- Our response to terrorism – shaped by a dystopian culture that is our own – determines its impact

Know Thyself

> When I was coming up, it was a dangerous world, and you knew exactly who they were. It was us versus them, and it was clear who them was. Today we are not so sure who they are, but we know they're there.
>
> Bush (2000)

With these words, given before he was elected President, George W. Bush captured some of the uncertainty that had gripped the U.S. establishment in the aftermath of the end of the Cold War. Celebrated by some as heralding the '*End of History*' (Fukuyama, 1989), the dismantling of the framework that had largely organised world affairs (and shaped identities) – both internationally and domestically – across much of the twentieth century proved unsettling for all those who understood themselves through it. Such confusions continue to this day, and not simply in the U.S. After a recent terror-related incident that targeted the vicinity of the Legislative Buildings of British Columbia on Canada Day, the BC Premier announced:

They want us to be governed by fear. They want us to look on each other with suspicion. They want us to be seized with anger. They want this because they hate the things that make us Canadian.

Clark (2013)

But, as some analysts immediately noted, who exactly were the '*they*' (who the RCMP described as being '*inspired by al-Qa'ida*') that she was pointing to? In this case, it would appear to have been a petty-criminal and failed heavy metal musician turned Muslim convert, and his methadone-taking, common-law wife, neither of whom particularly kept their dislikes discrete. And – just as significantly – what exactly are '*the things that make us Canadian*' (or American, or British, or anything else for that matter)? As the British writer James Heartfield notes in his critique of the postmodern outlook (2002), constantly calling into question the object of our attention also points to confusion relating to the subject – ourselves. Yet, almost ten years into the war on terror, President Barack Obama would still write in his Foreword to the 2011 U.S. National Strategy for Counterterrorism, that:

To defeat al-Qa'ida, we must define with precision and clarity who we are fighting.

Obama (2011)

It is the argument of this paper that – particularly in relation to what has become known as '*homegrown terrorism*' – not only have we failed to understand the enemy but, more importantly, the extent to which *we* have changed too and how this shapes those we confront. It is our lack of vision and direction for society that generates confusion over who the enemy is in the war on terror, and how to respond to them.

Interpreting Meaning

The common adage that; '*Generals always fight the last war*', could be augmented to include all-manner of other professionals – including politicians, media commentators and even intelligence analysts. A mental model once ingrained is truly difficult to shake off. The atrocities of 9/11 necessitated a response. Maybe it would have been too much to ask that this be as measured as that of the mother of Dutch filmmaker Theo van Gogh who said of her son's murder at the hands of a self-styled jihadist in 2005:

What is so regrettable … is that Theo has been murdered by such a loser, such an incoherent person. Murder or manslaughter is always a terrible thing, but to be killed by such a figure makes it especially hard.

Van Gogh (2005)

As the Holocaust survivor Viktor Frankl (1946) noted over half a century before, it is not suffering that destroys people – but suffering without meaning. So, after 9/11, a meaning – political ideology – was presumed and projected. It allowed a disoriented administration the semblance of clarity and offered a cohering mission to society. They were facilitated in this by the perpetrators themselves, whose chatter about global jihad was taken at face value. In a similar way, the failure to find weapons of mass destruction in Iraq led – in 2003 – to its invasion. Any lack of evidence was either ignored or taken to confirm pre-existing views regarding how devious the regime was. Either way, policy needs and presumptions – not evidence – determined outcomes.

The same is true of much intelligence. This necessarily combines information with the interpretation of that information. Yet, time and again, when examining intelligence failures the tendency is to blame just the information. Either insufficient information is highlighted, or there being too much to analyse. Alternatively, analysts worry about being provided with false, or misleading, information. They rarely question their frameworks. So, because in the past protests and violent outbreaks usually had a political or ideological purpose, today politicians, commentators and analysts look for political and ideological explanations – even when all the evidence points to the absence of these.

Groups such as the IRA and the PLO fought national liberation struggles. They used terror as a tactical means to achieve their strategic ends. But they knew above all that they needed to win the hearts and minds of their own communities for the struggle. In other words, they relied on mobilizing *a conscious and coherent collective*. And they confronted an equally conscious and coherent state. Failures, on all sides, can be traced to their alignment – or not – with the people they claimed to speak and act on behalf of. But al-Qa'ida and the offshoots it supposedly inspires could not be any more different. Whilst some claim to speak on behalf of the '*Ummah*', there is no evidence of any community ever having been consulted – let-alone engaged. That is why even the families and friends of those involved express shock to hear of their activities.

Neither is there any coherent text outlining their purported mission, or aims. Rather, much of this has been projected for them by analysts who seek to fill the vacuum of information left behind after the various acts of destruction with their own pet prejudices. Indeed – most strikingly – when asked to articulate their demands on television, one of the perpetrators of the Mumbai attacks was heard placing the phone down and asking one of his co-conspirators what these were (Ullah, 2008). Even if the perpetrators were mindless canon-fodder as some suggested, and even if we know the real origins of these attacks, this still fails to explain why to date no one has come forward to claim responsibility for these, as well as many others. And when they do – through so-called martyrdom videos and other media – there is precious little content other than a rambling rage.

Our failure then, is to attribute meaning – either political or ideological – to these. We thereby imbue vexatious acts of violence with greater import than they deserve. By doing so, we also attribute far too much authority and power to small numbers of individuals. Implicitly, we also identify a gaping hole at the heart of our own societies – where ideology and politics should be. For what kind of society is it that can be so rattled by events that – in perspective – should be seen as minor, if unfortunate, historical footnotes? Some analyses even effectively exonerate the individuals concerned by finding cause for them in the conditions of the developing world and our supposed insensitivity to these. Above all, our responses have allowed local and regional struggles, as well as isolated, irrational acts, to be presented as conflicts of global and epochal proportions.

Reflected Caricatures

Osama bin Laden himself was fond of citing Western politicians, commentators, academics and diplomats in seeking to legitimize his ostensible cause (Bin Laden, 2005). Sounding like any other contemporary critic of American policy, he droned on about a rag-bag of motives at different times. From primarily complaining about the relationship between the U.S. and the Saudi regime he switched to focusing more on Palestine *after* the events of 9/11 and then only later to Iraq, echoing the anti-war lobby's claim that the war was simply a money-making venture for large corporations. He lambasted the U.S. for not signing up to the Kyoto treaty to control greenhouse gases, accused Washington of being

23

controlled by a Jewish lobby, and argued that Western advertising exploited women. After the Madrid bombings of 2004, he even proposed that Western leaders should have paid more attention to surveys there that revealed how few people supported going to war in Iraq. In all of these, bin Laden and his acolytes revealed themselves as being entirely parasitical upon the caricatures and dystopian views that proliferated in – and emanated from – the West, as well as being obsessed with what was being said about them. One of the final images of bin Laden – sat watching himself on television – is quite apposite in that regards.

But what kind of Muslim leader is it who advises people to read the journalist Robert Fisk or the academic Noam Chomsky rather than, as one might have supposed, the Koran? And why did he choose to piggyback his claims on Western opinion-poll data and the views of environmentalists in order to get his points across? (Although we should note that contemporary political leaders and religious figures in the West do much the same thing). Ayman al-Zawahiri too – once right-hand man of bin Laden and the group's supposed intellectual – displayed similar tendencies of drawing ideas and inspiration from Western concerns when he noted, in relation to his growing, if evidently unrealistic, fascination with developing some kind of chemical or biological weapon:

> *Despite their extreme danger, we only became aware of them when the enemy drew our attention to them by repeatedly expressing concerns that they can be produced simply with easily available materials.*

Al-Zawahiri (1999)

In truth, bin Laden and al-Qa'ida entirely lacked any substantial ideas of their own, let-alone anything that amounts to an ideology. Bin Laden was the leader of nothing, who became – in an age enthralled by celebrity – the iconic terrorist of our times (Cornish, 2008), unable to control his own fans never mind the course of history (Devji, 2005). Sadly, only in an age when image and style trump insight and substance at every turn could such aimless violence come to be seen as so portentous and requiring an all-consuming response.

Unwittingly, the new terrorists were both a product of the contemporary confusions while inadvertently providing the authorities with a flimsy new purpose. Criticism of the West has long been around, but never before has it taken such a degraded form as in our post-political age. Even the presumed rise of religion in the recent period points to the evisceration of political engagement. And there is a world of difference between the cult-like religiosities of the present and traditional, religious organizations – though the former may better countenance rash acts of barbarism through their being less accountable to any wider institutions or mores.

Homegrown Nihilists

Far from being atypical, recent self-styled jihadists intercepted in the domestic arena have exemplified the ineptness of the ever-expanding roll-call of marginal fantasists and want-to-be terrorists who claim to be part of, or inspired by, al-Qa'ida. The British journalist, Brendan O'Neill, has published a list of '*The 10 stupidest Islamic terrorists*' (2013). It captures just some of their tactical, technical and organizational incompetence, irrespective of economic or educational backgrounds. And these form just the tip of the iceberg. This is not to dismiss the potential lethality of these plots and the devastating consequences they could have had upon those in their proximity if they been successful in their aims – nor should we confuse them with the more serious threat posed to troops in Afghanistan, Iraq and elsewhere.

Yet, after each of these incidents, rather than point to the combination of vacuous bravado and concomitant failure, politicians, commentators and analysts have preferred to pursue purported links to al-Qa'ida, which they invariably make connection to – however tenuously. But associating with groups such as Al-Mujahiroun or Jemaah Islamiyah, travelling to Pakistan to attend some kind of training camp, or surfing jihadist websites including the now notorious *Inspire* magazine – supposedly al-Qa'ida's web-based English language organ – does not explain anything.

To parody Oscar Wilde (1895); '*to lose some may be regarded as a misfortune; to lose so many looks like carelessness*'.

Ideas do not transform people unless they resonate with their experience and existing interpretation of the world. The question then becomes: Why do the ideas of fringe organizations appear to fall on such fertile soil? And, what is it about the West that seems to predispose some to this here? In view of the sheer weight of alternative media to *Inspire* and the other materials that supposedly incite terrorism, surely the really awkward question is: What is it about our society that *we* fail to inspire, often young, bright and energetic individuals, and provide them with rules, structures and meaning to live their lives by, such that they are left to look for these in arcane arenas?

Ultimately, ideas have to emerge from somewhere. And extremism is the extreme expression of mainstream ideas. If our aim is to stop the extremists, it will have to be to those mainstream ideas that drive them that we begin to address ourselves. In the most recent incidents – in Boston MA, London UK and Victoria BC – as well as many others, what we find are individuals consumed by a sense of self-righteousness. Islam – if it features at all – is often more an afterthought than a driver. It is their motif, not their motive.

But moral indignation is encouraged by contemporary society, which often presents a negative view of the present combined with a dystopian projection of the future. And – disengaged from what passes for politics today – many come to develop an aggressive sense of entitlement, indulged by a society they seek simultaneously to distance themselves from. The outcome covers the spectrum from asserting a new identity – young women wearing headscarves whose mothers never wore one – to inchoate rage, expressed either passively, in the so-called Occupy movement, more acutely, as in recent episodes of rioting, and violently.

It is the unpredictable emergence of the latter that has led some analysts to express their surprise at how rapidly so-called self-radicalization can occur. In fact, it is their failure to identify the social currents beneath the surface that leads them to viewing matters this way. Indeed, the parallels between '*homegrown terrorists*' and other '*lone wolves*' – such as Anders Breivik, who murdered 77 people in a bombing and shooting spree in Norway in 2012 – as well as the perpetrators of various mass high-school shootings (another relatively recent phenomenon), are more important than any differences between them pertaining to the particular cultural outlooks they then adopt.

Domestic Drivers

Space here precludes a detailed exposition of the various social, economic, political and cultural drivers of these trends that were largely catalysed into being only recently. That modernity itself produces turmoil and disruption, while generating constant uncertainty, has been known for a long time (Marx

and Engels, 1848) – despite the apparently recent discovery of this by some security analysts. But, over the course, of much of the twentieth century, the Cold War effectively kept the potential for change identified by many (see for example; Riesman, 1950; Bell, 1960; Sennett, 1977 and Lasch, 1979), in check, by demanding adherence to particular worldviews. The stand-off between the U.S. and its allies against the Soviet Union and its satellite states across Eastern Europe and elsewhere, divided the world externally and was reproduced internally against the '*enemy within*', understood then as emanating from trade unions or the political Left.

But, from about the mid-1980s, the erosion of the supposed twin threats of Soviet-style Marxism and state socialism – finally made evident through the unanticipated fall of the Berlin Wall in 1989 – opened the floodgates on the possibility for both public/political and private/personal transformation (see, for instance; Laïdi 1994, Giddens 1994, and more recently; Furedi 2005). This also encouraged the erosion of the distinction between these domains. Without the forces that had held the political Right together for so long, establishment elites were soon exposed as lacking any positive purpose or vision for society, and rapidly fell-out among themselves. Replacement enemies were postulated, but none of the new litany of demons – from the Contras in Nicaragua and General Aideed in Somalia, through to Slobodan Milosevic in the former Yugoslavia and Saddam Hussein in Iraq – could live up to the caché of the military, material and moral urgency that had been imposed by the Red Army.

Little wonder then that even freedom advocating, Cold War warriors, such as Margaret Thatcher, would oppose change when it came, briefing President Gorbachev in private meetings that the lifting of the Iron Curtain and German reunification would:

> *undermine the stability of the whole international situation and could endanger our security.*
>
> Thatcher, 1989

She added that – despite public pronouncements to the contrary – President Reagan was of the same view.

New organizing frameworks for society have struggled to fill the void left by the erosion of the old political and moral frameworks shaped by the interest-based politics of Left and Right. Ideology has – to some extent – made way for identity, but, as some have noted (Heartfield, Furedi), the latter is a very fragile sense of identity, based on a '*diminished*' sense of human agency. That is why there is such resonance today for prevailing discourses that emphasize risk and uncertainty – despite these always having been part of the human condition. More problematically, this culture also elevates our sense of vulnerability over resilience, irrespective of official intent.

Even those charged with defeating terrorism buy-in to such negative narratives, pointing in their turn to the possibility (rather than probability) of future catastrophes (variously to be caused by limited resources, viruses, climate, population, the economy, technology, and other forces). They then imagine and act upon worst-case scenarios rather than focusing on the most likely. In the past, such pessimistic projections would have been condemned as a loss of nerve that encouraged low morale – today they are considered sensible precautions.

They impact not just counterterrorism but all walks of life leading governments, for example, to encourage their nationals to flee the vicinity of Tokyo in the aftermath of the Fukushima power plant emergency triggered by the Great Tohoku earthquake – rather than humanely staying behind and

helping those they had been with. A similarly, shallow deterministic outlook, explains why the rudimentary findings of neuroscience and simplistic business models have been co-opted to shed light on the causes and trajectories of terrorism. It is because they present a process without a subject in an age when our sense of autonomy and potential has been so curtailed. Accordingly, biological metaphors (ideas go viral, terrorists are spawned, etc…) proliferate, as these also downplay our role and intentions (as well as – inadvertently – our accountability too).

Nervous Responses

By retreating from political ideology to process management in the West, uncertainty has effectively been allowed to drive world affairs rather than emerging from them. A concomitant sense of insecurity has encouraged politicians and people everywhere to avoid expressing firm principles and values independently of simply managing perceived, exogenous threats. But it is how we, as a society, respond to acts of destruction that determines their impact. Civilization cannot be bombed out of existence by terrorists. It can however be corroded from within if all we do is focus down onto technical solutions rather than expanding our horizons through a strategic vision that could project a positive sense of mission for society. In effect, we complete the acts perpetrated by domestic nihilists.

When the British Prime Minister flies back from his overseas engagements to be seen to be addressing the brutal murder of an off-duty soldier on a London street, or when the city of Boston is put into lockdown by the authorities pursuing an injured teenager on the rampage, no amount of words extolling our resolve and resilience can alter the implicit message of societies disoriented by adversity. Not only does this act as an encouragement to other loners and losers with an exaggerated sense of self-importance and grievance, it also flies in the face of the real solidarity and fortitude displayed by those most immediately affected. Such resolute responses at the time are then further undermined by the countless medical experts, media commentators and officials who all project about the long-lasting consequences on individuals and society that such attacks are held to have.

The record since 9/11 is replete with examples of incidents that led to the closure of city centers, the evacuation of hundreds of homes, the deployment of scores of armed units and the establishment of air exclusion zones, some of which concluded with the arrest of individuals that had been under prolonged surveillance and others their release subsequent to their having been found to be entirely innocent and acquitted. But if, as the British Home Secretary suggested in relation to one of these cases, the youth concerned posed '*a very real threat to the life and liberty of our country*' (Blunkett, 2003), what kind of person could threaten 60 million people? More importantly, as was also raised by the case in Canada more recently, what kind of country is it that can feel so threatened by the actions of such marginal figures?

Sadly, the focus on surveillance, protection, information and warnings that has emerged since 9/11 has the unintended consequences of promoting undue concern, mistrust and cynicism. It pushes people further apart from one another at a time when they need to be drawn together with a sense of common purpose. It also exemplifies the low view of the public and their likely responses evidently held by many in authority. As opposed to the contemporary obsession with needing to identify unanticipated shocks to the system, it seems – as is often the case – that it is long-term drift that will prove the more destabilizing in the long run. In this case, the drift created by consistently seeking to protect society from without rather than revitalizing it from within, and the gradual disengagement and distancing this fosters.

Dystopian Projections

Less than 48 hours into the war on terror, British journalist Seumas Milne had an opinion piece published about the U.S. entitled; '*They can't see why they are hated*' (2001). Others soon followed, leading to expressions of outrage by establishment commentators. What they failed to notice was quite how normal such expressions of anti-Americanism had become. A sense of contempt for supposedly soulless American consumerism is widespread – even among those working for the likes of Google and Citibank. And surely when Michael Moore's '*Stupid White Men*' (2001) became a best-seller on both sides of the Atlantic – selling over 300 000 copies in the UK in its first year of publication alone – this should have alerted a few bright minds in the security agencies (and beyond) to a self-loathing that is significantly domestic in origin. This has little to do with America itself, but rather reflects a broader dissatisfaction with the world that targets the U.S. as its highest expression of success.

That debate had been fulminating for quite some time particularly among the old political Left (see, for example, Bloom, 1987), but the events of 9/11 catalyzed – rather than triggered – the soul-searching across the board to a new level. It is quite striking how common it is today to read book titles such as; '*The World Without Us*' (Weisman, 2007), or hear respected academics describing humanity as a '*plague*' (Gray, 2002). These, and countless others like them, point to the low view we have come to have of ourselves in the contemporary world. They point to a significant clash *within* civilization, rather than to that between civilizations pointed to by the American political scientist Samuel Huntington (1993). Unfortunately, they also serve to reinforce a cultural milieu within which low expectations and dystopian fantasies become the norm.

But such a dismal view of ourselves, our role and impact on the planet can become internalized by some. It frames a demoralized public discourse of apocalyptic failure and rejection that sustains those prepared to lose their lives – as well as those of others around them – in their misguided determination to leave their mark upon a world they feel encouraged to reject.

Conclusion

America found itself, at the turn of the last century, an undisputable – if somewhat reluctant – world power. It more formally attained that role propelled by events elsewhere – but also inspired by the narrative of manifest destiny built on the Enlightenment optimism of Washington, Adams, Jefferson, Madison and others. By the close of the century, it appeared more gripped by a sense of Millenarian pessimism. Built not on size, but on the initiative of those confronting the unknown, its founding and guiding ideology was that of *freedom* – freedom from the past, and freedom of conscience, initiative, enterprise and of will.

The U.S., as immortalized by Francis Scott Key in his poem of 1814 was '*the land of the free*' – not the '*land of the secure*' – as it appears some today would have it. He understood that people in all places and at all times had been prepared to risk it all to achieve this. We do not just *live* our lives – we *lead* them. And similar aspirations have inspired the struggles of others, however distorted these became in the years that ensued. To lose sight of this, to trade our freedom in order to be looked over by others and made to feel secure is just one of the confusions that now grips America. But the forgotten role of leaders today is to inspire people – not just to protect them – for people who believe in their cause or project are far more effective agents of it than those who are coerced, managed or nudged.

28

What is most missing in the war on terror has been a vision for society *beyond* terror. That is the essence of real resilience – neither a focus on response and recovery, nor even the aim to prepare and prevent – but rather a sense of what we are for in the absence of all adversities; a projection of purpose. Otherwise, as is the case here, we effectively allow the challenges we confront to determine us rather than the other way round. America still represents much of what is best in the world – as well as a little of what is worst. For all the challenges still confronting it, as well as the pretensions and delusions of others, the future remains for America to lose rather than for others to win.

But, over a decade into the war on terror, it is high time for the U.S.'s search for meaning to conclude through the re-invigoration of its founding values, as well as the identification of a new vision. That way, many of the disillusioned individuals who look elsewhere for purpose and meaning would not need to, and the few that get through would be framed in the proper context – as mindless criminals.

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Technology, Society, and the Adaptive Nature of Terrorism: Implications for Counterterror

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To briefly frame the concept of "what is terror" without delving into a concrete definition for which no true consensus exists, we first recognize its basic concept as violence for political aims. A more nuanced view, however, is critical to understanding both the future of terror given its adaptive nature and the role of technology in society. From this perspective, terrorism has multiple distinct components: 1) the act itself, 2) the perception and subsequent recognition of that act as terrorism, and 3) the response to that act. Together these components create a "speech conversation" that is dynamic and continuing. Why is it important to understand terror's multidimensional and political nature? These concepts separate our societal classification of the Boston marathon bombing as "terror" but not the Newton shootings. U.S. counterterror (CT) strategy is targeted to deal with those threats viewed as "terror."

As technology continues to advance and increasingly permeate society, generating violence that makes a societal group feel vulnerable is not difficult. Generating the desired interpretation of that violence is hard, however, and is critical to the coupling we need between future U.S. CT and information operations (IO) strategy. This latter space, with all of its socio-technical nuances, is where threats we classify as "terrorists" have excelled. This paper will explain the nature and importance of socio-technical complexity, its relevance to terroristic adaptation, and employ an entrepreneurial business model analogy to help frame behaviors of those who perpetrate terror. We will conclude by discussing the implications for U.S. CT strategies in the future.

Complexity in Socio-technical Systems

Social and technological elements are often treated as distinct and separate elements that happen to coexist in the same environment, even if symbiotically. Figure 1 illustrates this traditional view, which holds people and their behaviors completely separate from process components and physical system elements or resources. A confluence view, in contrast, treats social and technological aspects as inseparable concepts. While this perspective is becoming necessary to support analysis of many of today's problems, it is still very challenging. There are many rapidly advancing technological sectors:

31

global commerce, communication technology and hence styles/ modalities, trade/ consumption characteristics, other technological advances, etc. Increasingly, technology is more than simply a significant contributing factor to societal complexity and adaptation.
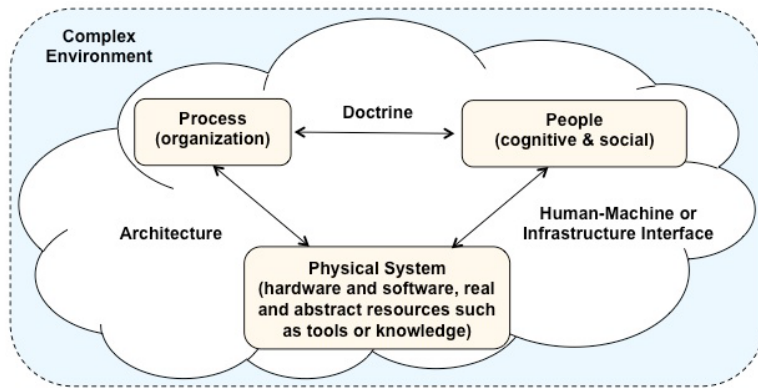
Figure 1. Traditional socio-technical construct
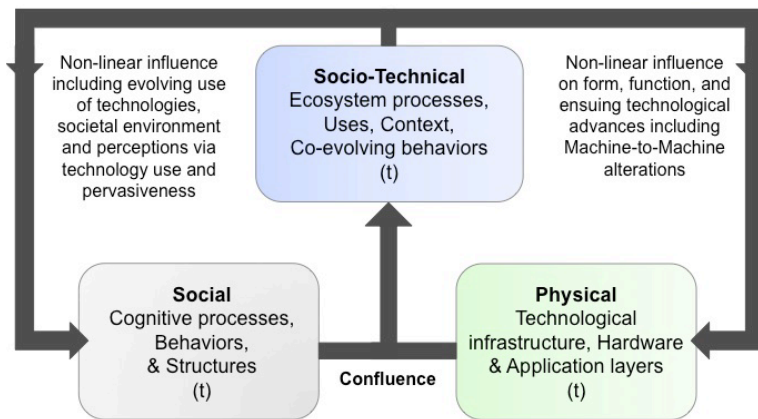
Figure 2. Socio-technical confluence view showing non-linear influences as a function of time

A confluence perspective enables us to be more aware of the active and passive influences that exist bi-directionally between the social and technological elements. These elements now exist and are evolving together, linked through a combination of physical, functional, and effective connectivity. The connectivity across the social and technological dimensions is intrinsic and implicit to their coexistence. The socio-technical confluence is producing (a) altered social perspectives, behaviors, and dynamics through technology use and pervasiveness, (b) influencing of same via exploitation of technology mediums and dynamics by societal groups, and (c) altered behaviors, policies, or other societal responses in the face of technological disruption, threat, or advance. Figure 2 depicts an abstract simplification of how all three of these dimensions converge in time and continuously co-evolve through nonlinear feedback.

Key characteristics of complexity

In the most basic terms, a complex adaptive system (CAS) contains multiple, heterogeneous elements interacting with each other and the environment to create system behaviors and characteristics not found at the element level. Complex systems embody some key characteristics critical to understanding the role of technology in the context of society and terror. First, the scale of observation determines the nature and range of characteristics and behaviors observable (or seen "emerging") from an outside perspective. For example, a cell, an organ, a human, a terror cell, and a society – each is a CAS. Viewing a single cell would not allow one to observe the behavior of walking. In addition, specialization increases complexity. As system elements possess fewer individual capabilities, a greater number of macro-level outcomes are possible only through interactions of these elements. A human is not comprised of skin cells alone, for instance.

32

Influence between the micro and macro levels of complex systems is bidirectional. System elements adapt to environmental changes just as they actively reshape the environment in a co-evolutionary process. Real complex systems are also variable, at least from an observational or analytical perspective, in that system elements and interactions may appear and disappear unpredictably. Defining relevant bounds for what constitutes a system and its environment (which contains other complex systems and so on) is very challenging. Since we cannot capture everything, system variability is inherent. Unsurprisingly then, a system's structural characteristics and what processes and behaviors are possible both within and as produced by that system are not separable. Form and function are linked. It is possible, however, for many different structural configurations to result in similar macro-level outcomes. This is a commonly observed phenomenon in the study of neural circuits, yet does not simplify the analytical challenge.

Complexity in a socio-technical ecosystem with a cyber backbone

Focusing our discussion toward the Cyber-Based Communication Technology (CBCT) domain, it is well known that CBCT advances have completely altered temporal and spatial scales of communication and information sharing across societal sectors. These transform both individual and community (up to State and even trans-State) patterns of organization. CBCTs are increasingly pervasive, serving as a "backbone" that connects the other technological sectors and society in new ways and on new time scales. CBCT is no longer a simple augmentation of the way society functions. Instead, the pervasiveness of CBCT has become a true difference in kind. The socio-technical system has evolved.

In a basic sense, CBCT has a two-dimensional impact on societal structure and dynamic behaviors. CBCT is both a means (a tool) and an ecosystem. First, consider technology as a means that influences the scope and nature of terror manifestations possible. The cyber realm may be both a medium through which a mass attack may be conducted and the target itself of that attack. Attacks along either vector may generate severe economic, social, and even loss of life effects.

As a key component of the "speech conversation," CBCT dramatically increases the reach of terror on the societal psyche on a never-before-realized scale. CBCT obviously increases the ease of long-distance connectivity among autonomously operating terror cells and dissemination of terroristic tactics, techniques, and procedures (TTP) with nearly anyone who is interested. This draws violent extremists, criminal enterprises, Lone Wolf individuals, rogue and non-rogue State groups, and otherwise passive sympathizers (i.e., those not actively engaged in the acts of terror but instead passively supportive of it) into a shared conversation. Terror acts are now known and "seen" globally immediately after or even during the attack. The level and power of such recognition is a significant motivator of many Lone Wolf types and small terror cells.

"Viral" therefore describes both the spread of a speech act and the infectious desire for fame as its actor. Together these dimensions produce powerful ramifications for the future of IO in the spread and support of terror in a cyber-human ecosystem, for the U.S., our allies, and violent extremist threats (and their perhaps erstwhile allies) alike. Ideology may readily be wielded as a facilitating tool for recruitment of new terror actors or for securing passive support across a globally connected audience that enables

33

the message and its consequences to flourish. Terror cells and other disruptively minded individuals or groups may recruit and sway sympathetic swaths of global society without relying on old methods of radicalization or complete indoctrination to the cause. Since online behaviors are typically disconnected from physical reality, many people may perceive less personal risk, be more emotionally disconnected from the reality of the terror, and act or support more brazenly when interacting in the cyber domain.

As an ecosystem, CBCT is a complex, evolving connective tissue for societal interaction. The cyber realm is evolving socio-technically in line with the confluence model depicted in figure 2. As part of this dynamic, the Internet (the physical layer of equipment, routers, switches, etc. that enable bits of information to flow) is now starting to gain new functionality. A wide array of connected sensors and devices are vastly extending its reach and imbuing it with sensory capabilities. These devices are rapidly beginning to eclipse the number of people represented within the CBCT ecosystem, creating a completely different dynamic from what has existed since the Internet's inception. Machine-to-machine (M2M) communications, now occurring with escalating degrees of autonomy and "adaptive intelligence," are further shaping the human experience.

The cyber ecosystem is also "specializing" via technologies to create ad hoc networks with broadband mobility, the rise of alternate-DNS and generic top-level DNS developed by other nation states, software defined radio advances, etc. Increasing forms of digital communication are not in English, and – critically – do not even use the Latin alphabet characters (Yannakogeorgos, 2013). This means that more and more "Internets" will emerge and be separated or otherwise hidden (shadow networks) from the Global Internet we consider today. Increasing numbers of users will be able to access and use the cyber technologies in their own native script and cultural context. Non-Western, global online presence and associated behaviors will escalate. Cyberspace will become more fractionated, specialized, and culturally heterogeneous.

More and more behaviors on a global scale will therefore occur only through interactions of these specialized or fractionated pockets. This challenges our abilities to understand the (potential) behaviors of the CBCT ecosystem as time goes on. Society and technology together are shaping a new and global paradigm. New capabilities, uses, and context are being created continuously, in a perpetual socio-technical coevolution. Operational dynamics and social processes, their outcomes, and many operational dynamics are morphing away from what we have understood.

Terror Framed in a Business Model Paradigm

By assessing terror groups in accord with their politically based business models, we may capture and anticipate the changing nature of terror activities and perpetrators more completely and intuitively. We define the "business model" of a terror group as "the means and methods embraced to support execution of the vision." Specifically, "how do we (they) achieve our goals?" Whether small cells or larger enterprises, terror groups are entrepreneurial. When we define terror groups (regardless of their size) as entrepreneurial, we mean that they embody the characteristics we in the West attribute to successful entrepreneurial spirit and action (Warren, 2012):

34

- Are dissatisfied with the present with a vision of how things "should be"
- Excel, often innovatively, at adapting IO, getting others on board, and adding to the vision
- Can rapidly ascertain their unfair advantages and take advantage of them
- Learn quickly, are flexible, and open to feedback from like-minded groups
- Express persistence and execution.

Terror groups may operate as enterprises (more centralized, hierarchical organizations) or franchises (largely independent, autonomously acting groups bound together however loosely by ideology). The form they take can be expected to be the one that will flourish in a given environment. As franchises, terror cells may be loosely connected to a higher order organization. Alternately, they may simply appropriate the "brand" and remain completely operationally autonomous. Extrapolating from the second point above (innovative IO excellence), this again suggests ideology may be readily wielded as a facilitating tool in a cyber-enriched landscape.

In relation to the third bullet above, Saras Sarasvathy has promoted the term "effectuation" to explain how entrepreneurs opportunistically use their unfair advantages to successfully achieve their goals (Sarasvathy, 2001). Effectuation is typically defined as a logic-based thinking process that enables entrepreneurs to succeed in the face of uncertainty. "You can cook from a recipe by buying the ingredients and making the dish; or you can cook by looking at what you have in the cupboard and determining what can be made with what you have. Effectuation is the later." (Warren, 2012) This approach directly contrasts with larger, more established organizations that strive to reduce risk through thorough analysis of the landscape before taking action. The more causal analysis seeks to determine a particular desired effect and then select among means that might produce that effect. Effectuation is more iterative: make the next decision based on the information, knowledge, and resources you have available now. The means available become the starting set. A decision is reached among possible effects those means might create. This allows for a great degree of agility and rapid responsiveness in an unpredictably dynamic environment.

As effectual entrepreneurs, terror groups tend to be to be highly adaptive, proactive, aggressively opportunistic, and frequently technically and tactically innovative. They generally act and change with far more alacrity than established institutions. In the face of overwhelming amounts of information from a similarly overwhelming number of voices in an ever-changing environment, effectuation becomes a process through which terror groups seek to reduce the complexity they face. Instead of trying to process and manage all data points available, these cells adapt rapidly to making decisions based on what means they can immediately touch. The escalating complexity and fragmentation of the cyber socio-technical realm frustrates U.S. abilities to discern what assortment of criminal, violent extremist, State, and various other non-State influences are present in an effectual conversation at any point in time. What dynamics and impacts will we face from hybridization of organizational focus, tactics, and emerging technologies across criminal and extremist groups linked through CBCT and their entrepreneurial nature?

Adaptation of Terror in a Socio-technical System

Form, function, and the role of ideology

Since the globally recognized emergence of Al-Qa'ida, the U.S. and its allies became quite effective at disrupting resource pipelines and removing "key leaders and influencers" in centralized, hierarchical terror organizations. Consequently, the enemy adapted to our strategy – it evolved. Terrorist groups now function as an interactive network of independent cells, where each cell is itself a complex adaptive system (CAS). These cells are frequently bound by a unifying ideology, however loosely it may be applied in practice. They may share some resources such as knowledge, financial pipelines, etc., and a common vision (again, however loosely), but act without being tied to a central operational command. In the case of Islamic jihadists, it seems clear that individuals are cognizant of the overarching ideological mission and intent of their global "struggle." Some, such as Syrian-born jihadi veteran Abu Mus'ab al-Suri (real name Mustafa Setmariam Nasar) have already advocated evolving to a highly decentralized dispersion of autonomous cells. In his 2004 manifesto, "The Call for Global Islamic Resistance," al-Suri stressed operational security over formal structure and centralized control as a model for future success (Morrison, 2007).

Structure, or form, emerges locally and is shaped by local environmental effects. In turn, the strength of locally emergent terror cells combines with favorable or non-favorable environmental currents and forces (i.e., social support, strength of government, etc.) to shape higher-order structure and connectedness. Terror cells emerging in disparate geographical and cultural regions may or may not initially be tied together by a common, underlying vision. However, over time, these cells may begin to associate in a synergistic ways at a higher scale. Since the local pressures of terror cells are frequently distinct from what a larger and more dispersed collective faces, a terror network emerging by serendipitous association may appear very disordered.

From a complexity science perspective, disordered networks, as opposed to well-ordered or hierarchical manifestations, may exhibit faster synchronization (Grabow et al., 2011). This means they can achieve synergistic behaviors at a faster rate (e.g., flashing fireflies). Coupled with CBCT advances, the disordered networks created by independently emergent, autonomously functioning, and perhaps loosely affiliated terror cells may spontaneously or opportunistically (depending on the motivating force) act in concert with each other. These behaviors may be heterogeneous in nature as well, making detection of – and defense against – a coordinated attack more difficult.

Within this complex process, ideology influences multiple dimensions of terror including its creation, overarching connectivity, and propagation. First, it is often a facilitating property encouraging the formation of new terror cells from a society when combined with other environmental factors. Second, ideology functionally influences connectedness across multiple, heterogeneous terror cells as well as between cells and non-actively participating societal groups. Across both of these dimensions, ideology is also a common, unifying context that shapes behaviors of both terror and societal groups without the need for any centralized control. In each case, ideology can be a contributing factor or a tool

36

intentionally appropriated to serve as an established backbone that serves more entrepreneurial terror goals.

Self-referencing and transience

The global socio-technical confluence, especially in the context of the coevolution of societal and cyber dimensions, completely alters the dynamics for what constitutes the environment of these autonomous cells and how they might interact. The addition of non-Latin alphabet characters and native cultural context to the online experience entices a wider, more diverse, and non-Western audience to participate in the CBCT medium. As is common when there is simply too much information to comprehend and process, however, people begin to self-select. While exposed to escalating data and perspectives, many pockets of online society are still becoming increasingly self-referential. Violent extremists and passive supporters increasingly rely on incomplete knowledge to inform their opinions, behaviors, and implicit support (or not) of other behaviors.

Transience is a key characteristic that is important to these concepts. Simply put, the same degree of perceived permanence required of physically grounded support of something or social connectivity does not exist in the electronic ether. Support of actions, process, etc. may be spontaneously serendipitous or as a result of carefully planned, even if seemingly random IO. In this context, "organizations" become not so much a thing, but an instantiation of an interactive, CBCT-mediated, cognitive process. To develop a cogent CT strategy, the U.S. must strive to understand: (1) how the development of increasing socio-technical complexity will impact our abilities to detect and influence the success of terror and/or its propagation, and (2) in what fundamentally new ways are we at risk due to this dynamic?

Implications for Counterterror

It is reasonable to expect that effectual, entrepreneurial terror groups will eventually find a way to achieve their objectives as long as their motivating issues remain. Adaptation is a continuous process in all ecosystems. Using an evolutionary analogy, any given species must adapt to successfully thrive when its environment (including other species with associated characteristics and behaviors) changes. Those species that cannot adapt effectively cease to exist or at least maintain any position of dominance. This concept bears significant implications for U.S. CT strategy moving forward. First, motivating issues enabling terror threats to emerge, succeed, and proliferate must be addressed. Second, we must actively stress their capacity to adapt. This cannot be achieved via maintaining a status quo or even a static concept of CT strategy.

Framing the nature of the threat – when does it matter?

A critical question is therefore whether loosely connected autonomous cells have a greater or reduced ability to actively influence their environment or target ecosystem than traditional, hierarchical-styled organizations over time. Conventional wisdom perceives larger, more organized terror organizations to have the greater capability to inflict substantial damage to U.S. interests. Certainly, if significant enough in magnitude, a single or small set of substantial attacks could alter the fabric and stability of the

targeted society in unpredictable ways. Societal response and resilience determine the act's short versus long-term ramifications.

Conversely, lone wolf extremists and smaller, autonomous terror cells may dominate the risk spectrum over time through effects that compound non-linearly. As technology advances to make it cheaper and easier to cause mass casualties to unarmed civilians or produce other highly disruptive actions, the U.S. should expect these smaller and non-structured violent extremist groups to proliferate. While any attack in isolation may not be enough to undermine national security despite its short-term societal impacts, repeated such assaults begin to erode and fundamentally re-shape the targeted society. This approach is often framed as the proverbial "death by 1000 cuts."

In one sense, older CT strategies that hold a very structured network view of terror groups, targeting pipelines and key leaders, will no longer be adequate. The newer terror mutation can readily adapt and survive. From another perspective, constraining terror to local manifestations may inhibit the power of scale achievable by cooperating and resource-sharing entities. One tenet of the latter view is that locally confined terror inhibits the ability to train and share tactics, techniques, and procedures (TTP). This might have been true years ago, but not today. The dramatic paradigm shift created by the Internet and modern CBCT readily facilitates coordination and information sharing across localities. In the context of comprehensive CT, under what conditions may these autonomous yet loosely connected terror cells synchronize on a global scale, combining forces at some opportune time and associated set of conditions or motivating sparks?

Despite the pervasiveness of and immense policy focus on the cyber domain, it is not the obvious cyber-related risks that pose the greatest threat. Technological advance and proliferation together with the cyber-social co-evolution are creating completely new risks and paradigms. The convergence of rapidly advancing sectors across biotechnology, materials, nanotechnology, energy, etc., especially when merged with CBCT, may produce new kinds of weapons and risks capable of mass effect over large areas. Disruptive and catastrophic technologies may emerge and merge. Sometimes, the greatest threat in an operational context can come from a technological advance designed for other, more benign purposes entirely. For example, cellular telephones were not intended to be a mechanism through which adversaries could detonate improvised explosive devices (IEDs). While the simple re-application of a technology may seem minimal, the totality of its effect can spawn significant, nonlinear responses.

A cost analogy for counterterror: Avoiding creeping normalcy in the "War of a Thousand Cuts"

The way these effects manifest depends greatly on their context. While a loose network structure can experiment with novel applications of emerging technologies at relatively low cost, a rigid hierarchy requires more investment to wield with a new technology. The more rules there are, it takes more rewriting to incorporate something new. This yields two undesirable outcomes. First, it is far more costly for the large organization to innovate[4], and hence it is generally slower to do so. Second, a small

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[4] Exceptions are military-specific, high-capital platforms (i.e., tactical aircraft and navies) for which a loose organization will be challenged to generate the economies of scale or networks of binding contracts required.

innovation from a decentralized actor can force disproportionate costs upon the centralized player. These exchange ratios risk exhausting the bureaucratic player given time.

This is the basis for the "War of a Thousand Cuts" strategy laid out by al-Qa'ida in the November 2010 issue of Inspire Magazine (see Gartenstein-Ross, 2011). By forcing the U.S to respond to endless small innovations, they aim for the U.S. to bloat with bureaucratic process and eventually collapse under its own weight. Unfortunately, these otherwise small innovations in tactics and weapons by al-Qa'ida have proven quite effective at forcing large-scale countermeasures. In any specific instance, these countermeasures may be relatively inexpensive (e.g., navigating through the TSA processes at an airport). Yet in the aggregate, they add up. September 11th itself speaks to the tremendous exchange ratios in our adversary's favor, where an investment counted in thousands yielded a response measured in billions. The same equation played out in the struggle against IEDs, where their measures cost immeasurably less than our countermeasures.

But, by making an abstract model of the measure-countermeasure struggle, we can evaluate the rationality of our counters and innovate more effectively. We posit that countermeasures are theoretically akin to chemotherapy. They induce friction on all involved but induce disproportionate costs on a targeted group. A locked door takes longer to move through than an unlocked one, but it takes much longer without a key. A good countermeasure (or security measure) must then maximize friction for individuals without access while minimizing friction for those with it. Understanding costs associated with countermeasures for both the designer (i.e., the U.S.) and the threats seeking to defeat them will help explain goals of terror organizations.

We offer that there are three fundamental costs to any countermeasure. First, there is the 'door-kicking' cost that captures the countermeasure's resistance to direct assault. It embodies the amount of effort (including time) that it takes an adversary to defeat the countermeasure by brute force. An adversary willing to pay this cost will gain one-time access to the protected capability. Maximizing this cost increases the opportunity cost associated with its defeat past the practical threshold for an adversary.

Second, the 'lock-picking' cost is the resistance of the countermeasure's internal logic against attempts at subversion. This corresponds to the effort required to identify and exploit a vulnerability of the countermeasure. An adversary able to pay this cost will invalidate the system in general. While both of these first two costs should ideally be maximized, they are related. Consider a system to be a physical fortification, a cyber-reliant infrastructure, or a sociological structure and/or process. Total system vulnerability is the lesser of either (1) all costs stemming from a system's ability to withstand brute-force attempts at defeat, or (2) the single cost associated successfully discovering and exploiting a system weakness.

Finally, there is the 'key-turning' cost. This cost is imposed by the system on individuals who have legitimate access, and should ideally be minimized by the countermeasure-maker. Cyber-security measures provide an excellent example. Interminable startup scripts and ever-changing password requirements all induce costs on the organization seeking to protect its assets, though with hopefully

less friction for those with approved access. In the case of counterterrorism, the adversary benefits from this cost, as it induces friction on the CT actor.

In decentralized organizations, such as Special Operations Forces (SOF) or a loose network of autonomous terror cells, shared knowledge of successful countermeasure-breaking TTPs distribute the burden of the first two costs (i.e., those required to successfully attack an enemy). The collaborative sharing also helps select the more effective countermeasures more efficiently, thereby reducing the total self-cost in the third category. Conversely, the responsibility for security (and hence the first two costs) in a bureaucracy is typically centralized in one place even as these costs are borne across the force. Large, structured organizations unfortunately tend to reactively solve counter-measure problems, increasing all three costs due to bureaucratic incentives. An intrusion, public catastrophe, or crisis can result in a classic 'concentrated benefits, distributed costs' problem. The responsible office will institute measures maximally *effective* at stopping further such events. Those measures, however, are rarely optimally *efficient* at balancing self-costs against other-costs. This is the very mechanism the 'thousand cuts' strategy exploits.

There are two potential solutions for this problem. Each is not, however, without great angst or political risk when considering both the physical and psychological impacts to a targeted society. For example, a logical discussion about countermeasure tradeoffs, however necessary, bears the burden of identifying some residually acceptable level of attack much like Becker's theories about the optimal level of crime (Becker, 1974). A second approach, perhaps more readily digestible, explicitly internalizes the 'key-turning' cost as part of the planning and implementation process. An efficient countermeasure is one where the costs prevented by potential intrusion, multiplied by the number of potential intruders, outweigh the sum of costs associated with system construction and access costs for the total number of friendly access attempts:

$$Countermeasure\ Efficency = \frac{Intrusion\ Harm\ Prevented \times Number\ of\ Intrusion\ Attempts}{(Access\ Costs \times Number\ of\ Access\ Attempts) + System\ Cost}$$

This view does not directly evaluate the costs to the terroristic threat groups as they seek to inflict damage upon our society and its structures. It does, however, rationally measure the coupled dynamic of potential costs and benefit to the U.S. Incorporating concepts like this into CT strategy and security measure discussions will help us manage our own inefficiencies and decide upon potential societal innovations that may be required.

"Managing" counterterror through driving innovative surprise

Our essential challenge is that strength borne by mass, extent, and force, no matter how skillfully applied, fails to stop a continuously emerging and adapting threat. This is especially true of asymmetric style conflicts with increasingly socio-technical nature and global extent. The U.S. is, quite simply, in a form-and-function mismatch against heterogeneous, independently entrepreneurial, and adaptive terror cells. Even so, it is not feasible to devolve our government, defense organization, or society to engage in decentralized cell-on-cell competitions. To successfully confront terror threats, the U.S. must instead become smarter, better, and faster within our own approaches and adaptation.

All living systems continuously adapt and change. This is equally true of the emerging socio-technical ecosystem, perhaps a new domain in the global commons in its own right, and of the species within it: the U.S. and its allies, violent extremists, passive supporters of extremism, lone wolf extremists, opportunistic hackers selling to the highest bidder (which may be a State, corporation, or subversive element), criminal organizations, other State and non-State actors, etc. The implication is that the U.S. will not stop terrorism. Violent extremists will persist in their attempts to undermine our societal systems. These extremists adapt as they seek subversive ways to defeat a target or survive offensive measures by the U.S. and other environmental stresses. In turn, the U.S. adapts, and so on. Since the cycle will not cease, CT strategy becomes a management problem, and successful organizations in volatile markets lead disruptive change from within.

'Management' conveys an approach to control and decision-making as well as strategic allocation of resources. For example, top-down approaches that embody hierarchical command and control are largely ineffective in the face of complex and turbulent environments (Mintzberg, 1994). Top-down strategies usually offer little capacity to adapt or sufficient dynamic response against disruptively innovative terror TTPs. In the 9/11 Commission Report, this problem was called a "failure of imagination" or a mind-set that dismisses possibilities (National Commission on Terrorist Attacks, 2004). As with Clayton Christensen's "Innovator's Dilemma," the same behaviors that bring success to CT stakeholders under present conditions create a cognitive bias against future emergent innovation.

To address these challenges, the U.S. must adopt entrepreneurial practices within its own enterprise inclusive of but not limited to defense-related organizations and strategies. Scenario planning, devil's advocate practices, and other future exploration methods help to forecast likely possibilities, risks, and identify uncertainties. Such approaches should exist within an innovative process that incorporates creativity and constant challenge to the orthodox bias of the higher-organization. Similarly, we should cocoon certain organizational structures and dynamics in a protective cover. By keeping them sheltered from the centralized rigidity, we can preserve innovative dynamics and lessons hard-won from previous asymmetric conflicts.

Part of our challenge is that bad plans in terrorist organizations often fail rapidly, while bad governmental policies can survive untested for years. The very deployment of security and defense strategies by the U.S. produces strong environmental signals that shape the actions of terror cells, indirectly communicating the need for them to innovate and coordinating much of their entrepreneurial behaviors. (This is known as stigmergy in complexity theory.) Red teaming, while an excellent method for evaluating these risks if properly crafted and embraced, is often marginalized or viewed with lackadaisical annoyance as a hindrance to acquisition or other program processes. It is usually also either socio-cultural or technological in nature. The U.S. should re-invent the red teaming as a dynamic and socio-technical tool to "think like the threat," leveraging trans-disciplinary expertise coupled with strong hacker-like mentalities. The entrepreneurial equivalent is to know your competition and anticipate their possible moves.

The U.S. must simultaneously manage our resources and the multifaceted impacts of global innovation. Violent extremists perpetually create learning opportunities by testing their innovations. Now, they also

41

share results nearly immediately via the global connectivity provided by the cyber domain. This spreads the burden of effort across many cells while enabling them each to reap the same value of reward. The adversaries in effect achieve an economy of scale to ferret out vulnerabilities.

Consequently, the U.S. must lead disruptive innovation in order to strain the capacity of these threat groups to adapt, thereby blunting their success. In this way, the U.S. can drive strategic surprise. DARPA, for example, embodies a highly decentralized approach to create innovative research and development despite existing within a highly structured enterprise. Consider the mechanism of combinatorial evolution for technologies described by Bryan Arthur: "Novel technologies are created out of building blocks that are themselves technologies, and become potential building blocks for the construction of further new technologies." (Arthur, 2009) This process applies equally well to the evolution of socio-technical space and the emergence of TTPs supporting terrorist objectives.

The U.S. should strive to understand the implications of the socio-technical ecosystem with respect to potential dynamics of violent extremists as they interact with each other and outside groups. This includes synergistic operations at opportune times as well as radicalization and spread or support of extremist views. This evolution similarly opens new possibilities for innovative IO from the U.S. Succinctly, in what fundamentally new ways are we at risk, and in what new ways can we innovate to offensively thwart our adversaries? The authors respectfully understand that this is always more simple to say, to offer potential solutions, than it is to operationalize.

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Market Economies and the Collision of Narratives: Approaching Terrorism Through Branding and Marketing Methodologies

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Terrorism has become a global franchised business, and in terms of brands, al-Qa'ida has proven to be "king." Their brand has come to guarantee global positioning, brand name recognition, easy recruiting, as well as abundant financial resourcing. Yet, like all brands, it is now faced with a changing market base that requires adaptive strategies to reposition their brand for continued market growth. As we examine the threats posed by what we classify as terrorism, we need to be willing to reposition our operational framework to include the influences of market economies. Turning the lens on ourselves, we then need to ask what it will take for us to compete and to expand our own market share to re-establish our national identity as the global consumer brand of choice.

Market economies are central to the DNA of our culture. We are a society based on "opportunity" and instinctively resist efforts by State institutions that attempt to infiltrate or limit our individualism, even if it is for a collective good. In the post 9-11 era, attempts to "protect" have been built out of a response of fear, and have missed the core narratives of market economy that drive policy, economic stability and global dominance on a daily basis. Worse yet, in historical terms, the current US counterterrorist narrative has expanded to look at all potential threats, and in doing so consider all citizens a possible threat. The irony is that this approach not only resembles many issues our country's founders fought against to establish the Republic under which we currently reside, but simultaneously work to empower the branding and market positioning that terrorist organizations leverage best: fear mongering and inflammatory provocative verbiage. In our fight to protect against the emerging terrorist threats, we are suppressing our greatest strength while placing ourselves at a strategic disadvantage that feeds terrorist brand positioning that continue to evolve and adapt.

Branding and Marketing are two distinct areas that need to be clarified for the discussion. In simple terms, branding is strategic; marketing is tactical. Marketing unearths and activates buyers. Branding makes loyal customers, advocates, even evangelists out of those who buy. All organizations must sell. How they sell differs but the members of the organization and their actions function to either construct or deconstruct brand strength and loyalty (Heaton, 2011).

Marketing is the vehicle that provides support and reinforcement to the core values and functions of the brand and pushes the consumer to purchase the offering. This helps build the belief and value in the brand. As these efforts grow, the goal is to build the brand so that by name and/ or logo-design alone the organization's essential truth or value, product, or service is represented. Through the efforts of marketing, the brand is crafted to communicate the organization's characteristics, values, and attributes that clarify what it is and is not. "This is what I am. This is why I exist. If you agree, if you like me, you can buy me, support me, and recommend me to your friends." If well executed, branding and marketing

work in concert to generate consumer loyalty, expanded market share and increased sales (Heaton, 2011).

Looking at the brand identity of al-Qa'ida, for example, there are several key characteristics that work to build brand strength and durability. The al-Qa'ida brand leverages exclusivity, mysteriousness and a faceless hand of power for the good of Islamic retribution and protection of the faith. It seeks to position itself as the extension of the hand of God, supported by al-Qa'ida's use of interpretations from the Koran. Brand strength is enhanced using word and phrases considered scared to all Muslims, making use of the Koran as a marketing tool to expand their global market share and to enhance al-Qa'ida's "consumer friendly" attraction. Brand durability roots itself in the timelessness of the teachings of the Koran and the Muslim belief that the words in the Koran are words direct from God. It is a defensible market position that finds seeds of commonality in all followers of the faith.

Reinforcing the brand are the actions of its members who have proven capable of executing well-organized and sophisticated attacks against the West. This is an essential part of its marketing campaign. al-Qa'ida's persistence and resilience is a constant marketing message that reinforces the brand position that "God's hand" is ensuring the organization's success in spite of the overwhelming Western (if not, Christian) technological and resource superiority. This in turn feeds subordinate brand and marketing narratives of simplicity and traditional ways as the vision "God" wishes the world order to be.

Co-opting events is yet another important and functional part of al-Qa'ida's marketing strategy. This reinforces the organization's adaptability, by taking credit for events, regardless of verity or actual association. This was demonstrated in the messaging following the Boston bombings, suggesting an al-Qa'ida link (Garrison, 2013). The subsequent result is the persistence of the myth that al-Qa'ida, like God, is everywhere for the protection and inauguration of a global Islamic order. From a market share perspective, these themes provide a familiar and desirable message to attract new customers while enhancing brand loyalty with existing followers. All of this ties to brand durability and ultimately the continuance of funding.

The killing of Osama bin Laden significantly impacted the al-Qa'ida brand and its consumer confidence. The most immediate effect was the moral victory for the United States and its allies. Since brand strength is grounded in consumer confidence, the death of bin Laden created a renewed surge in confidence from the anti-al-Qa'ida market segments while installing doubt in the brand loyalists of al-Qa'ida. As Guido Steinberg said, an advisor on international terrorism, the death of bin Laden was pivotal because "what has changed was that an important leader was taken out and al-Qa'ida has not been able to find anyone with his charisma to replace him… Osama bin Laden had a personality that was able to attract many young men in the Arabic world and also in the West and South Asia" (Scheschkewitz, 2012).

Bin Laden's death has also affected a shift in the organization's power. New jihadist hubs have emerged that are pushing their way into the spotlight. Examples of this are found in Nigeria's Boko Haram and the Somalian al-Shabab. Though it has been proven that they have contact with al-Qa'ida, "nonetheless, organizations like al-Shabab and Boko Haram don't necessarily act on al-Qa'ida orders," Steinberg

45

explained, adding that the organizations had their own national agendas, are potentially more dangerous, and are increasing in popularity (Scheschkewitz, 2012).

Finally, there is a rise in a new kind of self-professed Islamist terrorist. An example of this is Mohamed Merah, an Islamic warrior, who was killed in Toulouse, France in March 2012. He is said to have had close ties to al-Qa'ida but was acting on his own without orders from al-Qa'ida command. With the loss of bin Laden and the weakening of al-Qa'ida's core command through ISAF efforts and US drone attacks, there is now a rise in individuals who become fanaticized and radicalized jihadists - partly through internet propaganda - and carry out attacks on their own, with no command or direction from a terrorist cell (Scheschkewitz, 2012).

So what does this mean for US terrorism policy and strategy? While the death of bin Laden has provided a moral victory to the US and its allies, it has had a cause and effect of market fragmentation and a rise in competing terrorist brands. Additionally, individual actions, not sanctioned by any terrorist organization, are showing indications that they are on the rise, leading to what one might refer to as the preverbal *Warhol fifteen-minutes of Jihadist fame*. For dominant terrorist brands such as al-Qa'ida, this is a challenge to their established brand that threatens their brand strength and market value. As discussed above, the brand is directly linked to the market messages and actions. If al-Qa'ida cannot reaffirm itself through the core element of brand authenticity, namely action, al-Qa'ida risks being usurped by competing jihadists and jihadist franchises. At the end of the day, it is business; and a business needs to remain relevant, popular within its market segment and profitable to ensure its long-term survival.

Conversely, while the loss of centralized control of al-Qa'ida may appear to be a victory for the US and its allies, the rise of competing terrorist franchises and independent terrorist entrepreneurs leads current US policies into treacherous grounds. In order to combat this new and evolving threat, current counterterrorism policies that rely on surveillance and monitoring must necessarily be extended to every citizen. No one becomes exempt. It is a slippery slope we are currently witnessing that fuels anti-government sentiment and furthers the narrative of distrust that is a core narrative of our country's founding. What is needed is a change in operational paradigm. In simple terms, we need to move from a threat-response model to one that analyzes and embraces markets and competition. Central to this success is the understanding of two prominent US cultural narrative themes: the distrust for government and the land of opportunity.

The bi-polar framework we are currently working under with terrorism is simply an extension of the "evil empire" monolithic strategic views of the 20th century. We have identified an enemy that is given a name: "terrorist." We have identified the primary agent of the threat: "al-Qa'ida." Yet the threat has seemingly managed to slip past our security and find haven within the borders of the United States, dormant and waiting for the moment to reach out and strike. It is the modern day version of "Things that go bump in the night" (Scottish Prayer, 1926). The response is more security, and the trend to place everyone under the watchful eye of the institutions capable of protecting us. The spiral takes us deeper into the abyss of "big brother" while running head long against the most pervasive narrative themes in US society.

46

Since the Revolution, the "Don't' Tread on Me" flag has persisted as a symbol of American patriotism, a symbol of distrust with government, and a symbol of support for civil liberties. It is symbolic of a core narrative of the founding of the United States. As current counterterrorism policies attack the rising threat of a newer more adaptive terrorist threat, these same polices run roughshod over one of the most deeply seeded narratives of our nation: the distrust in government, symbolized by a yellow flag with a snake coiled and ready to strike. Not only does this fuel an existing distrust for government, the use of policies that ignore this cultural narrative theme risk degrading stability and confidence in governance, while potentially fueling homegrown terrorist-type organizations as an unanticipated consequence. What is created is the very real risk of a downward spiral that will in effect manifest the threats made by terrorist organizations.

The second cultural narrative theme of importance is "the land of opportunity." In a random survey of immigrants in Seattle, Denver, Baltimore and DC, they were asked why they came to the United States. All surveys were conducted on a one-to-one basis without knowledge of others. Each person surveyed contextually provided the same answer: "for the opportunity to make a better life for myself and my family" (Kesterson field notes, 2013). This is reflective of another critical US cultural narrative theme. At the core of this narrative are the mechanisms of market economy. It is a narrative that is a driving force for the United States, encouraging dreams and innovation to create the reality you wish to live into. It is also arguably one of the most overlooked strengths in the strategies to counter terrorist threats. "The Land of Opportunity" narrative provides a means to combat emerging terrorist threats by leveraging the strength of market economies, business and personal prosperity as agents to combat that, which seeks to destroy the hopes and dreams we each seek to build.

What is needed is a shift in the current operational paradigm so that we look at countering terrorism from the position of a business and market economies. This means embracing the tools of marketing and the power of successful branding. Consider an anti-American demonstration in the Middle East; a scene that has been viewed all too often on the multiple outlets of visual media. We have become witness to the regular burning of American flags, of the effigies of Presidents, and more recently of the burning US embassies. Yet we never see a pair of Nike's burned, or an Apple computer smashed or burned. Why is that? These are dominant symbols of American corporate might and global economic dominance, yet they are preserved from the fate of anger and destruction. The answer resides in branding. Apple and Nike have built brand loyalty that has superseded that of the US national brand.

In order to build an effective counterterrorism response based on the principles of market economies, the problem needs to be framed around market factors, as opposed to threat factors:

- What are the market factors that create brand durability for terrorism?
- What are the value propositions that these markets are responding to?
- What are the market elements that allow for growth and the ability to franchise?
- What are the brand attributes?
- How are they building brand identity and brand loyalty?
- What is their pitch?

47

Building an understanding of a terrorist threat from a market economy and branding focus provides a means to model the threat in terms of a US cultural strength. Looking at Nike or Apple provides a demonstration on the ability to build brand loyalty in areas of intense hostility. In these terms, "threat" now becomes a function of market entry and risk mitigation, and native to the tools and resources that drive successful business for market success. The strategies that evolve are driven by bottom-up factors to successfully compete with the established terrorist brands. Brand identity and marketing methods are analyzed for their strengths and weaknesses. Customer confidence and brand loyalty are measured to gauge market durability and brand penetration. Actions that support the brand are scrutinized for inconsistencies that can be leveraged to degrade brand attraction. As the counter brand strategy is built to create a compelling counter offering, the understanding of the established brand is used to exploit weaknesses and deficiencies and simultaneously forge consistency of message and action from bottom to top. In simple terms, a counter-offer is designed to maximize customer appeal.

Successful brands do not seek to replicate the competition but to innovate from the gaps that the market analysis has revealed. Apple did not create *just* another computer. Nike did not create *just* another pair of shoes. These companies leveraged innovative design, impactive messaging, and adaptive marketing to create brands whose loyalty might be better defined as a culture unique to them. Though one could argue successfully that selling a "product" is easier than "selling" a national policy, the key to shifting towards a market and branding focus for counterterrorism is to accept that any marketing and branding strategy must answer a fundamental question: what are we selling?

If we look at al-Qa'ida, their market offering is rooted in a preservation of belief that emanates from the pages of the Koran that are themselves considered the words of God. They are selling the preservation of their faith. If we look at our strategies and tactics, our message and market offering are unclear. Are we selling freedom? Are we selling democracy? Are we selling the right pursue your religious preference without persecution? As actions reinforce the brand, our message becomes even more unclear. Our strongest marketing message is the ability to kill anyone we find unsuitable in the world with a remotely piloted drone. How does that message compete with a message, for example, rooted in God and the preservation of faith?

Developing a counter offering and ultimately a competing brand requires not only a deep understanding of the value offerings of the competition (i.e. the terrorist or terrorist organization) but must also include:

- Developing a unique value proposition
- Assessing market entry points
- Building risk mitigation strategies

The goal is to maximize the strengths of the market base to innovate an offering and build a brand that has greater appeal than the competition. In the case of the US, leveraging the powerful cultural narrative – *the land of opportunity*- can inspire native talent to build competing strategies and brands that will compete globally against al-Qa'ida and other terrorist organizations or non-aligned threats by the virtues of market economies. The goal is also to dilute the message of the competing brand and

avoid inadvertently fueling the competitions market message by actions you take. Responding to threats and fear mongering of al-Qa'ida for example by placing all citizens under suspect only enhances their message and brand strength. As part of the process of developing counter offerings and building marketing strategies and brand identity, the question of value needs to be answered. What is your value and how does that shape the message and offering you are seeking to make. Consider the irony of the Internet - a capability that itself was developed by DARPA and DoD that is used, coveted and protected as a key backbone for success for any terrorist cell operating globally today. The value is undeniable. We must ask ourselves, however, what we have done to leverage this product offering as part of the "brand" to counter the terrorist threat? The answer is obvious: the message and brand leverage have been lost.

The rise of terrorist franchises and terrorist entrepreneurs poses the risk that anyone can be a potential threat. Under current strategies, each person becomes suspect, running counter to the cultural narrative of "opportunity" while fueling the narrative of "government distrust" and actualizing the al-Qa'ida verbiage of a threat around every corner. Rather than succumb to the narratives of fear, the US has the ability to shift the operational paradigm to embrace its greatest strength and "attack" al-Qa'ida and other terrorist threats through the tools of market economies. By maximizing the understanding of branding and market economies, strategies are built from the foundation of narrative, with actions intrinsically linked to reinforce the brand and the market offering. Narrative becomes the leading weapon that shapes both strategy and tactics. The brand becomes the decisive weapon to build loyalty and market share. In the current environments, these tactics are being used against us to our disadvantage. By shifting away from the threat based model and building from a brand and market economy model, the ability exists to strengthen the US brand as a consumer brand of choice and defeat terrorist threats at their root – by denying market share and ultimately funding. The paradigm is what is native to business: strength is not force, but market position.

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Counterterrorism and Muslim Public Opinion

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For a non-state terrorist organization to succeed strategically it needs, among other things, to accomplish two key objectives. First, it must have the ability to cause a psychological reaction in its intended target that, in turn, causes the target it opposes to change its policy behavior in ways deemed preferable, if not desirable, by the terrorist organization. Terrorist organizations thus use terrorism as a tactic to achieve their strategic goals. The casualties of the terrorist attacks are thus tactical targets, while, more often, heads of state are the strategic targets. The pressure on heads of state to "do something" in response to terrorism is, in turn, tuned by the psychological reaction of the publics to whom state leaders are accountable. State leaders have more degrees of freedom to calculate a counter-response when the public is resilient. Less resilience, or more panic, causes the pressure on state leaders to be more acute. Terrorists do not want cooler heads to prevail since it gives their adversaries more power, while undercutting theirs—they cannot very well claim to have made the enemy feel the fear they had hoped to instill when the living victims respond with the indomitable spirit of *Homo Invictus* (Suedfeld, 1997). Therefore, the U.S. government is right to make public resilience an explicit component of its counterterrorism strategy (White House, 2011).

Secondly, in order for a terrorist organization to be strategically successful, it must gain tacit support or, at least, non-opposition from the broader public within which it is embedded. Otherwise, without a widespread perception of credibility, terrorist organizations could at best score tactical victories, but not significant strategic ones. In the absence of any real prospect for strategic victory, the motivational fuel for terrorism would soon be depleted. Although the U.S. is not at war with Islam, its counterterrorism strategy focuses on threats that mainly emanate from the Muslim world—notably, al-Qa'ida (AQ) and its affiliates and adherents, the Iranian state-sponsored terrorist organization, Hezbollah, and the Palestinian terrorist organization, Hamas. Thus, it is important to know how Muslims around the world view Islamic terrorist organizations and movements of violent extremism and how they think and feel about other issues that may have direct or indirect bearings on the current counterterrorism environment (e.g., how Muslims view the U.S., what value they place on democracy or economic prosperity, etc.). Moreover, it is important to know how Muslim public opinion is changing over time since this can provide information pertinent to assessing the prospects for strategic success by terrorist organizations, on the one hand, and the U.S. and its allies, on the other.

Fortunately, there are many open sources of information on Muslim public opinion that can provide the basis for the sort of psychological intelligence, or PSYINT, that the counterterrorism community requires

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(for reviews of open sources that may be of value, see Pavlovic, Blackler, & Mandel, 2008; Pavlovic, Casagrande-Hoshino, Mandel, & Dorn, 2008). For instance, the Pew Research Center has been surveying citizens in several predominantly Muslim countries each year for over a decade now as part of the Global Attitudes Project (GAP). Much of the data has been summarized in thematic reports and many of these are focused on analyses pertinent to the sort of assessments that an informed counterterrorism effort would require. The raw data from multiple years and tens of thousands of surveyed individuals is also freely available to download and analyze. Such data could be used to empirically test theoretical propositions about the root causes, or at least correlates, of support for violent extremism. The aim of this paper is to examine the findings of such reports in order to better understand the current counterterrorism environment and anticipate its future.

Support for Usama bin Laden and al-Qa'ida

Given that the primary focus of U.S. counterterrorism efforts is on defeating AQ and its affiliates, an analysis of Muslim support for AQ and its former leader is a good place to start. A Pew Research Center survey report published April 30, 2012, reported that support for Usama bin Laden (UBL) had waned from 2003 to 2011. Across that timespan, the percentage of Muslims having confidence in UBL was down in every predominantly Muslim country polled. For instance, in Pakistan, support for UBL was at 46% in 2003 but was down to 21% in 2011. In Lebanon, the percentage dropped from 19% to 1%, and in Indonesia, it was down from 59% to 26%.

As the same Pew report notes, a year after UBL was killed by U.S. Navy Seals, AQ's favorability remains low. Among Muslims, more than 70% view AQ as unfavorable in Egypt, Jordan, and Turkey. In Lebanon, that figure is as high as 98%. In Pakistan, 55% view AQ as unfavorable and only 13% view it as favorable. These findings suggest that AQ is losing the war of ideas. Muslims in Muslim nations are increasingly rejecting AQ and its extremist ideology.

Support for Suicide Bombing and other Forms of Terrorism

An earlier Pew report (Horowitz, 2009) found a similar pattern of decline in support for suicide bombing and other forms of terrorism.[6] From 2002 to 2009, support for terrorism dropped from 74% to 38% in Lebanon, from 43% to 12% in Jordan, from 33% to 5% in Pakistan, from 26% to 13% in Indonesia, from 13% to 4% in Turkey. And, in Egypt, support dropped from 28% in 2006 to 15% in 2009.

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[6] The survey question read "Some people think that suicide bombing and other forms of violence against civilian targets are justified in order to defend Islam from its enemies. Other people believe that, no matter what the reason, this kind of violence is never justified. Do you personally feel that this kind of violence is often justified to defend Islam (1), sometimes justified (2), rarely justified (3), or never justified (4)?" I hereafter refer to this item as support for terrorism given that suicide bombing represents a subset of terrorism and the item probably overestimates support for suicide bombing *per se*. It would have been useful to differentiate support for suicide terrorist attacks from support for other forms of terrorism that do not involve suicide. And, more generally, it is beneficial to avoid multi-part questions because a respondent might have different levels of agreement with one part than with another (e.g., supporting terrorism but being opposed to acts that involve suicide attacks).

Exceptions to this declining trend were Nigeria, where support hovered at about 40%, and the Palestinian territories, where support for terrorism was around 70% in the two years (2007 and 2009) where data was collected. Note how the last figure contrasts with a 7% level of support among Israeli Muslims observed in 2009. Remarkably, it is a full order of magnitude lower.

In the Spring 2011 Pew GAP dataset[7], the same question about support for suicide bombings and other forms of terrorism against civilians was once again posed to Muslims in a number of predominantly Muslim countries as well as in Israel and the Palestinian territories (Q89 in the 2011 survey). I compared the Spring 2009 figures noted in Horowitz's (2009) report with comparable 2011 figures. Terrorism was viewed as often justified or sometimes justified by: 68% in the Palestinian territories (down 2% from 2009), 35% in Lebanon (down 3%), 27% in Egypt (up 12%), 21% in Israel (up 14%, but still substantially lower than in the Palestinian territories), 13% in Jordan (up 1%), 10% in Indonesia (down 3%), 9% in Turkey (up 5%), and 4% in Pakistan (down 1%). Thus, in 2011, we see some evidence of a resurgence of support for suicide bombing and terrorism in Egypt and among Muslims living in Israel. Just a few months prior, Egypt had been caught in an 18-day wave of public protests against the Mubarak government, which culminated in Mubarak's resignation and the eventual election of Mohamed Morsi of the Muslim Brotherhood. It is unclear to what extent the observed increase in support has to do with the recent so-called Arab Spring in Egypt.

Support for terrorism was significantly greater among those Muslim respondents who identified as Shi'a (n = 454, mean = 3.22, SD = 1.00) than among those who identified as Sunni (n = 6482, mean = 3.41, SD = 0.95), t(6934) = 4.11, p < .001. The effect size (Cohen's d = .19) is small by Cohen's guidelines, but not trivial.

Interestingly, support for terrorism was significantly lower among Muslim respondents who identified primarily with being Muslim (n = 5117, mean = 3.55, SD = 0.86) than among those who either identified primarily with being a citizen of their country (n = 1746, mean = 3.17, SD = 1.04) or reported identifying equally with both (n = 1160, mean = 3.18, SD = 1.02), F(2, 8020) = 152.29, p < .001. The approximate effect size, combining the "citizen" and "both" categories, borders on what might be called a medium-sized effect, Cohen's d = 0.40. Clearly, this finding does not play well with the AQ narrative promoting a wider conflict between Muslim and Western civilizations. Those who identify with their countries or territories, and who thus have a more Westphalian notion of social identity, are more supportive of terrorism than those who identify as Muslims first. This might indicate that support for terrorism is associated with concerns over more regional conflicts rather than with civilizational clashes at a global level.

Support for Islamic Fundamentalism

In the 2011 GAP dataset, Muslims in the aforementioned countries and Palestinian territories were also asked whether they sympathized with Islamic fundamentalists or with those who disagree with Islamic

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[7] The dataset was retrieved from http://www.pewglobal.org/category/datasets/2011/.

fundamentalism. In order of descending support for Islamic fundamentalism, the percentages of Muslims who said they sympathized with Islamic fundamentalists are 44% in Pakistan, 36% in both Jordan and the Palestinian territories, 31% in Egypt, 24% in Turkey, 23% in Israel, 18% in Indonesia, and a mere 2% in Lebanon. Overall, precisely one-third (33.3%) of Muslims polled in these countries and the Palestinian territories in 2011 openly expressed sympathy for Islamic fundamentalism. There was double-digit support in all regions except for Lebanon.

Although, as reported earlier, Shi'a Muslims supported terrorism significantly more than Sunni Muslims, Shi'as were significantly less likely to say that they sympathized with Islamic fundamentalists (20%) than were Sunnis (53%), $z = 12.23$, $p < .001$.

Also recall that Muslim respondents who identified primarily with being Muslim supported terrorism significantly less than those who identified equally or more with being a citizen of their country or territory. However, those who identified primarily as Muslims were more likely to sympathize with Islamic fundamentalism (62%) than those who identified equally as Muslim and a citizen (41%) or primarily as a citizen (31%). If we combine the latter two groups the difference in proportions is highly significant, $z = 19.28$, $p < .001$.

Given the opposing patterns observed in disaggregating support for terrorism and sympathy with Islamic fundamentalism, one wonders what the relationship is between those measures. It is striking that the relationship between support for Islamic fundamentalism and terrorism at the country/territory level is so weak. The correlation of the country/territory percentages reported above for terrorism and in this section for Islamic fundamentalism was not even positive, $r(6) = −.065$. The lack of relationship between support for terrorism and Islamic fundamentalism is also evident at the individual level of analysis. The correlation between support for terrorism (1=often justified; 4=never justified) and Islamic fundamentalism (1=supports; 2=does not support), although statistically significant, was trivially small and, once again negative, $r(5348) = −.061$, $p < .001$. The findings, based on a large and representative sample of Muslims from seven countries and the Palestinian territories, force us to check our assumptions about the relationship among Muslims' beliefs. It is evident from these findings that support for Islamic fundamentalism does not indicate, or serve as a valid proxy for, support of terrorism. Indeed, the relationship is not even positive.

Perceptions of Threat From Islamic Extremism Versus U.S. Military Action

In the 2011 GAP survey, Muslims in the same eight regions were also asked about the extent to which they were concerned about Islamic extremism in their country and the extent to which they were worried about U.S. military threat in their country someday. It is worth noting that respondents were asked these questions in different parts of the survey. Hence, they were unlikely to have adopted a comparative frame of mind when answering them. The distribution of percentage responses to each question is shown in Table 1.

In Table 1, we see that Lebanon has the highest proportion of Muslims who are very concerned about Islamic extremism. In contrast, Israeli Muslims are the least likely to be very concerned about Islamic

extremism. In terms of worry about U.S. militarism, Jordanian Muslims were the least likely to be very worried, followed closely by Egyptian Muslims, whereas Muslims in Indonesia, Pakistan, and the Palestinian territories were among the likeliest.

Of these data, one can ask several questions. For instance, overall, across these regions, are Muslims more concerned about Islamic extremism or U.S. militarism? A related-samples *t*-test reveals that Muslims were significantly more concerned about U.S. militarism (mean = 2.06, *SD* = 1.04) than they were about Islamic extremism (mean = 2.12, *SD* = 1.07), $t(7105) = 3.89$, $p < .001$. What is striking, however, is just how weak this effect is. Cohen's *d* (the standardized difference between the means) is a mere 0.05—an exceedingly small effect by Cohen's (1988) standards.[8]

Table 1. *Muslim Perceptions of Threat from Islamic Extremism and Potential U.S. Military Action*

Region	How Concerned/Worried?			
	Very	Sometimes	Not too	Not at all
	Islamic extremism			
Egypt	31.4	33.0	19.5	15.4
Indonesia	19.2	24.4	30.3	19.8
Israel	10.9	20.4	25.9	29.3
Jordan	25.1	22.3	25.0	26.7
Lebanon	47.0	25.1	18.4	7.1
Pakistan	38.3	23.5	7.8	8.1
Palestinian terr.	32.4	45.1	15.3	6.3
Turkey	26.3	25.7	13.9	22.8
	U.S. military action			
Egypt	20.2	33.4	25.0	19.5
Indonesia	42.1	32.2	14.1	8.7
Jordan	18.3	28.1	32.4	20.4
Lebanon	30.2	24.2	20.8	23.1
Pakistan	41.4	24.2	10.7	9.6
Palestinian terr.	42.4	47.8	6.5	2.6
Turkey	31.9	27.8	13.0	14.2

Note. Values are percentages. The remaining percentages for each country/territory are for respondents who indicated either "don't know" or refused to answer. The question [Q90] about U.S. military threat was not asked in Israel. The question about Islamic extremism was Q44 in the GAP 2011 survey.

And, to what extent, and in what direction, are these threat perceptions related to each other? Here, the data could be used to test competing hypotheses. For instance, if Muslims view Islamic extremism as a useful counterweight to possible U.S. aggression, then one might expect there to be a negative correlation between the two measures. On the other hand, these measures might both capture individual differences in threat of violence in the respondent's society, in which case one might

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[8] This estimate corrects for repeated measures using Morris and DeShon's (2002) Eqn 8.

anticipate a positive relationship. In fact, the Pearson correlation was positive and of medium effect size by Cohen's convention, $r(7104) = .34$, $p < .001$. Results such as these could be used to challenge the AQ narrative, which seeks to promote a clash of civilizations between the West and the Islamic world, since they indicate that people who are more concerned about U.S. militarism in their countries are also more concerned about Islamic extremism in their countries.

Prediction of Support for Terrorism

Theories of terrorist motivation abound, but there has been little effort to concurrently evaluate those theories with actual data. On the basis of hypotheses that have been proposed, one might expect support for suicide terrorism to be directly predicted by perceived U.S. military threat to one's country, by the degree to which one views one's people as having unrecognized exceptionality (i.e., a narcissistic social identity), by the degree to which salient outgroups (e.g., "the West") are perceived to think and feel negatively towards one's ingroup (e.g., "Muslims"), by the presence of economic deprivation that causes a loss of basic human requirements, by religious fervor, etc.

To examine these and other hypotheses, I conducted a multiple linear regression analysis in which the 2011 GAP survey data on Muslim support for terrorism, which I had summarized earlier, was regressed on various putative predictors. These included the measures of (a) perceived threat from Islamic extremism (Q44) and (b) threat from U.S. militarism in their country/territory (Q90), (c) gender (Q111; 1=male, 2=female), (d) age in years (Q112), (e) whether one was unable in the past year to pay for food, medical care, or necessary clothing (if respondent answered "yes" to Q122A, Q122B, or Q122C, they were coded as 1=yes, otherwise, 0)—namely, this served as a measure of deprivation, (f) the frequency with which they pray (1=never, 7=everyday five times), (g) the importance of religion in their lives (1=very, 4=not at all), (h) their opinion of European (Q38) and (i) American (Q39) hostility towards Muslims (1=most, 4=very few), (j) whether they thought Muslim nations should be economically more prosperous (Q40, 1=yes, 2=no)—a measure of Muslims' perceptions' of Muslim relative deprivation, (k) the extent to which national laws should follow the Quran (Q47X, 1=strictly follow, 2=based upon Islamic principles but not strictly follow, 3=should not be influenced), (l) support for the U.S.-led efforts to fight terrorism (Q52, 1=favor, 2=oppose), (m) their belief in whether Arabs carried out the 9/11 terrorist attacks (Q95, 1=believe, 2=do not believe), (n) their belief that "success in life is pretty much determined by forces outside one's control (Q15a, uncontrollability), (o) their belief that "our people are not perfect, but our culture is superior to others" (Q15b, cultural superiority), and (p) their belief that "it is sometimes necessary to use military force to maintain order in the world" (Q15c). For the latter three items, respondents answered using a 4-point scale ranging from 1 (completely agree) to 4 (completely disagree).

The results of the analysis are shown in Table 2, and the predictors are ordered by the magnitude of their standardized regression weights (beta). There are a number of noteworthy findings. First, although there are several statistically significant predictors, none constitutes more than a small effect size. This point is reinforced by the model statistics. Although the model is statistically significant, $F(16, 3992) = 18.97$, $p < .001$, it accounts for less than 7% of the variance in support for terrorism, adjusted $R^2 = .067$.

That is, on the basis of the 16 predictors examined, we can explain only about 7% of the variance in support on this measure.

Table 2. *Multiple Linear Regression Predicting Support for Terrorism (Q89)*

Predictor	Beta	*t*	*p*
Constant		26.035	.000
Uncontrollability (Q15A)	−.134	−8.135	.000
Cultural superiority (Q15B)	−.096	−5.953	.000
Arabs as 9/11 source (Q95)	.082	5.190	.000
Perceived European hostility (Q38)	.081	4.241	.000
Militarism sometimes needed (Q15C)	−.064	−3.892	.000
Deprivation (Q122A-122C)	−.060	−3.877	.000
Religion (prayer frequency, Q114)	.052	3.217	.001
Religion (importance, Q118)	−.049	−3.066	.002
Age	−.043	−2.778	.005
Muslim nation should be more prosperous (Q40)	.033	2.159	.031
Laws should follow Quran (Q47X)	.025	1.583	.114
Perceived threat of Islamic extremism (Q44)	−.020	−1.193	.233
Gender	−.015	−0.951	.342
Support for U.S.-led counterterrorism (Q52)	.010	0.621	.535
Perceived American hostility (Q39)	−.004	−0.228	.819
Perceived threat of U.S. military action (Q90)	−.003	−0.158	.874

Second, and somewhat surprisingly, the best predictor of support for terrorism from the set examined was how controllable Muslim respondents thought success in life was. The more respondents disagreed that success in life was not personally controllable (namely, the stronger their internal locus of control for life success), the more they supported terrorism. The finding is surprising not only because controllability is an unlikely candidate for "best predictor" of terrorism support, but also because one might easily have predicted the opposite relationship.

Third, the second best predictor—a sense of cultural superiority—was actually in the opposite direction from that expected. That is, support for terrorism declined as the respondents' sense of cultural superiority increased. This is a surprising effect that runs contrary to the notion that a motivator of support for collective violence is the sense that one's social identity has not been afforded the respect it deserves (e.g., Mandel, 2002, 2010).

Fourth, both more frequent religious activity (prayer) and the greater perceived importance of religion were associated with lower support for terrorism. Once again, these results may strike some readers as unexpected. The results also could be of value in reinforcing the message that the U.S. is not at war with Islam—why would it be, if stronger adherence to the Islamic faith were associated with less support for terrorism? Of course, another part of the message ought to be that religion is weakly related to such support.

Fifth, it is noteworthy that, although perceived hostility towards Muslims from Americans had no significant predictive effect on terrorism support, perceived hostility towards Muslims from Europeans did. As one might expect, Muslim respondents who felt more strongly that Europeans were hostile were

56

also more supportive of terrorism. Of course, one must be cautious in interpreting such findings. For instance, respondents were always asked the question about European hostility immediately before the question about American hostility. It is not inconceivable that order effects account for the differential relationship. A stricter test would require the order of the items to be counterbalanced across respondents. A related question is whether Muslim respondents living outside of the U.S. and Europe perceive greater hostility towards Muslims in one region or the other. In fact, respondents perceived significantly greater hostility among Americans (mean = 2.09, SD = 0.99) than among Europeans (mean = 2.13, SD = 0.99), $t(8681)$ = 3.93, $p < .001$. However, the size of the effect is trivially small, Cohen's d = 0.04. Moreover, the variance for the two questions is identical. Thus, the differential predictability cannot be attributed to range effects.

Sixth, there was some support for the notion that personal deprivation is related to terrorism support. Respondents who indicated that they were unable to pay for a basic requirement for themselves or their family, such as food, medical care, or clothing, were more supportive of terrorism than those who did not report such a condition. Moreover, in support of the notion that perceived relative deprivation underlies support for terrorism (Atran, 2003), respondents who believed that Muslim nations should be doing better economically were also more supportive of terrorism than respondents who did not believe that. However, it is worth reminding the reader that the effect, while significant, is exceedingly small. One is therefore left to decide whether, in fact, the finding does constitute support for the relative deprivation thesis.

Seventh, the demographic factors, age and gender, had little predictive effect. Male and female respondents did not differ in terms of their support for terrorism. Age was positively (though, again, weakly) correlated with support (recall that higher values on the support measure reflect lower levels of support), which may be regarded as a positive indication that support for terrorism is weakening.

Eighth, a number of putative predictors failed to even reach statistical significance in spite of the large sample size. Neither concern for Islamic extremism nor worry over potential U.S. military interventions in respondents' countries predicted support for terrorism. However, opposition to the view that militarism is sometimes needed to maintain order in the world was predictive of support for terrorism, even though support for U.S.-led counterterrorism measures did not predict support for terrorism, countering the intuitive hypothesis that these measures would be inversely related. Likewise, respondents' views about the role of the Quran in setting national laws failed to predict support for terrorism.

Finally, a surprising result was that respondents' disbelief that Arabs were behind the 9/11 terrorist attacks is associated with *weaker* support for terrorism. This contradicts the intuitive hypothesis that Muslims who were more willing to endorse suicide bombings and other acts of terrorism would be more prone to deny Arab (or Muslim) involvement in 9/11.

It is also of interest to know how widespread the belief that Arabs were not behind 9/11 is among the Muslims polled. In each of the eight countries/territories examined (including the non-Arabic countries), a majority of Muslim respondents reported that they did not believe that Arabs perpetrated 9/11.

Overall, 62% of Muslim respondents held this view, while only 16% held the opposing view (about one fifth said they did not know). This is a remarkable statistic. If nearly two-thirds of Muslims deny that Arab Muslims were behind 9/11, then one must ask what do they believe? Do they believe 9/11 was a U.S. or Israeli conspiracy? Do they even accept that 9/11 occurred? Unfortunately, there were no follow-up questions in the 2011 GAP survey. Perhaps such questions could be asked in future years in order to get a better understanding of the social-cognitive and cultural bases for such widespread denial.

Conclusion

The present analyses are merely illustrative of the sorts of questions that one could address with open-source data on Muslims' (and others') attitudes, beliefs, sentiments, and characteristics (e.g., demographic, cultural, etc.). The present analyses are certainly not even a comprehensive analysis of the 2011 GAP survey dataset, which is just one of many collected by just one research center. Yet, even this brief exercise points to the value of testing hypotheses with large samples of statistical data.

The analyses conducted here yielded some rather unexpected findings. For instance, one might have thought that sympathy for Islamic fundamentalism would be at least moderately correlated with support for terrorism, yet the correlation was weak and negative. Or, one might have predicted that support for terrorism would be associated with stronger religiosity, but that was not so—in fact, the opposite was observed. Such freely available data could be used on a regular basis to check our intuitive theories of terrorism and political violence and to check our mindsets and possible biases. We know that the proverbial hedgehog—the individual who prefers to know one big thing or grand truth—is a less accurate forecaster of geopolitical events than the proverbial fox, who ferrets out many little truths that, taken together, often reveal stark inconsistencies (Tetlock, 2005). The current approach—getting knee deep in data and being open to seeing where it leads us—may be more appealing for those of the foxlike persuasion, but this should only reinforce the idea that it may be all the more important for hedgehogish analysts and policy makers to push through the pain and discomfort.

Such attempts to ground beliefs in rigorous data analysis are important not only for understanding the subject matter, but also for formulating policy, strategy and taking appropriate action. If we misdiagnose the causes of terrorism or support for it, we will likely take ineffective, if not entirely counterproductive, actions to counter what we perceive as the causes. This only serves to entrench false beliefs, waste precious resources, and afford our adversaries opportunities that they should be denied if at all possible. To do so in the context of counterterrorism, we need sound PSYINT. If the intelligence community is not already harnessing open-source data for these purposes, they should be gearing up to do so. If messaging to the Muslim world is an important part of U.S. counterterrorism strategy, the U.S. and its allies need to better understand the constellations of cognitions and sentiments that motivate action (e.g., terrorism) or inaction (e.g., bystander apathy).

Theories of terrorist motivation and of support for terrorism can certainly be useful in guiding research and data analysis, but researchers and analysts should also be open to testing ideas that have low probability priors. For instance, in the regression analysis reported earlier, the inclusion of the controllability item was viewed as an improbable payoff, and yet it turned out to be the strongest of the

58

predictors examined. We need both top-down theory-driven analysis and bottom-up data-driven theory formulation. Moreover, just like physical target can be moved, so can public opinion. Attitudes are not static. Thus, we need systematic data collection on an ongoing basis. In short, to support our PSYINT requirements for effective counterterrorism we need an applied behavioral science of terrorism and political violence.

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Can Thematic Content Analysis Separate the Pyramid of Ideas from the Pyramid of Action? A Comparison Among Different Degrees of Commitment to Violence

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Abstract

The publicly accessible messages of 15 extremist groups were coded by Thematic Content Analysis (TCA). Orientations toward violence included activist, militant, and terrorist groups; their goals derived from animal rights, Islamist, territorial, or white supremacist ideologies. TCA is a set of scientifically rigorous methods for converting running text into quantitative data, analyzable by standard statistics. A measure of cognitive integrative complexity (IC) showed significant declines across groups as they increased in their acceptance of violence, higher power imagery for terrorist compared to the other groups, and high importance among terrorists on the values of self-direction (autonomy), character (virtue, sincerity, honor), and benevolence (caring for those close to oneself). The results demonstrate the usefulness of IC coding to assess groups' acceptance of, and proneness to, violence.

Key points

- Thematic content analysis (TCA) can be used to assess open-source messages of extremist groups reliably and with a high degree of rigor.
- Integrative complexity (IC), an unobtrusive TCA measure of cognitive structure, shows reliable decreases associated with increases in the acceptance and practice of violence.
- Power motivation increases with positive orientation to violence, but the results are less clear-cut than with IC.
- Terrorist groups emphasize the values of autonomy, virtuous character, and care for those close to oneself.
- TCA may be useful in differentiating the dangerousness of groups, and may also point to optimal approaches to deradicalization.

Introduction

Extremism is defined as an attitudinal position at either end of any ideological dimension (political, religious, ethical, moral, philosophical, ecological, etc.). The word "dimension" implies that there are two opposite anchor points at the extreme ends, with a range of less extreme -- i.e., more or less moderate -- points between them. In this sense, extremism is merely a locator term along the dimension; by implication, extreme positions may be perceived as those outside the latitude of acceptance of the majority culture (Hovland & Sherif, 1980). It is useful, however, to differentiate

61

positions that differ in how far they lie from the boundary that separates the latitude of acceptance from the latitude of rejection.

There have been a number of proposals as to the categorization of such groups (e.g., LaFree & Bersani, 2012). We have found a useful concept in McCauley's (2011) two-pyramid model, distinguishing between levels of radicalization: extremism-supporting ideas, and extremism-supporting actions. Presumably, the latter are further out on the acceptance-rejection dimension. We use four terms: "Extremist" is an overall descriptor of groups and individuals whose ideology is outside the range of acceptance; using the terminology of Moskalenko and McCauley (2009), we use the terms "Activist," "Radical," and "Terrorist" to refer to specific groups that vary along the pyramids of ideas and actions (see Method).

The importance of understanding the psychological characteristics of extremist leaders and groups has two aspects. From the point of view of psychological theory, it is interesting to understand the characteristics that differentiate such people and groups as outliers from the norm and from each other. Second, it is desirable to establish the potential usefulness of thematic content analysis, used in many studies of international relations, in the context of research on extremism.

From an applied perspective, understanding the psychology of extremists differing in their willingness to accept and commit violence can be used to assess the dangers posed by each group. Changes in their psychological processes may be markers of impending attacks, the analysis of current and prospective leaders may identify more or less aggressive candidates for leadership, and the data may guide the design of material intended to move members or leaders to less pro-violence strategies or to enhance the possibility of successful negotiations.

The study reported here used thematic content analysis (TCA) to assess the cognitive processes, power motivation, and basic values of groups espousing a variety of extremist goals and strategies. TCA is a class of techniques for turning qualitative materials (interviews, manifestos, blogs, press releases, etc.) into quantitative data, with rigorous methods for scoring and data analysis. Identifying information is removed from the texts as much as possible while maintaining the coherence of the material\. The excerpts to be scored are selected randomly from the total available database and then mixed in random order. Detailed coding manuals are used to generate quantitative scores of the chosen variable. Scorers are trained and tested to establish their accuracy by comparing their scores with those of experts, and inter-rater reliability is re-tested for every study. The scores can then be analyzed by normal inferential statistics such as ANOVA and regression. TCA coding manuals exist for many variables, and others can be developed fairly easily (Smith, 1992).

TCA has been used widely in political psychology. Among its major applications has been the study of changes in the psychological processes of governmental decision-makers and representatives as international crises develop and move to their resolution, and the forecasting of both international and domestic political violence. Individuals who have been studied range from student samples to members of political parties, societal elites, and high-level military, political, and revolutionary leaders (reviewed

in Suedfeld, 2010). A recently published set of studies addressed differences in psychological variables among four Islamist groups (Smith et al., 2008).

This paper describes a TCA study that assessed psychological processes in trios of extremist groups matched for ideological content (ethnic/religious, territorial, or civic) but differing in their support for violent tactics.

Method

Three TCA methods were employed in the study. The groups whose messages were scored were divided into categories along two dimensions: their orientation toward violence, and their ideology or goal.

The TCA variables were:

1*. Integrative complexity (IC),* a measure of ongoing cognitive processes, based on scoring two components: *differentiation*, the perception of more than one dimension or legitimate viewpoint on a topic, and *integration*, the perception of relationships among differentiated percepts. IC has been shown in many studies to indicate the degree of flexible, nuanced, and perspective-taking thinking, with consistent relationships to political party membership, political career success, and the outcome of negotiations in conflict situations.

The basic scoring unit is the paragraph, and scoring follows a 1-7 scale. Scores range from 1 (undifferentiated) through 3 (differentiated, not integrated) and 5 (integrated) to 7 (multi-level integration, with integrated percepts subsumed under an overarching cognitive schema) (Baker-Brown, et al., 1992).

2. *Power motive imagery (need for Power, nPow)* is an index of the degree to which the individual is motivated to exert influence over others. It is scored by the percentage of references indicating such motivation among all motive-related words in 1,000 words of text. It is related to the behaviors of political and business leaders in negotiations and other conflict situations (Winter, 1991).

3. *Universal values* are the guiding principles by which people lead their life. Approximately 11 (the actual number can vary slightly depending on the focus of the study) such values represent major categories that have been found to apply across 20 divergent cultures around the world (Schwartz, 1992). The values scored in this study were selected from that list as appearing to be especially relevant to extremist groups: Universalism, an appreciation of the unity of humankind and the environment; Self-direction or autonomy; Character, comprised of virtue, honour, honesty, and similar traits; Power, as in the nPower variable described above; Hedonism, or the enjoyment of physical pleasure; and Benevolence, caring for those close to oneself or one's own group. The hierarchy is established by counting the number of mentions related to each value in a body of text.

The groups included in this study are categorized along two dimensions: Orientation toward violence and goal or ideology.

Orientation toward violence. The groups were divided into three categories, as follows: The *Activist* category is comprised of groups that pursue their goals by political means only, and explicitly renounce and denounce violence. *Radical* groups do not participate in violence, but decline to condemn it. *Terrorist* groups admit to practicing violence in support of their cause, including attacks against civilian targets to weaken societal resistance.

Goals and ideologies were also divided into three categories: Territorial, in this case Irish Nationalist and Tamil, both seeking independence from a larger polity; Ethnic/Religious, including Islamists with different geographic ranges of activity (Israel, the West Bank, and Gaza; the Middle East more generally; and global) and White supremacists; and Civic, which at this point is represented only by the animal rights movement. We are planning to increase the number of groups in all of these categories. Table 1 presents the list of groups on which data have been collected so far.

Table 1. Groups included in the study.

Goal/Ideology	Category		
	Activist (legal, opposed to violence	Radical (legal, but not opposed to violence)*	Terrorist (violent)
Animal Rights	PETA	Animal Liberation Front Press Office	Animal Liberation Front
Islamist		Hizb ut-Tahrir; Movement for Islamic Reform in Arabia	Hezbollah; al-Qa'ida; al-Qa'ida in the Arabian Peninsula
Territorial	Social Democratic & Labour Party; Tamil National Alliance	Sinn Fein	Provisional IRA; Tamil Tigers
White Supremacy		Non-violent white supremacy (various)	Aryan Nations

*This is a modification of the overall terminology used in the white paper, to enable the inclusion of groups not fitting into the other taxonomy.

All of the scored material was obtained from open sources, mostly from the Internet. The organizations included in the study have their own websites, and various academic and governmental bodies also collect the statements issued by the organizations. Except for Hezbollah, the data for Islamist groups were imported from Smith et al. (2008) by permission.

The hypotheses of the study were derived both from theoretical propositions and from previous findings. We predicted that as groups declared greater acceptance of violence, their level of IC would decline and their Power orientation would increase. We also expected that the Terrorist (most violent) groups would be higher than the others in endorsing the values of Power, Character, and (ingroup) Benevolence, and lowest in Universalism and Hedonism.

Results

Mean IC declined linearly from Activist (M=2.02, SD=0.93) to Radical (1.84, 0.93) to Terrorist (M=1.64, SD=0.83) groups. The overall ANOVA was significant [$F(92,1222)=8.66$, $p<.001$], and all pairwise differences reached statistical significance at $p<.05$ or better by the Tukey test. Pairwise differences in effect size were related to distance along the extremism dimension: Cohen's d was 0.19 for the difference between Activists and Radicals, 0.23 for that between Radicals and Terrorists, and 0.43 for the comparison between Activists and Terrorists.

Mean Power motivation [ANOVA $F(92,392)=5.82$, $p=.006$] was highest in Terrorist groups (M=4.46, SD=9.24), which were significantly different from Radicals (M=3.98, SD=8.85; Games-Howell post hoc test $p=.02$). The effect size was small, Cohen's $d=0.05$. The Activist and Radical (M=3.94, SD=6.88) groups did not differ significantly from each other. Ideology or goal did not differentially affect either psychological variable. Figure 1 shows the differences in IC and Power motivation across groups.

Figure 1. Mean IC and Power motivation by group.
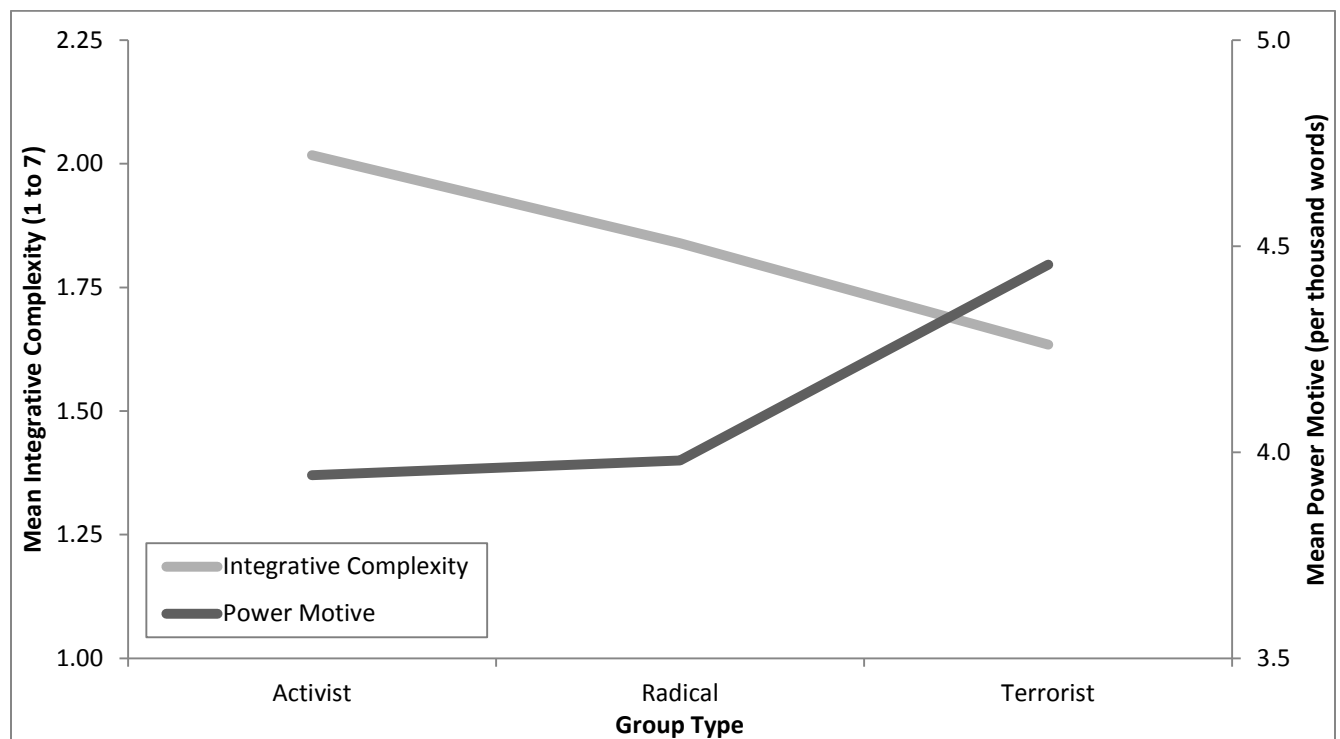
Significant differences were found on four values as a function of orientation to violence. Terrorists were higher than both other groups on Self Direction [$F(2,115)=10.88$, $p<.01$, pairwise comparisons $p<.001$] and Character [$F(2,138)=33.43$, $p<.001$; pairwise comparisons $p<.001$], and higher than Radicals on Benevolence [$F(2,113)=3.69$, $p<.01$; pairwise, $p<.01$]. Radicals were higher than both other groups on Universalism, $F(2,99)=21.43$, $p<.001$. The only significant difference by goal or Ideology was that groups with territorial goals were higher than the other two groups in Universalism, $F(3,104)=13.10$, $p<.001$.

65

Discussion

Most of our hypotheses were supported by the data. Groups with increasingly positive orientations toward violence were characterized by lower integrative complexity and to a lesser degree by higher power motivation. Differences in values were mostly as predicted, except that Universalism was lowest in Radical rather than Activist groups, and there was no difference across the groups in Hedonism.

The negative relationship between IC and Power motivation had been previously reported in change scores as nations moved toward war, and in comparisons of a small sample of groups (Suedfeld, 2010). The reliability of the relationship across a variety of ideological causes and cultures is both new and of significant interest. So is the integration of Values data into the pattern. In previous research, IC and nPow were both markers for impending violence, but IC was more consistent in that regard (e.g., Stewart & Suedfeld, 2012). In the current study, both variables were related to pro-violence orientation, but IC was able to differentiate significantly among all three categories of groups whereas nPow only distinguished the most violent category, Terrorists. Furthermore, effect size calculations supported the greater reliability of the IC results: relatively small for the one-step differences and medium for the two-step gap between Activists and Terrorists. By contrast, even the one significant difference in nPow, that between Radicals and Terrorists, showed an extremely small effect size. This supports the conclusion that aside from qualitative studies, IC is one of the very few methods for reliably differentiating violent from non-violent extremist groups on the basis of publicly available materials.

Implications

In terms of possible applications, the fact that TCA (especially IC and to a lesser degree Power imagery) can identify variations in cognitive and other psychological characteristics across groups that differ in their acceptance of terrorism can help to identify the degree to which groups may be dangerous and deserving of monitoring and countermeasures. Conversely, TCA may also identify which groups might be more open to deradicalization. Changes in IC may be omens of impending terrorist attack. The degree to which a current leader, or members of a potential group of leaders, fit the pattern of the category to which their group belongs may indicate whether the group will remain in that category, or could predict the direction in which a particular leader may move his or her group.

Materials for encouraging disaffection from a group, perhaps in favor of a less violent one, as well as strategies for negotiations, could be designed to consider the principles that describe particular groups. From a cognitive viewpoint, there are two ways to try to persuade people or groups to move along McCauley's (2009) deradicalization ladder. One is to address the content of their belief systems through targeted messages. Our data indicate that any persuasive tactic used in dealing with Radical and especially Terrorist groups must express respect for their power and autonomy, and extol their virtuous character and their care for their comrades, supporters, clans, and families. Even so, a backlash may result if group members, who already feel devalued by their adversaries, perceive that the group's important attitudes are being attacked. Another potential problem is the reaction of the general public if such positive characterizations of extremist groups become widely known. As might be expected,

66

appeals to common humanity or greater enjoyment of life will not find resonance in any of these groups. Some differences in the message may also be useful; for example, two-sided arguments might lead Activists to consider alternative viewpoints, but are not likely to have an impact on members of the other two groups (Hovland, Janis, & Kelly, 1953).

The alternative approach is to refrain from attacking the group's current belief system and instead to encourage a reduction in rigid, dogmatic thinking (Rokeach, 1960) by enhancing the audience's ability to process new and dissonant information; in other words, to raise the audience's IC. This strategy has been used with promising short-term success by Liht and Savage (Liht & Savage, n.d.; Savage, Liht, & Williams, 2011), although long-term followups and applications to fully committed extremists are lacking at this time. Being able to accept that there may be multiple legitimate viewpoints on a topic (without necessarily abandoning one's own viewpoint) or that the topic may have more than one relevant dimension –i.e., differentiation in IC terms – is a significant step away from the Manichean belief systems that are associated with extremism. Procedures similar to this could also be developed to change the relative importance of motives, which we know are responsive to social parameters (McClelland, 1965). At this point in time, the mutability of values is uncertain.

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Prevention of Violent Extremism Based on Promoting Value Complexity, Informed by Neuroscience and Deployed on the Internet

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Introduction

Researchers in counterterrorism are in a knowledge arms race that seeks to utilize cyber-space as a site for engaging with extremism (Lyle 2013). The Internet, mobile platforms, Cloud computing and social networking have revolutionized social and civic life as well as how extremists self-organize and communicate. Counterterrorism researchers are also seeking to harness insights from neuroscience for how the new generation of cyber-based communication technology affects the brain (Fogg 2002), and for deploying this understanding to counter extremist messaging on the Internet.

This paper discusses a broad-based primary prevention approach (Savage & Liht 2010) that operationalizes Peter Suedfeld's (2010) construct of integrative complexity, and that can be deployed on the Internet. Our approach leverages value complexity as a means to increase the complexity of thinking about issues of potential cleavage between Muslim and British/ western identities. Three different prevention courses, based on the integrative complexity model and facilitated through multi-media group activity learning over 16 contact hours, are the first primary prevention initiatives in the UK to show significant empirical results (measured by integrative complexity coding and other constructs) across three different cultural groups:

- Being Muslim Being British, developed for young British Muslims vulnerable to Al-Qa'ida-related radicalization, Savage & Liht 2010, 2011; Liht & Savage in press, 2013)

- I SEE! a life skills course for a changing Scotland, developed to address Catholic-Protestant sectarianism in Scotland (Boyd-MacMillan & Savage 2013), and

- The Conflict Transformation Course developed for religious leaders of differing theological orientations (Boyd-MacMillan, Savage & Liht 2008).

Significant results from pre and post testing of Being Muslim Being British and I SEE courses show that participants' transcribed group discussions at the beginning of the course show 'us and them', black and white categorical contrasts (an IC score of 1) and at the end of the course evidence an ability to perceive multiple dimensions regarding conflicted issues, and the validity of differing viewpoints, without sacrificing one's own important values (an IC score of 3). Values complexity significantly increases (using Schwartz & Boehnke's values construct, 2004), and conflict style shifts in written moral dilemmas shift to

69

compromise and collaboration, away from competing, accommodating or avoiding (using Kraybill's conflict styles constructs, 2000). With the Conflict Transformation Course, IC similarly shifts from IC score of 1 to 3 in written responses concerning how people thought about their 'theological outgroup'; in I SEE, written responses showed a significant gain in IC but of a smaller magnitude. Overall, there is evidence that the IC-based intervention helps people to think about the issues pertinent to their ideology in more complex ways, and with a greater ability to enter into pro-social conflict resolution.

We argue that the appeal of extremist ideology is lessened by dissolving the false dichotomies and emphasis on a single moral value per issue that is imposed by extremist rhetoric. This is achieved by enabling people to maximise a wider spread of their own values, which motivates greater complexity in thinking (Tetlock 2003). People are more receptive to messages with a complexity level similar to their own when thinking about conflicted social issues, and thus we argue that having higher IC we argue protects from the appeal of extremist messaging (Liht & Savage in press 2013).

In an effort to keep pace with the way extremisms are morphing and proliferating through the Internet, we are planning an on-line version of the IC-based course Being Muslim Being British in the UK. Previous papers discuss how the IC approach is operationalised in facilitated group based courses (Savage, Liht & Williams 2012, Savage 2011, Savage in press). The focus of this paper concerns how the IC approach can be operationalised on-line. This paper concludes with a research design to neuro-image the impact of the IC approach, in group-based courses and when operationalised on-line, and we hope this will offer new understanding for countering terrorism.

But first, how primary prevention on-line can support secondary/tertiary prevention online in the new climate of extremism is addressed in the next section.

Primary Prevention On-line Supporting Secondary-tertiary Prevention

The 2013 Boston and Woolwich attacks signal the changing nature of violent extremism. Extremist networks (Radical and Terrorist, according to McCauley's definitions used in this volume) are diversifying, becoming less centralized and thus more difficult to counter using the conventional means of the last decade. The UK Prime Minister has called for new practical measures to reduce the number of people vulnerable to a range of extremisms in the early stages, to reach them in schools, colleges, universities, prisons and via the Internet. This is the language of broad-based primary prevention[9]. It signals a potential shift in policy from the 'sharp-end', hardline focus of the 2011 UK Prevent III strategy.

Primary prevention is a term borrowed from the field of medical, psychiatric prevention (Caplan 1964, Bloom 1996) and is commonly extended to preventing social problems. Primary prevention of a social problem, such as Islamist extremism, is aimed at the broadest relevant population (not necessarily showing signs of the disorder) in order to cover the widest range of causal factors, including broad cultural and social psychological factors. Its research focus is to understand the deep level causes; its

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[9] Reported in BBC1 News, June 3, 2013.

aim is to increase resilience and decrease vulnerability, increase social support and decrease stressors, in order to reduce the prevalence of the social problem (Williams 2012, Savage, Liht & Williams 2012).

Secondary prevention (Caplan 1964) has a tighter focus. It focuses on early diagnosis, referral and treatment, for example, when someone with Radical opinion (illegal, non-violent) transitions towards (Terrorist) violence. The UK's multi-agency referral programme Channel is a good example of secondary prevention (UK Home Office 2010). Tertiary prevention applies to an even smaller subset where the disorder is in an advanced state. In this case, it concerns work in prisons with those detained on terrorism related charges. For simplicity, in this paper, tertiary and secondary prevention are considered as a single category. What they share in common is a focus on what promotes or inhibits a transition from radical opinion to violent actions.

A much-cited model for researching the question of secondary/tertiary prevention - what promotes or inhibits a transition from radical opinion to violent actions - is McCauley's Two Pyramid model (McCauley & Moskalenko 2008, McCauley & Moskalenko 2010). This model identifies key transition points between the holding of radical opinion (the Opinion Pyramid) and taking action (the Action Pyramid). Orlina & Desjardins (2012) prioritise 78 key transition points from a total of 250. No determinism is implied; individuals can move from one level to another, between pyramids, in any direction motivated by their experience of interventions/inhibitors and activations/ catalysts. This dynamic model is embedded in a given political, social, economic context that also modifies or intensifies the impact of interventions/ inhibitors and activations/ catalysts. The social context is itself tiered, comprising wider society with its socially shared worldview, sacred values, grand narratives and culturally defined degrees of individualism versus collectivism (which in turn affect perception of self and others, Markus & Kitayama 1991). This admirably multi-variate approach illustrates what the sum of research into violent extremism distills: there is no one pathway to extreme opinion or violent actions.

For prevention officers seeking to counter extremist influence on-line (and informed by neuroscience studies), the multivariate, non-determinist nature of secondary/tertiary prevention presents huge challenges. In any one interaction with an on-line individual hinting at progression towards violence, a large number of factors need to be included in a rapid calculus as the prevention worker seeks to offer 'sticky' communication informed by neuroscience studies that connects with the ideologies and grand narratives the user is exposed to, what attitudes, beliefs and behaviours are endorsed by the user (Borum 2011), and how these may interact with the user's personality and neurally-based individual differences. In short, by focusing on the content of ideology, a prevention officer working with an individual on-line, with the aim of subverting or reversing a progression towards violent actions, will need to go through 78 transition points multiplied by an unspecified number of individual and contextual factors to tailor his/her cyber-communication. In all, the proposed research and development needed for internet-based secondary/tertiary prevention is an enormous undertaking, made necessary by the proliferation of extremism on the Internet.

Primary Prevention on the Internet

Primary prevention on the Internet has the advantage here of being able to be successful in the absence of complete knowledge of the etiology of the problem. For example, it was possible to contain the spread of infectious diseases in the latter part of the 19th century as people took measures that were seen to work, yet without complete knowledge of germ theory (Caplan 1964). With primary prevention, doing something strategic to interrupt a pernicious cycle (and then evaluating the outcomes of that intervention) can be sufficient, without having to identify every known pathway and factor for the problem's progression for a given individual or group. The best available account of a social problem improves and focuses prevention efforts when empirically evaluated for effectiveness. That then feeds into its conceptualisation, interventions, further research and evaluation (Williams 2012).

Our approach to primary prevention focuses on the process and structure of thinking, rather than the content of ideology. Our understanding of the deep level causes of extremism centers on the impact that globalization has on different cultures' value hierarchies. It is normal that different individuals or groups have varying hierarchies of importance in regard to their values, as any life context makes it extremely difficult to maximize all human values equally (Liht & Savage, in press, 2013). The interpenetration of cultures resulting from globalization is intensifying a sense of threat to people's values, sacred and secular, for both traditional and modernist cultures. Extremist discourses (whether Islamist or Right Wing) can be understood as a defense against encroachment into groups' value hierarchies.

Extremist discourse prevents value trade-offs by emphasizing one moral value to the exclusion of any other values (Strozier, Terman & Jones, 2010), particularly in regard to values that define group identity. Focus on one single value (per issue) reduces the complexity of the social world in order to maximise in-group coherence and marshal unified action (Savage 2011). Such a move pits the in-group and their most important value against the out-group and their most important value (Suedfeld, Leighton & Conway, 2003). It is well documented that the inability to make trade-offs between competing values results in low complexity reasoning (Tetlock 2003). Based on extensive fieldwork with violent extremists, Scott Atran and colleagues insist that sacred values, which are defined structurally by the impossibility for any co-mingling with other values, play a key role in motivating the actions of extremists (Ginges, Atran, Sachdeva, & Medin, 2011).

This low complexity structure is precisely what analysis of extremist rhetoric shows. Linguistic analysis of extremist communications shows overwhelmingly low complexity of thinking (Conway, Gornick, Houck, Towgood & Conway 2011) measured by various constructs including integrative complexity. Their research shows that violent extremists' (Terrorist) rhetoric is even lower in complexity than their non-Terrorist (but ideologically-similar) counterparts. Research also shows that when IC rises, peaceful solutions to conflict ensue (Suedfeld 2010, Suedfeld, Leighton & Conway 2005). The paper in this volume by Suedfeld, Cross & Logan further substantiates the predictive power of the integrative complexity construct across a range of extremisms: Islamist, Territorial (Northern Ireland), White Supremacist, and Animal Rights. Their study shows that participants' increasing degree of commitment to violent action is attended by an increasing and significant lowering of IC. In short, IC scores differentiate significantly

72

across all three categories of Activist, Radical and Terrorist groups. This research brings new specificity to the decades long track record of cross-cultural integrative complexity studies that show that when IC drops from its recent baseline (measured by IC coding the verbalisations of political decision makers) violent conflict between groups is predicted (Suedfeld 2010). Drawing on the track record of Peter Suedfeld and colleagues' integrative complexity research, our approach to primary prevention considers that whatever pathway towards violent action is taken, what extremist ideologies have in common is a simple binary structure underpinned by value monism. It is precisely this lack of complexity on core issues that offers a site for primary prevention (Liht & Savage in press 2013).

Adapting the IC Prevention Approach to the Internet

The three IC courses described in the introductory section above share the aim of liberating thinking from a defended value monism through group activity learning over 16 contact hours, led by a trained facilitator. The multi-media, group activity based courses employ learning that is interpersonal, embodied, and multi-sensory. We have wondered whether adapting Being Muslim Being British to the Internet may compromise some of the dynamic learning processes. Research into the how cyber communications affect psychological processes (Orlina & Desjardins 2012) indicates that most of the learning processes can be replicated on-line, with the help on on-line mentors, interactive graphics, and video games played 'live' by multiple players with 'live' chatroom follow-up, and support through on-the-ground IC mentors. The efficacy of the 'virtual' IC courses will need to be assessed and compared to the group-based courses, and so the final section of this paper describes the multi-method neuroscience and socio-cognitive design to assess the effectiveness of the online adaptation.

For the planned UK project adapting Being Muslim Being British to the Internet[10], we first identify issues that are conflicted for British Muslims, and represent questions that young people often ask and for whom an Internet portal/website will be attractive. The issues we have selected include British vs. Muslim identity, gender equality, UK vs. Sharia law, Islamic banking vs. capitalist systems, halal and haram, charity, political participation vs. jihad, Prophets within Abrahamic traditions, different religions, science and the new atheism, and angels and jinns. These questions will be addressed and scaffolded by activities to promote differentiation and integration, the two aspects of integrative complexity (Suedfeld 2010, Suedfeld, Logan & Cross, this volume).

Differentiation pertains to the ability to perceive multiple viewpoints, dimensions and causal factors in regard to an issue. To promote differentiation, for each issue four different viewpoints, neutrally labeled, will be presented using film clips of influential Muslim speakers espousing positions such as: a) Caliphate, b) Conservative/Salafi, c) Muslim Engaged with the West, and d) Radical/ Extremist. Each of the filmed interviews will have hyperlinks with vetted websites for users to peruse if they so wish. This approach relativizes extremist opinion rather than countering it with the 'right answer'. This approach avoids provoking reactance or reinforcing a binary style of thinking. It gradually becomes clear that extremist opinion is not the only answer to pressing issues for Muslims, and enables extremist opinion

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[10] A project planned in collaboration with senior Prevent practitioner Anjum Khan; See   www.collaborativeventures.co.uk

to be sifted in light of a wider range of respected ingroup viewpoints.

This first step of differentiating needs to be processed in a safe, boundaried way, lest the new complexity of respected ingroup viewpoints becomes overwhelming. For this, integration activities online are needed. For the second step of integration, graphic-supported and video game learning activities will help users to 'ladder down' to discover the values that underlie the different viewpoints. This enables users to learn to discover for themselves which values are most important to them personally, as well as being able to identify which values are motivating the speakers of each the different viewpoints per issue.

Exploring a value spectrum involves understanding the real-world tensions that are incurred in the outworking of both ends of the values spectrum. To enable greater specificity in thinking (and to avoid black and white categorization) we encourage participants to 'think with their bodies and emotions' (Williams, Teasdale, Segal & Soulsby, 2000) in group base courses. On-line, we will invite users to take on an 'Avatar' through computerized graphics. Through an Avatar, users will be able to explore all points along a value spectrum, laid out, as it were, across the floor. By the Avatar standing in different positions and experiencing the pushes and pulls of the opposing values, users can discover where they as individuals want to stand, and from which they can 'try out' different value trade-offs, expanding their own hierarchy of values. In this way, it becomes possible to avoid threat to important values that 'either/or' thinking evokes. Chat rooms, supported by an IC online mentor will be available for these initial integration tasks.

From here, further experience of integration becomes possible: the finding of linkages and higher order syntheses of the different viewpoints on the issues through on-line role-play. Using interactive software, role-play activities will be choreographed that re-create the social psychological dramas around the issues. Different viewpoints (from the film clips) will be enacted by characters in the role-play so that value trade-offs become interpersonal. The role-plays will require concurrent online players (as in 'live' online poker games) at set times during the week. Each player will takes on a different 'IC level' Avatar. Each Avatar is scripted with a particular conflict style and IC level. Each player experiences the consequences of their Avatar's interactions. Users will be encouraged to debrief and share insights in chat rooms, blog sites and with IC mentors online. Follow up games could allow players to completely script themselves, and to experience the consequences of different solutions to the role-plays.

Another example taken from Being Muslim Being British (BMBB; Savage & Liht 2010; Liht & Savage 2011) involves an online game in which participants have to evaluate two different modes of political decision-making: one democratic (involving the value of self-direction), and the other religious, for example, under a Caliphate (involving the value of religious tradition and conformity to social roles). To do this they have to use two different modalities: one describing both decisional methods verbally, and the other, describing them non-verbally, using online drawing and graphics software. In group-based BMBB experience, those using only words to describe the two means of decision-making resulted in dichotomous thinking: no commonalities or ways of relating the two forms of decision-making were found. Using words only, democratic and religious decision-making were described as black and white

oppositional contrasts. But when the participants used non-verbal methods, both modes of decision-making were seen in greater detail and with greater areas of commonality between them. Experiential, sensory-based learning can help users to be liberated from categorical thinking and the social pressure arising from radical discourse that presents democracy and theocracy as completely alien to each other. In this way, users can be helped to move intuitively towards a sense of 'gestalt' underlying the viewpoints in tension (Liht & Savage in press).

Another role-play that can be deployed online follows the contours of the well-known 'Blind Date' television show, and again ideally requires concurrent on-line players (or scripted Avatars). This role play explores the impact of the tension between communitarian versus individualist pressures, acted out in role play in which different male suitors try to 'sell' themselves to 'Aisha', a potential bride, while other group members play Aisha's parents, family and community/religious leaders who seek to influence her. The different roles allow the enacting of communitarian influences, pitted against Aisha and her friends who are arguing for individualism in regards to marriage choice. This activity is geared to enable participants to explore new ways to find integrations, middle-ground value trade-offs, in order to maximize, as the participants see fit, something of both communitarian and individualist values (Liht & Savage, in press, 2013).

Similar to the group-based IC courses, online IC learning needs to be fun, accessible, transparent, and empowering for participants' daily lives. There is no 'driving' the kind of integration participants should use. Rather we enable participants to 'try out' an array of integrations and to experience or imagine the consequences. Integrations can range from harmonizing integrations (that dissolve false dichotomies), to synthesizing integrations (such as Hegelian thesis, antithesis, synthesis), to win/win trade-offs, compromises and contextual thinking, to clashing paradigms that require a larger reframing to make sense of irresolvable difference (Reich 2002). Participants conclude the activity when they are satisfied that their solution to a social problem is true to their own values, as well as 'true to life'. In doing this, all viewpoints are given consideration, even the extreme ones, but without having to sacrifice other competing values – which is required when people are expected to adopt every aspect of extreme opinion. Practicing different integrations neutralizes the mobilizing impact of extremist opinion because participants now have more advanced skills to apply to complex social conflicts. At a higher level of complexity in thinking, new social realities become possible.

As there are cognitive and social costs for higher levels of complexity in thinking (Suedfeld, Leighton & Conway 2003), the raising IC beyond the value monist position is a crucial but initial step on a longer journey towards developing the meta-cognition skill of flexibly adapting IC to the needs of the current context. That larger aim and context will be taught through the overall pedagogy of the website, and supported by activities such as Active Listening, negotiation games, role plays and so forth. This larger meta-cognition aim means that black and white moral values do not have to be eschewed. Rather they can be incorporated cumulatively into a more complex understanding that includes them, but does not collapse them into value monism.

Our colleague Anjum Khan recommends that the planned website should be linked with on-the-ground

75

prevention workers so that there is a two-way sharing of information. On-the-ground Being Muslim Being British courses, linked to the website, are also advantageous for building a moderate mentoring network.

Complementing Other Prevention Methods on the Ground and Online

The IC approach (on-line and on the ground) complements other primary prevention initiatives such as those that explore new narratives, involve in social action or bridge-building through cultural exchanges and artistic ventures, develop empathy for victims of extremist violence, or hear cautionary tales from ex-radicals. These forms of primary prevention implicitly involve an ability to perceive other's viewpoints and values in more complex ways. The IC approach suggests ways forward for measuring the effectiveness of these other primary prevention initiatives and offers a language for these initiatives to 'talk to each other'.

The IC approach also complements secondary/tertiary methods, particularly in view of the predictive power of the IC construct for identifying growing commitment to violent action (Conway et al 2011; Suedfeld et al, this volume). In regard to online secondary/tertiary prevention, the IC approach online can plugs gaps arising from incomplete information of the factors influencing transitional pathways of a particular individual online. To enable this, we would provide IC training for secondary/tertiary prevention workers as well as U.S. adaptation of the kind of the on-line IC presence we have planned for the UK.

An Online Primary Prevention Neuroscience Study

All of this needs to be assessed. This section describes a neuroscience study to assess, first, the impact of the IC courses on the ground in conjunction with the already existing pre and post testing method, and then secondly, comparing that to the impact of the online course. Another favourable comparison presents itself here. While prevention workers in secondary/tertiary prevention aim to harness neuroscience *indirectly* for their on-line work, this requires finding parallel neuroscience studies performed on the general (or abnormal) population that have some application to specific transitions towards violence. This invites many unseen and confounding factors, complicating interpretation of parallel neuroscience studies. Direct neuroscience such studies on hard-to-research extremist enclaves are understandably not envisaged. The conditions required for *direct* neuroscience prevention are, however, met with the IC approach. Direct neuroscience research requires an already developed theoretical framework that accounts for extremisms and that has been developed into testable method of prevention. It is helpful that we have initial empirical results that are replicated across three cultural groups, strengthening the assumption that brain-based affects may be found. For direct neuroscience studies, it is also necessary that hypothesized changes in response to relevant stimuli can be operationalised within the practical constraints of, for example, an fMRI functional neuroimaging scanner, with the stimuli on a computer visible to the participant in the scanner, with a handheld response panel. The film-based aspect of the IC approach makes this feasible. A direct neuroscience study also needs to be able draw in volunteers from relevant target groups for a study carried out in a transparent and ethical manner. We are in a good position to meet these conditions.

76

We propose that the neuroscience data we gather will be triangulated with other biological and psychological data for meaningful interpretation along with our usual pre and post testing, IC coding method (using Baker-Brown, Ballard, Bluck, de Vries, Suedfeld & Tetlock's 1992, validated IC coding frame). It is widely acknowledged, particularly among neuroscientists, that neuro-imaging is not sufficient to explain complex human cognition: the colourful scan images that capture the functioning of the human brain do not tell us about the meaning, purpose, and content of those neuronal processes - that requires social and cognitive psychology in triangulation with neuroscience.

For the first study, the primary prevention neuroscience study we propose will recruit participants from on-the-ground IC courses for the experimental group. The control group will comprise demographically matched participants who do not undergo the prevention course but will have a similar time interval between the pre and post testing. For the second study, when the proposed on-line version of Being Muslim Being British is up and running, we will use computer-based stimuli while the participant is in an imaging scanner. Pre and post testing will involve functional magnetic resonance (fMRI) scans to measure neural activation in response to the computer-based stimuli. As well, parallel biological measures, and cognitive, social psychological measures (IC coding, values coding, conflict style, outgroup empathy-related and mobilisation behaviours, and neurally-based individual differences questionnaires) will also be gathered.

To assess the effectiveness of the IC approach in liberating thinking from value monism (for both group-based and on-line studies), we plan to adapt an experimental paradigm used by Berns, Bell, Capra, Prietula, Moore, Anderson, Ginges and Atran (2012) using functional magnetic resonance imaging (fMRI). We will assess the effect of the IC course through pre and post testing on participants' ability to find trade-offs when key values are invoked. Barnes et al (2012) found that concerning 'sacred' values people refused to sell (termed sacred values, because participants could, but refused to, 'auction off' them for up to $100), there were increases in brain activity in brain areas known to be involved in categorical right-wrong decisions. These brain areas were activated, not the cost-benefit/utilitarian areas of the brain. They found this held true for values dictated by secular law as well as those that are not, for example, belief in God. In addition to right-wrong thinking, these same parts of the brain have been implicated in language rule and other rule retrieval. This suggests that 'sacred', taboo for trade-off values, affect behaviour through the retrieval and processing of deontic rules (categorical moral reasoning) and not through a utilitarian evaluation of costs and benefits. The researchers also found that 'sacred' values thinking ('not for sale', or taboo for trade-off values, Tetlock 2003) activated the amygdala (in the middle brain's limbic system, the emotional center of the brain and the site of fear, which triggers the fight/flight/freeze response). This is important for understanding the link with integrative complexity, as the limbic system has only a limited range of basic categories with which to parse the social world, such as predator, prey, mate, offspring, parent, Haidt 2006). It makes sense of the known connection between fear and cognitive constriction. Berns et al conclude that when individuals fail to make trade-offs, positive or negative incentives are ineffective at best (Berns et al 2012).

We will test whether the IC course primary prevention enables people to reframe 'not for sale' values

with the help of IC scaffolding, and whether this enables them to engage in higher complexity trade-offs that still protect their core value (assessed through interview after the fMRI session). Neuroscience, we hope, will provide an inside story on what is happening through the gains in IC that the pre and post testing of IC courses enables.

We will also look for an increase of brain activation and corresponding neuronal spread (indicating increased complexity in thinking) in response to the stimuli such as statements and film clips about the ingroup/outgroup). Here, there is no prior expectation concerning which brain regions will show increased activation or neuronal spread as neurological individual differences are so large that the location of increased activation may vary between participants. This hypothesis is built upon the premise that there will be increased neuronal spread in the post condition, after an IC course, indicating greater complexity of thinking, parallel to the difference in complexity between belief versus disbelief (Harris, Kaplan, Curiel, Bookheimer & Iacoboni, 2009).

During scanning, we will also undertake some exploratory studies. For these, we will examine scans individually, pre- and post-test, and not make group-based comparisons. The next two exploratory hypotheses are thanks to Lianne Vostermans, postgraduate student at the University of Cambridge, who identified the parallel studies. These two exploratory analyses will tell us something about the underlying 'story' concerning which aspects of the course enabled that individual to progress towards complexity in thinking and values. We will examine differences pre and post the IC intervention to see if resilience to threat (measured as recovery from the top-down opponent process towards the limbic system and amygdala) is greater in the post condition. Based on a study by Jackson, Mueller, Kim, Dalton, Nitschke, Urry, Rosenkranz, Ryff, Singer & Davidson (2003), greater levels of resilience are related to greater levels of left pre frontal cortex activation as compared to right pre frontal cortex (PFC) activation. The amount of activation in the left PFC region of a resilient person can be thirty times as high as that in someone who is not resilient (Davidson & Begley, 2012). Not only does a resilient person enjoy higher activation levels in the left PFC; he/she also has stronger inhibition to slow down responses of the amygdala. This is extremely relevant to counterterrorism as Le Doux (1996) has demonstrated that the neuronal signals of the amygdala are faster and more powerful than those of the neo-cortex. It is not possible in the short term to 'think more complexly' when in the grip of the amygdala's fight/flight/freeze response. Threat to important values needs to be avoided, and that is assisted by developing the neural pathways that build resilience in the left PFC. We are interested to see if the IC approach course does build resilience to threat to important values. To accompany the resilience data of the fMRI scans we will conduct blood pressure measurements to see if this goes with lower blood pressure (or less variation) post- as compared to pre-test.

Next, we plan to explore whether the IC course enables a broader focus of attention for individuals (indicating increased inter-communication between the left and right hemispheres). A good test to see if IC resources on-line enable cognitive reframing of biases and binary categories in the same way that face-to-face, embodied group activity learning does, we will measure the modus of attention using a method called attentional blink (AB) (Raymond et al, 1992). High AB is related to focused-attention; whereas low AB correlates with open, non-judgmental attention (as found in meditating Buddhist

78

monks) (Davidson & Begley, 2012). We hypothesise that AB reduces in the intervention, due to explicitly taught IC skills (e.g. trying to make connections, being impartial, open-minded) and explicitly taught social skills (e.g. active listening, negotiation, mediation) as well as implicitly taught social skills (e.g. inter-group dialogue, out-group friends/acquaintances). We think a wider focus of attention (involving right-left hemisphere communication) is behind the ability to see commonalities between democratic and religious decision making in the non-verbal condition described above.

Finally, we will assess empathy-related choices in which the participant chooses different behaviour options while in the fMRI scanner. We will do this through creating a dilemma in which members of participants' outgroup are seen to suffer pain (in a film). Participants will choose from the options of 'help', 'watch other neutral film clip', 'watch pain', based on a study by Hein, Silani, Preuschoff, Batson & Singer (2010).

Pre and post the IC course, we will ask our participants to complete neurologically-related individual differences questionnaires so that these can be used to benchmark any change in empathy, attentional style, or resilience to threat to values as a result of the IC course. If we achieve significant results through any the above neuroscience methods, and in comparison with those same participants' IC pre and post testing IC coding, values complexity and conflict styles data, we will have gained the first direct neuroscience evidence concerning the impact of a primary prevention method that can be used for a range of extremisms. This information will be valuable to secondary/tertiary prevention, and will inform the interpretation of indirect, parallel neuroscience studies relevant to counterterrorism.

Long Term Impact

The IC method has the markers of high impact and memory retention: the course experience concerns issues that are personally important, that maximise participants' deep values, is multi-sensorial and interpersonal. The impact of this kind of learning never completely disappears from the brain, according to meta-research on interventions (Pettigrew 2011) and neuroscience studies (Greenfield 2003, Pascual-Leone 2001). Further, we have IC coding evidence (from I SEE data) showing that the course leverages a change at a less-than-conscious level, seen in differentiation strategies we did not teach (such as alternative perspectives emerge through time considered valid; new perspectives grow out of old ones, recognizing that both the old and new are valid; sensitivity to the input of experience on perception; complex conditional reasoning; conditions for a hypothetical outcome are stated; and the conditional nature of the projected sequence of events is stated). There is also evidence of explicitly taught complexity skills, e.g. the ability to see some validity in different viewpoints (Boyd-MacMillan & Savage 2013).

Nevertheless, only longitudinal research can determine the long term impact, for which we aim to include a longitudinal design as a voluntary aspect of the on-line IC course. The sum of neuroscience points to brain plasticity (Pascual-Leone 2001): the brain operates a 'use it or lose it' policy. Therefore, to guarantee long-term prevention gains, we need to promote ongoing practice of IC. Neuronal pathways that are repeatedly exercised become more powerful, efficient, and automatic so that these

79

neuronal pathways are more readily accessed in times of perceived stress or threat. We think on-line interactive games, if they are fun and rewarding to do, and if they provide real world gains (such as a certificate of course completion as a marker of attainment in 'social intelligence' – which is valuable in the job market) are the most efficient means to achieve this.

Conclusion

The IC approach does not assume a linear set of causes, nor that it would be possible to reverse those causes if they could be identified. Rather it takes an emergentist model of change, that at higher levels of complexity new pro-social, non-violent means to address social conflict become possible (Savage 2011, Savage in press). The plasticity of the human brain means that humans have ample potential for developing new, more complex neuronal pathways and that these pathways can be developed in a relatively short space of time

The integrative complexity primary prevention method brings unique benefits to the overall map of prevention – and particularly so in the new context of prevention that seeks to be internet-based and informed by neuroscience. The IC approach online is cost effective in that it does not need to isolate an entire etiology for every individual. The focus on structure of thinking, rather than content, keeps pace with changing expressions of extremism, resolving the futility of chopping off new expressions of extremism as others sprout up without addressing the deepest root cause - an inability to adapt to post-modern globalised conditions of cultural inter-penetration and widespread lack of cognitive and social skills to address injustices in non-violent ways.

One last word about the knowledge arms race. It would seem an imbalance of knowledge (and knowledge is power) if only 'experts' have the neuroscience and captology know-how with which to influence people's thinking online. We are happy to promote a democratization of neurally-informed meta-cognition on the Internet using a dual pronged strategy - one for particularly at risk groups (as in Being Muslim Being British) and two, to reach the widest population through general online IC education, so that as many people as possible can learn to see through the rhetorical strategies of any extreme persuasion.

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Two Possible Profiles of Lone-actor Terrorists

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Abstract
We review recent research to suggest two possible profiles of lone-actor terrorists. *Disconnected-disordered* individuals are loners who often have a history of mental disorder, especially depression. *Caring-compelled* individuals feel keenly the suffering of innocent others, and feel personal responsibility to bring justice to those seen as responsible for this suffering.

Recent events have brought increased attention to a rare form of terrorism: lone-actor terrorists. On November 5, 2009, U.S. Major Nidal Malik Hasan attacked fellow soldiers at Fort Hood, leaving 12 dead and 31 wounded. On March 2, 2011, two U.S. soldiers died after a lone gunman, Arif Uka, attacked them at Frankfurt airport. On July 22, 2011, Anders Breivik killed 77 civilians in and around Oslo. President Obama described the problem as follows (Associated Press, 2011): "…the risk that we're especially concerned over right now is the lone wolf terrorist, somebody with a single weapon being able to carry out wide-scale massacres of the sort that we saw in Norway recently. You know, when you've got one person who is deranged or driven by a hateful ideology, they can do a lot of damage, and it's a lot harder to trace those lone wolf operators."

Lone-actor terrorists are those who plan and carry out an attack without assistance from others. They see themselves as representing some larger group or cause and may have some experience in a group, organization, or social movement related to this cause. Their grievance is thus shared by many although their attack is carried out alone.

In this paper, we argue that lone-actor terrorists may have common characteristics that could help identify high-risk individuals. We begin by identifying the psychological puzzle in understanding lone-actor terrorists: what distinguishes the rare lone actor from the many with similar opinions? Then we review the relatively few and recent studies of lone-actor terrorists to show an emerging statistical profile of individuals who are social loners, often with some history of mental disorder. A very different profile emerges from consideration of two case histories of lone-actor terrorists: two individuals with solid social connections and unusual capacity for empathy and outrage.

The Psychological Puzzle of Lone-actor Terrorism

Lone-actor terrorists are risking life and liberty for their cause. Why would any individual take this kind of risk? More generally, why would any individual choose to sacrifice for a cause?

The usual answer to this question is that group, organizational, and cultural pressures move us to do what we would not choose to do if we considered only our personal welfare (Moskalenko & McCauley, 2011). Small group dynamics can provide rewards for those who take risks and make sacrifices for the group, and punishments for those who do not. Organizations similarly provide rewards for those--fire, police, soldiers--who take risks for organizational goals, and punishments for those who shirk their duty. Larger cultural pressures can provide additional contingencies: status for the man or woman in uniform, a look of scorn or 'white feather' for the young person on the street in civilian clothes in time of war.

The psychological puzzle presented by the lone-actor terrorist is that the individual takes risks and makes sacrifices as a free choice, not subject to social pressures. The lone-actor does not feel the power of group dynamics and group pressures, does not have institutional support, and prepares an attack in secrecy that avoids cultural pressures. For the lone-actor, action is freely chosen with an anonymity akin to that provided by a voting booth. The puzzle then is why an individual would freely choose violence for a cause, knowing that the choice will be costly in terms of self-interest.

Radical Opinion

One possible answer to the puzzle is that extreme or fanatic beliefs push some individuals to violence. This possibility implies a single dimension of radicalization, ranging from individuals who care nothing about a cause to those who believe in the cause so strongly that they are ready to risk their lives for it. It is plausible and even intuitive that radical ideas produce radical behavior, and Silber and Bhatt (2007) popularized the single-dimension model in their N.Y.P.D. report, *Radicalization in the West: The homegrown threat*. The single-dimension model is similarly embodied in the metaphor that groups advancing extremist ideas are a "conveyor belt" to terrorism (Caldwell, 2006). In this view, terrorist violence is the radical behavior that proceeds from radical ideas.

More recently, however, three kinds of evidence have contradicted the single-dimension model of radicalization.

First, there are individuals who move to violence without support of radical ideas. Using case history material from terrorist groups ranging over continents and centuries, McCauley & Moskalenko (2011) identified twelve mechanisms of radicalization. At the individual level, the mechanisms include personal grievance, group grievance, love, slippery slope, risk and status seeking, and loss of social connection (unfreezing). Four of these six mechanisms can move individuals to join a terrorist group without any help from radical ideas or political grievance. Some individuals join a terrorist group to get revenge for some harm done to them or their loved ones (personal grievance). Some join because a friend or relative asks them for help (love). Some join because they seek the thrill and status of guns and violence (risk and status seeking). Some join for social connection and comradeship (unfreezing). Thus, radical ideas are not required to join a terrorist group, although most individuals probably learn some kind of conflict ideology after joining.

Second, radical opinions are common but terrorists are few and lone-actor terrorists even fewer. The 2007 Pew poll of U.S. Muslims included the following item. *Some people think that suicide bombing and other forms of violence against civilian targets are justified in order to defend Islam from its enemies.*

Other people believe that, no matter what the reason, this kind of violence is never justified. Do you personally feel that this kind of violence is often justified to defend Islam, sometimes justified, rarely justified, or never justified? In 2007 and again in 2011, about eight percent of U.S. Muslims said that this kind of violence is often or sometimes justified (Pew Research Center, 2007; 2011). Eight percent of the approximately one million adult U.S. Muslims projects to approximately 80,000 who justify suicide bombing against civilian targets in defence of Islam. But only hundreds of U.S. Muslims have been arrested for violence-related offences. In other words, fewer than one in a hundred justifying suicide bombing are trying to do any kind of political violence.

Third, research on de-radicalization has highlighted the difference between extreme action and extreme opinion (Bjorgo & Horgan, 2009). Some captured jihadists are willing to give up violent action but not ready to give up extremist opinions. Others are willing to give up both violent action and extremist opinions. The first kind of change is de-radicalization of action without de-radicalization of opinion. The second kind of change is de-radicalization of both action and opinion. The disjunction of action and opinion is not consistent with the idea that it is extreme opinion that produces extreme action.

Thus, three kinds of evidence weigh against the single-dimension view of radicalization that assumes bad behaviour begins in bad ideas. Many individuals move to terrorism before they acquire extreme ideas. Ninety-nine percent of those with extreme ideas never act. And individuals can give up extreme action without giving up extreme ideas.

From this evidence Leuprecht, Hataley, McCauley and Moskalenko (2010) argued the need to consider radicalization of action as a separate problem from radicalization of opinion. They suggested a two-pyramids model of radicalization, with radicalization of opinion represented in one pyramid and radicalization of action in a separate pyramid.

The base of the Opinion Pyramid are those with no sympathy for a cause, the second level are those who sympathize with the cause but do not justify violent means, the third level are those who justify violent means (e.g. suicide bombing in defense of Islam), and the apex of the pyramid are those who feel a personal moral obligation to take up violence in defense of the cause.

The Opinion Pyramid represents the 'war of ideas' between terrorists and the government. Polling data from a particular population at a particular time can provide a snapshot of how the war is going, as shown in the percentages associated with the different levels of radicalization in the opinion pyramid. Tracking polls, with repeated measurements over time, can provide a trajectory of success or failure in the war of ideas as polling data show shifts in the percentages of poll respondents with more and less radical ideas (McCauley & Stellar, 2009).

Turning now to the Action Pyramid, the base of the pyramid are those doing nothing for a cause, the second level are those who participate in legal political action for the cause (activists), the third level are those who break the law in support of the cause (radicals, including violence against property), and the apex of the pyramid are those who attack civilians in support of the cause (terrorists). Al-Qa'ida, for instance, is at the apex of the pyramid; Hizb-ut-Tahrif is at the second level. It is worth noting the disjunction between ideas and action for Hizb-ut-Tahrir: their ideas are extremist, they want restoration of a world caliphate just as al-Qa'ida does, but they believe that this is not the time for violence.

The two-pyramids model represents a long tradition of research in social psychology that has found a weak relation between attitude and behaviour (Sabini, 1995). A strong relation between attitude and behaviour is usually found only in special circumstances, such as a voting booth. In everyday life, action

86

depends not just on attitude but on cultural norms, group norms, habits, and local rewards and punishments.

To return to the puzzle with which we began, the two-pyramids model means that extreme opinions cannot be taken as sufficient cause or even the proximate occasion of extreme behaviour. More specifically, extremist opinions are not an adequate explanation of the self-disregarding behaviour of lone-actor terrorists. There are hundreds of Muslims with extreme ideas for every lone-actor Muslim terrorist.

Statistical Studies of Lone-actor Terrorists

If radical ideas cannot explain lone-actor terrorists, perhaps bottom-up empirical studies can unlock the puzzle. In an early example of this kind of research, Hewitt (2003) identified 27 lone-actor U.S. terrorists between 1955 and 2001 and suggested that the rate of psychological disturbance was higher (6 of 27) among the loners than among other U.S. terrorists. More recent studies of lone-actor terrorists point in the same direction.

Spaaij (2012) examined 88 cases of lone-actor terrorists aggregated across fifteen Western countries and found that lone actors are likely to suffer from some form of psychological disturbance and tend to be loners with few friends. Gill, Horgan, & Deckert (in press) put together an international collection of 119 mostly lone-actor terrorists (including also isolated dyads and some individuals with loose group connections). No single profile was identified but many of the lone-actors seemed to be socially isolated. In the most methodologically sophisticated study yet conducted, Gruenewald, Chermak and Freilich (in press) compared lethal attacks by lone-actor and group-actor U.S. far-right extremists. Results indicated that the lone-actors were younger and more likely to have a military background, more likely to suffer mental illness, and more likely to experience disconnection by separation, divorce, or death of a partner.

Expanding the search, McCauley, Moskalenko, and Van Son (2013) sought to develop hypotheses about the characteristics of lone-wolf terrorists by looking for the common characteristics of two kinds of mostly lone-actor violent offenders: assassins and school attackers. The study used existing U.S. government-sponsored reports to examine these two kinds of offenders.

The logic of comparing school attackers with assassins is that these two groups of offenders are like lone-actor terrorists in perpetrating planful violence fueled by grievance. To the extent that assassins and school attackers share common characteristics, these characteristics may be risk factors for lone-actor terrorism as well. The obvious demographic differences between the two groups (teenagers vs. adults) are actually a strength of the comparison: any commonalities uncovered are the more striking and unlikely to be a reflection of life status or demographic factors.

The common characteristics of assassins and school attackers were found to include grievance, depression, unfreezing (broken social ties), and weapons use outside the military. These four characteristics suggest the importance of means and opportunity for perpetrating violence. Grievance is a motive for violence, weapons experience provides a means, and depression and unfreezing lower the opportunity cost of violence as the perpetrator has less to lose.

An illustration of these characteristics can be made for the case of Major Nidal Malik Hasan (McKinley & Dao, 2009). Major Hasan turned to the Koran after the death of his parents, seems to have had no close relationships after he was transferred to Fort Hood, and was about to be transferred to Afghanistan

(*unfreezing*). He saw himself discriminated against as a Muslim (*personal grievance*) and saw the war on terrorism as a war on Islam (*political grievance*). He brought two weapons to his attack, one a sophisticated 'cop-killer' pistol for which he purchased a laser sight – indicating *experience with weapons* beyond whatever slight weapons training the U.S. Army provides for physician-psychiatrists. So far as we can ascertain, Major Hasan showed no signs of depression. Thus, Major Hasan had three of the four characteristics common to assassins and school attackers: unfreezing, grievance, and weapons experience.

Taken together, these results provide a developing indication that grievance-fueled lone attackers are likely to have weapons experience, depression or other mental disorder, and temporary or chronic social isolation. McCauley & Moskalenko (in press) call this the *disconnected-disordered* profile. Future research may discover characteristics that differentiate lone-actor terrorists from assassins and school attackers, or it may turn out that lone-actor terrorists are part of a larger phenomenon of grievance-motivated lone-actor violence.

A Second Profile

There are lone-actor terrorists who do not fit the disconnected-disordered profile—individuals who are not loners and not suffering mental disorder but who nonetheless undertake lone-actor terrorist violence.

One such case, described by McCauley and Moskalenko (2011) is Vera Zazulich. A young Russian woman who had spent time in Siberia for anti-tsarist political activities, Zazulich heard about a student prisoner beaten for failing to doff his cap to the prison governor. Zazulich was outraged; she tried to learn if the terrorist group People's Will was going to bring vengeance against the governor. The militants brushed her off. She decided someone had to do something, she procured a pistol, went to see the governor, and shot him. After a tumultuous trial, she was acquitted and spirited out of Russia before the tsar could countermand the acquittal. In exile she wrote and debated with the likes of Vladimir Lenin; she showed no sign of mental disorder and was connected with many political activists in exile.

Another such case, also described by McCauley and Moskalenko (2011) is Clayton Waagner. Beginning in the 1970s, Waagner was convicted of various acts of theft and burglary, and in 1992 he was sentenced to four years for attempted robbery. Released from prison, he was in Pittsburgh in January 1999 when his daughter Emily went into premature labor, producing a granddaughter, Cierra, born dead at 24 weeks. Waagner's commitment to fight abortion began when be held Cierra, touched her soft skin, and looked at her tiny but perfectly formed face and body. He says that he heard an internal voice, the voice of God: "How can you grieve so hard for this one when millions are killed each year and you do nothing."

In September 1999, he was driving with his wife and children in a Winnebago that broke down. Police found stolen firearms in the stolen vehicle, and Waagner admitted that he was planning to use the weapons to kill abortionists. Convicted for theft and firearms violations, he escaped from prison in February 2001. He describes tracking and finding an easy shot at several abortion doctors, but could not bring himself to pull the trigger. He kept moving with auto theft and robbery, and changed his plans: he would use fear instead of bullets.

In October 2001, he sent out 285 letters to abortion clinics across the USA. Each letter contained a quarter-teaspoon of white flour and an anthrax threat. Coming soon after the still-unsolved anthrax attacks that followed the 9/11 attacks, the letters were taken seriously and seriously disrupted clinic operations. In November 2001, still on the run, he sent out 269 more letters to abortion clinics.

88

Anticipating doubts and accelerated testing after the first hoax, he included in the white powder traces of a substance known to test positive in the most common test for anthrax. Again, he succeeded in shutting down many clinics. Captured in December 2001, he is serving a 30-year jail sentence in the U.S. Penitentiary in Lewisburg, Pennsylvania.

Before holding his dead granddaughter, Waagner was at the second or third level of radicalization in the Opinion Pyramid: he sympathized with those fighting abortion and may even have seen violence against abortion providers as justified. But he was doing nothing in the fight against abortion, that is, he was inert in the base layer of the Action Pyramid. His grief holding his dead granddaughter turned to guilt for doing nothing about the millions of children aborted, and from grief and guilt came radicalization in both the Opinion and Action Pyramids. As with Vera Zazulich, strong emotion made the personal political; he felt suddenly a personal responsibility for action that radicalized him to the apex of the Opinion Pyramid. He moved also to the apex of the Action Pyramid (Terrorists) as he stalked abortion providers.

Interesting here is the fact that Wagner had targets in his sights but could not pull the trigger. He was forced down the Action Pyramid to fight abortion with threats of violence that were in fact harmless. With his anthrax letters, he moved from the terrorist apex of the Action Pyramid to the radicals level of illegal political action without violence.

The two cases described—the tenderhearted secretary and the man of action—offer several clues for understanding how individuals can leave self-interest and loved ones behind to take risks in lone-actor terrorism. Both were sympathizers with a cause and perhaps justifiers of violence in support of that cause. That is, both were in the middle levels of radicalization in the Opinion Pyramid. Zazulich had already reached the third level of the Action Pyramid in illegal anti-tsarist activism. Waagner too had broken laws but remained in the inert base of the Action Pyramid doing nothing to fight abortion. For both, something of great emotional significance occurred—unpunished violation of a student, death of a granddaughter—and the political became personal. In both cases, the emotion came from identifying with—caring about—the welfare of others. Both were radicalized to feeling a personal moral obligation—the apex of the Opinion Pyramid—and both attempted to kill perpetrators of violence against those they cared about—the apex of the Action Pyramid.

What moved both, while others who shared their convictions did nothing, seems to have been an unusual capacity to care about the suffering of others. Both had solid social connections and no sign of mental disorder. McCauley and Moskalenko (in press) call this the *caring-compelled profile* of lone-actor terrorism. The capacity for empathy or sympathy is generally seen as quintessentially human and eminently humane. Here we have a hint that there can be a dark side to caring greatly about others. Individuals can kill for love, including love of strangers seen as victimized.

Conclusion

Research has indicated that the pathways to participating in a terrorist group are many and too varied to admit the possibility of a profile of individual characteristics that can identify potential terrorists (McCauley & Moskalenko, 2011). But there remains the possibility that lone-actor terrorists—those who act without group or organizational support—may share characteristics that could provide a useful profile of potential for lone-actor violence.

Indeed results reviewed in this paper indicate that there may be at least two profiles for lone-actor terrorists. Statistical studies indicate a *disconnected-disordered* profile: individuals with a grievance and

89

weapons experience who are socially disconnected and stressed with psychological disorder. But we have advanced two case histories that do not fit this description: Vera Zazulich and Clayton Waagner had social skills, solid social connections, and no sign of mental disorder. Rather these cases tentatively suggest a *caring-compelled* profile: Zazulich and Wagner felt strongly the suffering of others and a personal responsibility to reduce or revenge this suffering. We suspect that the caring-compelled profile is less common than the disconnected-disordered profile—not least because self-sacrifice for others is less common than self-interest—but this hypothesis will have to be tested as we learn more about lone-actor violence.

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Countering Terrorists: Psychological Risk Factors of Radicalization

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Abstract

Counterterrorism is not necessarily about combating a phenomenon or its' tactical manifestation, rather it is countering those who perpetrate the associated acts. There is no empirically based psychological or demographic profile of such a person that would indicate a predisposition toward joining violent extremist organizations. There are, however, environmental, social, and individual characteristics whose presence may increase the likelihood of participating in an act of terrorism. What follows are a proposed set of individual psychological risk factors for individual radicalization. The behaviors or attributes described merely point to a possible increase in the willingness to participate in or actual perpetration of political violence. While derived from the limited available empirical evidence, additional research is still required to validate these risk factors and ultimately establish them as indicators and warnings of terrorist behavior.

Key points:

- Terrorism is a form of psychological warfare and thus focusing on the psychological aspects of its participants and effects is necessary.
- Studying the individual psychology of terrorists will not necessarily help alleviate terrorism, but it will help counterterrorists.
- While there is no empirically based profile of the terrorist, by and large the individuals who seek to affiliate with a VEO and/or commit an act of terrorism are not mentally disordered (although there are exceptions).
- Risk factors are not deterministic, but they are helpful in prioritizing individuals who may become terrorists and/or understanding the motivations of those who have already joined or committed an act.
- In order for the psychological theories of radicalization to be operationalized, the associated hypotheses must be tested and replicated to ensure for any updated counterterrorism strategy, and ultimately tactics, rest upon sound scientific and technical support.

Introduction[11]

Terrorism is a set of tactics by which a group seeks to impose its will on a selected target audience (Banks & James, 2007) that have proven to be one of the more effective forms of psychological warfare

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92

(Ganor, 2004). Terrorism is the confluence of violence and propaganda, where the former seeks to modify behavior through coercion and the latter through persuasion (Schmid, 2005), whose purpose is to cause an unremitting, paralyzing sense of fear that permeates one's psyche (Breckenridge & Zimbardo, 2007). The internalization of terror supports terrorist organizations' narrative that the existing government is powerless and/or lacks legitimacy (Chalian & Blin, 2007). The resultant uncertainty can exacerbate existing vulnerabilities within a target audience and increase susceptibility to terrorist messaging. John Boyd proposed that uncertainty is a fundamental and irresolvable characteristic of war, no matter how good our observations, theories, and/or rationalizations are (Osinga, 2006). Terrorism seeks to exploit the endemic uncertainty in the human condition and use the natural result of violence (fear) to exert control over members, reinforce the biases of supporters, and intimidate adversaries. This uncertainty not only creates receptiveness to insurgent ideology, but also exacerbates preexisting prejudices in the wake of traumatic experiences (Bos et al, 2013).

Social-science research on the underlying causes of terrorism have focused on three main areas: (1) the political, economic, and social conditions that correlate with politically motivated violence, (2) group dynamic processes that facilitate radicalization and violence, and (3) psychological traits and characteristics that predispose individuals to seek membership in violent organizations (Bos et al, 2013). Although explanations at the level of individual psychology alone are insufficient to explain how and why an individual chooses to become a terrorist, the incorporation of multiple subdisciplines within psychology does help one comprehend the phenomena associated with radicalization. Kinship or other social ties, whether to people that are experiencing similar issues or who are already involved (Sageman, 2004), will increase the probability of an individual joining a terrorist organization.

Radicalization is the process by which an individual, group, or mass of people move from legal participation in the political process toward violent political action (Crossett & Spitaletta, 2010). A risk factor is a variable associated with an increased likelihood of radicalization; the presence of this variable is neither deterministic nor implicitly characterological. The individual decision to adopt an extremist ideology is impacted by the psychological disposition and state of the individual, both of which contribute to susceptibility. Some individuals possess a predilection toward violence. That predisposition, coupled with an affinity toward the narrative used to frame a movement and the degree to which that sympathy is personalized, increases the chances of radicalization. Each of these risk factors is exacerbated when placed in an environment that corroborates individual biases and provides an opportunity for an individual to behave in such a way the reinforces a cultural norm or projected identity.

The following paper attempts to briefly address the psychopathological myths associated with terrorism as well as suggest a set of risk factors for radicalization that should be considerations of future counterterrorism strategy. A recurring point throughout the essay is the need for additional primary research to reinforce the scant empirical data on the individual psychological aspects of terrorists. In order for the psychological theories of radicalization to be operationalized, the associated hypotheses must be tested and replicated to ensure for any updated counterterrorism strategy, and ultimately tactics, rest upon sound scientific and technical support.

Dispelling the Myth of the Terrorist as Mentally Disordered

There is no empirically based psychological or demographic profile that would indicate a predisposition toward either supporting and/or joining a violent extremist organization (VEO), nor is there evidence of any genetic role in determining why certain people become involved in terrorism. In general, radical organizations have a sufficient range of personality and cognitive profiles within their ranks to be indistinguishable from the surrounding population. What follows are a proposed set of risk factors that seem to apply to individual radicalization. The behaviors or attributes that follow merely point to an increased likelihood to participate in or eventual participation in political violence.

Severely mentally ill people usually have difficulty fitting in with teams and larger organizations, and this is true whether the organization is a corporation or an insurgency. There are, however, some isolated examples of insurgents or terrorists who do exhibit symptoms of mental disorders, typically profound thought disorders and distortions of reality. These tend to be lone wolf terrorists; partly because of the difficulty, they have integrating into larger groups, and partly because of the unique features of their pathology. Typical characteristics of these attackers are delusions of grandeur and narcissistic tendencies. In this presentation of paranoid schizophrenia with thought disorder, individuals may believe the government or other powerful groups are "out to get them." The personal identification with the adversary (e.g., the government is out to get "me") is a delusion of grandeur that can be considered an unconscious attempt to elevate self-esteem. Presumably, if a powerful group has a specific grievance with a single individual, that individual must be important. The subsequent elevation in self-esteem and self-importance may perpetuate the disordered thinking. Self-efficacy and self-agency are typically high in individuals who act alone to remediate political grievances and are often correlated with narcissistic tendencies. However, their presence does not necessarily indicate the presence of the personality disorder or the associated leadership style (Bos et al, 2013). While there is a greater probability of psychopathology with lone wolves than those who affiliate with VEOs (McCauley & Moskalenko, 2009), psychopathology is rarely the proximal factor in the transformation from law-abiding citizen to violent actor. Rather, it is a combination of some underlying psychopathology (major or minor) and specific environmental conditions that propel the individual toward radical behavior. In certain cases, such as paranoid schizophrenia with underlying thought disorder, the violence is a result of disordered cognition and a break from reality; it is not necessarily truly politically motivated (Bos et al, 20130).

Actual or vicarious identification with victims may predispose an individual to radicalization (Horgan, 2009). The proximity to and/or strength of connection with a political victim, including individuals who suffer physically, psychologically, financially, or otherwise by a change in the sociopolitical environment, will increase the likelihood for radicalization. Thus, any political or military action will likely have unintended consequences (Crossett & Spitaletta, 2010). Vicarious grievances are most effective when supported by ideological frameworks articulating perceived problems, a vision of the future, and a prescription for action. Cases of individual radicalization in response to political violence (when the individual acts alone rather than as part of a group) are relatively rare (Crossett & Spitaletta, 2010). In

94

such cases, the individual is likely to have some association with a larger intellectual community or social movement (McCauley & Moskalenko 2008).

While the most serious psychiatric disorders may be rare, there are associated personality and other disorders that may correspond to violent radicalism. Common theories hold that individuals either possess or lack certain personality traits that make them more susceptible to radicalization and more likely to perform acts of terror. Most of the literature attribute remorseless personality types, either psychopathy or sociopathy, to radicalism (Victoroff, 2005). Antisocial personality disorder (APD) is a personality disorder and the current term used to describe a pattern of remorseless disregard for the rights of others (Victoroff, 2005). First referred to as moral insanity in 1835 (McWilliams, 2011), then psychopathy up until the mid-1950s, and sociopathy until 1980, APD is hypothesized to occur in approximately 3 percent of the male population (Hare, 1993). APD is characterized by chronic disregard of social norms and laws, lack of remorse, impulsivity, and other traits and seems a plausible explanation for some terroristic behavior (Martens, 2004). A subset of violent extremists would meet criteria for a diagnosis of APD, although many others would probably exhibit traits associated with APD without meeting full diagnostic criteria. Many individuals with APD share certain characteristics with violent radicals, such as a sense of social alienation, early maladjustment, impulsivity, and hostility (Martens, 2004). There are also those who exhibit an antisocial or sociopathic leadership style but probably do not meet the clinical criteria for a personality disorder (Post et al, 2002a).

The behavioral profile of the psychopath suggests a disposition wholly unsuitable for the stressors of membership in a VEO. Psychopaths are often unstable, unreliable, unconcerned with group objectives, and have difficulty maintaining goal-directed behavior. For these reasons, they often fail to meet the selection criteria for the group or are employed only for specific purposes (Bos et al, 2013). This personality disorder is also associated with ordinary criminality, but there is reason to believe that terrorists (particularly those working with an organizational structure and/or network) are psychologically healthier than typical criminals. A 1986 study illustrates the prevailing characteristics of murderers in general: they are predominantly male, they are usually in their 20s to 30s, and approximately one-third to one-half have prior criminal records. The finding most pertinent in studying insurgencies, however, was the relative stability of the political murderers as compared with nonpolitical murderers. The political murderers were also far less likely to be intoxicated at the time of the offense or to have prior criminal records (Lyons & Harbinson, 1986). The Lyons and Harbinson (1986) study is one of the few examples in the literature of a direct comparison between those who commit political violence and those who simply commit a violent act. A common theme throughout the literature on the psychology of terrorism is the need for additional primary research into the psychological phenomena of those involved in terroristic acts.

Self-immolative Terrorism

Suicide attacks are among the more historically, socially, and psychologically compelling tactics used in support of a political objective. The willingness to act in a manner that will lead to one's death is considered illogical and unexpected. Analogous to clinical research on suicidality, access to the actor is prohibited by the act itself and thus theories require extrapolation from antecedent data. Studying

95

suicide terrorists is difficult for a number of reasons, including the ethical implications, the physical danger surrounding contact with groups who have used suicide terrorism and also the simple fact that successful suicide attackers are no longer available to question. One of the best available studies, by Merari (2010) and his colleagues, compared three groups of Palestinians imprisoned for involvement in terrorist activities. These prisoners included those with "failed suicides," or those that suffered a device failure on the objective but had executed the necessary tactics and thus psychologically committed suicide. Merari (2010) found that would-be martyrs had lower levels of ego strength, as well as a dependent and avoidant personality style, which made them more amenable to external influence. Significantly more martyrs than the other control group members displayed symptoms of depression, and some of the would-be martyrs displayed subclinical suicidal tendencies (Merari, 2010).

To be effective, martyrs should not be afflicted by some kind of psychological disorder; higher-status martyrs have more credibility with the masses and thus their sacrifice carries more weight. This trend was identified in studies of the selection process that the PIRA used to select those who would participate in the 1981 hunger strikes in the H-Block of Long Kesh prison. Hunger strikers had to volunteer and be approved by the PIRA military council, and most of those selected were highly regarded within the organization. Hunger strikers appear to have possessed a rather high level of dispositional resilience, thus enabling them to persevere through extraordinary physiological and psychological anguish while serving as a suitable example to engender ideological or financial support (Bos et al, 2013).

There is controversy over including hunger strikers in the same category as suicide bombers; however, both approaches require an individual to value a particular cause over their own existence (Merari, 2007). While the literature suggests this commitment is unlikely to be the result of major psychopathology, there is still debate over whether those willing to engage in self-immolative behavior in the process of killing others and/or destroying property can be considered psychologically healthy (Bos et al, 2013).

Risk Factors

Social conditions play an integral role in the process by which one decides to commit political violence. Geography and economics also contribute, but do not play a decisively predictive role in determining where radicalism arises or thrives (Crossett & Spitaletta, 2010). Two prominent theories underlie the following psychological risk factors of terrorism: terror management theory and uncertainty reduction theory. Terror management theory holds that mortality salience varies directly with the need for self-esteem. Essentially, as an individual thinks more concretely about his or her own death, they exhibit behaviors that reinforce existing ideologies or biases within their social group. The corroboration minimizes death anxiety, providing an understanding of the environment that has order, meaning, and standards of acceptable behavior (Crossett & Spitaletta, 2010). In essence, mortality salience drives self-esteem needs, which in turn reinforces preexisting in-group biases. A related theory, uncertainty reduction, holds that individuals categorize themselves into groups in order to alleviate uncertainty (Savage & Liht, 2008). Individuals evaluate in-group members positively because likeminded individuals are assumed to support, and therefore validate, their own cultural worldview, reinforcing existing biases

96

and increasing self-esteem. In contrast, individuals evaluate out-group members negatively because they are assumed to threaten their worldview (Pettigrew, 1979). Both terror management and uncertainty reduction theories have merit; unfortunately, there is little empirical evidence to support either as causal mechanisms for terrorism (Crossett & Spitaletta, 2010). Nevertheless, a theme amongst the following risk factors is the ability to describe the resultant behavior as a response to uncertainty.

The following risk factors address both enduring (trait) and temporary (state) conditions that may predispose an individual to radicalization. State characteristics are rather transient and some, particularly emotional states, may only last seconds or minutes and as such are somewhat difficult to predict and/or prevent. Nevertheless, understanding how these states arise and are modulated by executive process can provide insight into the psychological and physiological reactions of individuals. This can be particularly useful when trying to influence or deter an individual from information that may facilitate the radicalization process (Spitaletta, 2013). Generally, trait characteristics would suggest an increased likelihood of a particularly behavior, but the characterological variants of the following do not seem to be a consistent predictor of radicalization. Instead, it is often the combination of a dispositional trait and environmental circumstances that induce a particularly state, which increases the risk of radicalization.

Emotional Vulnerability

There is little evidence that those with emotionally unstable (or neurotic) personalities are at greater risk for radicalization, but the increased affective arousal associated with trauma or other significant event predisposes the individual to greater openness to the use of, or support for the use of, violence and increases susceptibility to pro-violent beliefs is emotional vulnerability (Horgan, 2009). This could be brought on by any number of internal (cognitive and/or personality predisposition) or external (death or injury of a loved one) stimuli (Crossett & Spitaletta). To suggest neurotics are at greater risk of becoming terrorists is an over-simplification; however, individuals within at –risk demographics (such as young men in a conflict zone with scarce access to resources and few employing prospects) whose subjective experience results in an emotional reaction that may be difficult to manage, may become more susceptible to terrorist recruitment.

There are some dispositional characteristics that may predispose one to such emotional states; one example is intolerance of uncertainty. Intolerance of uncertainty is a cognitive bias that affects how a person perceives and responds to uncertain situations both psychologically and physiologically (Bredemeier & Berenbaum, 2008); it can exacerbate the common attentional bias toward negative information, resulting in an increased estimate of perceived threat, which can lead to the inability to act when faced with an uncertain situation (Dugas et al, 2005). Highly correlated with anxiety, intolerance of uncertainty can manifest as a tendency to perceive uncertain situations as stressful and upsetting, to view unexpected events as negative and to be avoided, and a subjective sense of unfairness about the unpredictability of the future (Bredemeier & Berenbaum, 2008). While intolerance of uncertainty as a characterological trait is cognitive risk factor for anxiety, there is no empirical data to support it being a risk factor for radicalization (Crossettt & Spitaletta, 2010).

Among the more prevalent theories regarding emotional vulnerability as a risk factor is the idea that frustration plays a role in radicalization. Frustration leads to anger and ultimately, aggression (Crossett & Spitaletta, 2010). The frustration-aggression hypothesis identifies the incongruence between subjective needs and objective reality as the cause of disappointment, which is then displaced (Maile et al, 2010). Frustration results when stimuli prohibit an individual from attaining some goal (Berkowitz & Harmon-Jones-2004); however, it is typically inhibited by contextual factors such as social norms and/or threat of punishment (Maile et al, 2010). When an aggressive response is suppressed, the use of alternative strategies may fail to achieve the desired goal, thus reinforcing aggressive behavior and elevating it as the dominant response (Maile et al, 2010). Thus, frustration has been postulated as a root cause of extremist violence (Crossett & Spitaletta, 2010).

An outcome of this frustration is anger, a negative emotional state that can vary in intensity from mild irritation to intense fury accompanied by physiological and biological changes including elevated hear rate, blood pressure, and hormone levels (Speilgeberger, 2009) which can result in maladaptive behavior (Kassinove & Suckhodolsky, 1995). Anger can be analyzed in terms of state or trait anger; trait anger refers to a relatively stable predisposition to react to stimuli perceived as negative in an angry manner while state anger refers to the emotional response to an immediate stressor that may vary in both intensity and duration (Cox & Harrison, 2008 and Spielberger, 2009). State anger can be further defined in terms of ''anger-in'' (the conscious suppression of an angry response to a stimulus) or ''anger-out'' (the overt expression of anger) (Cox & Harrison, 2008). One particularly maladaptive behavior associated with "anger-out" is aggression. Affective aggression, the form of aggression most associated with high emotional and physiological arousal (Murphy, 20003) is the most relevant when considering the process of radicalization. The neural correlates of affective aggression entail emotional reactions that originate in the amygdala, whose signals are then transmitted to other structures, including the hippocampus, parahippocampal gyri, hypothalamus, thalamus, and cingulate cortex (Siegel & Victoroff, 2009). Insufficient prefrontal activation may prevent inhibition of brain structures located in the limbic system. Without proper inhibition from the prefrontal cortex, the amygdala can drive behavior in an unconstrained manner (Adams, 2006).

Intolerance of uncertainty and low frustration tolerance are both component of distress intolerance, or the perceived capacity to tolerate uncertainty, ambiguity, frustration, negative emotional states, and physical sensations (Zvolensky et al., 2010). The more intolerance of uncertainty and/or frustration an individual experiences, the more likely they are to act aggressively when confronted with confusing, threatening, or inhibiting stimuli. Understanding both the personality and the emotional state of an individual at various points in the radicalization process is mostly useful after the fact; unfortunately, individual emotions are too volatile for them to be easily definable or have sufficient predictive validity. Absent direct access to psychometric and demographic data, it is not only difficult to determine the emotional state of an individual, but it is also nearly impossible to develop appropriately idiosyncratic countermeasures (Bos et al, 2013). Nevertheless, emotional vulnerability is perhaps the most risk factor for radicalization most vulnerable to interdiction and one that should continue to be examined (Spitaletta, 2013). It is important to note that there are additional circumstances that precipitate

emotional vulnerability and/or exacerbate emotional experience. Some, but by no means all, of those situations follow.

Humiliation

Humiliation, and the consequent internal pressure for revenge, is a factor that has been suggested to predispose one to violent behavior (Crossett & Spitaletta, 2010). The experiences of grief, either personally or vicariously, are often accompanied by strong feelings of humiliation (Post et al, 2002). Intentionally or unintentionally robbing an individual of his or her dignity provides not only a rationalization for radicalization, but also a sociocultural motivation to defend the dignity of all those within the in-group. Revenge is an emotion that is deeply rooted in the instinct to punish transgressors who violate the social contract; hence, it is a motivator that often serves not only the goals of a vengeful individual but also the goals of the group (Victoroff & Kruglanski, 2009). Revenge is not always considered an antisocial behavior; it can be considered normal and potentially useful in certain contexts. Thus, the humiliation and traumatization of political opponents can create an environment that stimulates violent behavior, thereby escalating the level of violence (Crossett & Spitaletta, 2010). The concept that feelings of humiliation or exploitation give rise to a passion for revenge is prevalent in forensic psychiatry and criminology, and it has been suggested that it may contribute to nonpolitical murders (Victoroff, 2005).

The subjective experience of humiliation can have more profound consequences when it occurs within and environmental that places a high normative value on honor. Cultures of honor are those where there is a perceived imperative to preserve one's character by avenging even minor slights (Nisbett & Cohen, 1996). Particularly for males, failing to retaliate for an insult, attack, or property encroachment can be seen as a serious threat to the individual's honor and reputation. Examples of these cultures exist all across the world, including parts of the American South and the Middle East. Not surprisingly, such cultures are vulnerable to high homicide rates, cycles of retaliation, and longstanding feuds. In such cultures, humiliation can become so ingrained that it becomes the definitive trait of an individual (Nisbett & Cohen, 1996). Avenging one's honor, in the context of political violence, may be a logical reaction to some grievance. Extending this to an individual's group, violence towards a fellow group member could be avenged by the killing of any member of the offender's group. Thus, this law of social substitutability may be perverted or manipulated by individuals to rationalize terrorist behavior (Bos et al, 2013).

Positive views upon and/or history of violence

Past behavior is the most reliable predictor of future behavior and thus individuals with a history of violence are more likely to commit violent acts. The belief that there is nothing inherently immoral in violence against the state or its symbols is another risk factor for radicalization (Post et al, 2002a). Social learning theory holds that an individual can recalibrate his or her moral compass in order to increase cohesion with the group to which the individual belongs. If the individual's underlying moral reasoning does not include compunction toward violence, this process can occur more rapidly. Moral inhibition and antiviolence taboos are societal stricture; thus, groups operating in fragmented political cultures

99

with a history of violence are a greater risk for radicalization. Likewise, groups whose members (particularly their leaders) have experience with violence, conflict, and weapons are at an increased risk for radicalization. If the group actively recruits individuals that demonstrate a history of violent behavior, including participation in other violent campaigns or organizations, it could indicate a conscious attempt by the group to build capacity for political violence (Post et al, 2002b). Reviewing the biographical data and criminal records of the individual comprising a group may provide insight into their propensity toward violence. Records of violent crime, military and combat experience, and other evidence of violence will help calculate the risk for further violence (Crossett & Spitaletta, 2010).

Resonant narrative

Most individuals generally dislike ambiguity and uncertainty in their social and physical environment. Through generalized beliefs, individuals seek to give meaning and organization to unexplained events. Common agreement on certain beliefs also enables individuals to operate collectively toward a desired goal. Leaders can interpret situations in terms of the group's beliefs or ideology, translating abstract, ideological beliefs into specific, concrete situations in which actions are to be taken (Crossett & Spitaletta, 2010). Narratives and/or narrative bits (or narbs) are used to articulate a perceived grievance within a particularly worldviews, exploit a degree of emotional identification with said grievance, and mobilize resources to address the grievance (Mitra, 2010). Narratives can also be used to idealize resistance figures and shame those who were aggrieved by the identified out-group, appealing to an emotional vulnerability or a susceptibility in order to engender popular support. They can even be employed as a means of removing a psychological barrier as a de-facto justification for violence (Crossett & Spitaletta, 2010)

A well-crafted message that appeals to a variety of vulnerabilities within a selected target audience will help set the environmental conditions that support the radicalization process. Political, ideological, and/or religious narratives may mediate between the collective identity and personal misery from humiliation, but they may also reinforce a victimization identity that contributes to increased potential for violent behavior. A narrative serves as an organizing framework for individuals to make sense of their world (Brown et al, 2008) and their place within that world, bringing one's identities into congruence with their environment. Sensemaking enables individuals to conceive and formulate their social environment though reality testing, creating a shared worldview amongst members of a particular in-group. Thus, narratives facilitate this process of interpretation and production of meaning whereby individuals and groups decipher and reflect on phenomena (Brown et al, 2008).

Conclusion

Terrorism is a form of psychological warfare that is best combated by psychological warfare (Post, 2005). Countering terrorists as individuals is an appropriate method of fighting that war; however, it requires a more nuanced approach that includes both personalized persuasion efforts as well as intelligence-driven direct action (Spitaletta, 2013). Those counterterror tactics, when and where able, should be informed by empirical data from both operational and academic sources. Unfortunately, much of the research cited in the psychology of terrorism literature relies on a limited body of primary research (Crossett &

Spitaletta, 2010). Additional research is required to identify the observable behaviors associated with risk factors for radicalization. The resultant findings could provide additional scientific and technical rigor to current counterterrorism tactics.

There are varied opinions as the future of terrorism and counterterrorism in the U.S.; many of which are represented in companion pieces in this White Paper. Regardless of the type of VEO, nationalist, religious extremists, or racist, whatever form terrorism takes, countering it will entail addressing the individuals who theorize, plan, and execute the acts. To counter those individuals, a more thorough understanding of the underlying psychological risk factors associated with their decision to affiliate with an organization and/or commit these acts is essential.

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102

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Leveraging Advances in Qualitative Methodology to Analyze Radicalization

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- Abstract
- There have been enormous advances in the study of radicalization over the last decade, but there remain significant shortcomings that limit the validity and generalizability of findings
    - Advances in qualitative methodologies offer a framework for improving the understanding of the complexity inherent in the phenomena of radicalization and non-radicalization
    - Typological theories can be used to structure what is known and where there are gaps requiring additional work
    - The Possibility Principle can be used to identify negative cases for comparison against individuals who do radicalize
    - Two-level theories can be used to disentangle the effects of multiple, simultaneous causal factors
    - Qualitative Comparative Analysis (QCA) can be used to identify equifinite clusters of causal factors, even with relatively small numbers of cases
- Improved understanding of the multiple potential pathways into radicalism and terrorism should lead to better tailored CVE policies that are more effective and efficient

In contrast to the relative lack of research on radicalization immediately following the 9/11 attacks, scholars and policymakers now face a vast array of frameworks and theories to explain why and how individuals radicalize to extremist violence. This is a welcome development, but several aspects of the study of radicalization complicate attempts to understand this phenomenon. If these issues are not overcome, the research program could stagnate, complicating the efforts of policymakers and practitioners to understand and counter the threat of radicalization, as well as integrate the study of radicalization into broader topics in the social sciences.

Specifically, four aspects of radicalization complicate analysis: 1) the limited inferential power of most studies to date because of a lack of adequate "negative cases" for comparison; 2) difficulties associated with assessing whether and how radicalizing forces operate at different levels of analysis (e.g. mass-level group grievances versus individual level psychological issues); 3) the causal complexity of radicalization processes; and 4) the proliferation of theories of radicalization and the extent to which these are competing, complementary, or occur in sequence.

Fortunately, significant advances in political science and sociological qualitative methodologies can address these issues. Specifically, four qualitative methods can contribute to the study of radicalization. *Typological theories* can organize hypothesized causal factors and their interaction, and identify overlaps and gaps in knowledge; *Two-level theories* deal with causal forces operating at different levels of analysis; *qualitative comparative analysis* incorporates causal complexity into analyses; and the *possibility principle* identifies the proper population of "negative cases." These qualitative analytical tools can serve to better structure the qualitative study of radicalization, or can be a conceptual "first-step" to organize theories and evidence in preparation for a quantitative study.

The remainder of this white paper provides more detail on both the problems that bedevil the current study of radicalization and how these four qualitative methods can at least partly address the shortcomings.

Shortcomings in the Radicalization Literature

Since 9/11, the expanded attention on terrorism among scholars and policymakers has included a focus on the process by which individuals radicalize to terrorism. Following from McCauley and Moskalenko's (2011) definition of "a change in beliefs, feelings, and behaviors in directions that increasingly justify intergroup violence and demand sacrifice in defense of the in-group," radicalization is the means by which terrorists emerge from the general population and, as such, forms the crux of efforts to prevent terrorists from manifesting in society. Yet, despite much scholarly consideration (see Borum 2011a and b for useful reviews of the literature), four issues continue to constrain our understanding of radicalization.

First, existing studies of individual-level political violence allow for little valid causal inference due to the **lack of variation on the dependent variable**. Most studies of radicalization focus on individuals who have radicalized to the point of violence. This is useful, but does not allow for causal inference as there is no set of "negative cases" against which the radicalized individuals can be compared; studies of only radicalized individuals may thus suffer from selection bias, which can undermine the validity of their findings. Some have defined negative observations as the entire population, although this may lead to inaccurate analysis through inclusion of large numbers of irrelevant observations. Others analyze variation among individuals and terrorist groups instead (Henne 2012); this, however, does not directly address the causes of individual-level political violence. A notable exception is the promising work by Freilich and colleagues examining variation in the use of violence by domestic extremist groups and individuals (Pridemore and Freilich 2006; Freilich et al. 2011; Caspi et al. 2012; Chermak et al. 2013). The validity or generalizability of causal inferences about radicalization is thus constrained by the relatively small number of cases and uncertainty over what constitutes the proper population of "negative cases."

The second issue involves understanding how radicalization occurs at **different levels of analysis**. Many scholars have offered compelling arguments for the presence of individual, group, and macro-level causes of radicalization (*inter alia*, Ross 1993; Hudson 1999; Sageman 2004; Wiktorowicz 2004, 2005; Horgan 2005; McCauley and Moskalenko 2008; Ackerman and Sawyer 2010). However, how these different levels relate to each other is unclear. Are individual-level psychological issues more salient than

105

mass-level societal grievances, or do group-level processes interact with individual-level issues, as Wiktorowicz (2005) suggests?

Third, the **causal complexity of radicalization** makes it difficult to analyze this phenomenon adequately. Commonly-identified causes of radicalization—such as social ties to radical individuals—do not cause radicalization by themselves, as such factors are present among many individuals without causing radicalization. Instead, radicalization is likely the result of numerous interacting factors, some of which occur in sequence. Similarly, various pathways can lead to similar types of radicalization; that is, radicalization processes can reflect equifinality, with multiple causes of the same phenomenon. Consider, for example, the contrast between Theodore John Kaczynski, the "Unabomber," and Dzhokhar Tsarnaev, the younger of the two brothers behind the recent Boston Marathon bombing. While Kaczynski's radicalization has been attributed to social isolation, sexual confusion, and schizophrenia, Tsarnaev's was strongly influenced by group dynamics (specifically, the relationship he shared with his older brother, Tamerlan). By most accounts, Tsarnaev was quite the opposite of Kaczynski—a star athlete, pro-social, and well-liked and respected by his friends and acquaintances. Thus while their pathways to radicalization were different, both Kaczynski and Tsarnaev ultimately committed bombings in support of a radical ideology.

Both of these aspects of radicalization complicate analysis and can lead to over-simplification or reduction of the phenomenon to "just so" stories. This is because conventional statistical analysis struggles to deal with causal complexity and equifinality in the absence of an incredibly large number of observations, while single case studies can provide a good amount of information on a particular example of radicalization but little leverage over the broader process.

Finally, it is unclear how to advance the research program given the **myriad theories and hypotheses about radicalization** across multiple disciplines, many of which are overlapping or competing (such as, for example, a personal search for identity and in-group "risky shift"). Advancing the research program on radicalization requires organizing and synthesizing theories to identify overlaps, and assessing the relative strength of various analyses and hypotheses. Without this, research on radicalization risks stagnating in an infinite regress.

Qualitative Methods

Further development of the radicalization research agenda would benefit greatly from leveraging advances in qualitative methodology. Beginning with the debate over King, Keohane and Verba's (1994) guide to methodology—which critics saw as downplaying the strengths of qualitative analyses—numerous scholars have highlighted the comparative advantages of case studies and developed methods to improve the quality and transparency of qualitative studies (George and Bennett 2005; Goertz and Mahoney 2006; Collier and Brady 2010). Four methods in particular could be particularly useful in the study of radicalization: typological theories, the possibility principle, two-level theories, and qualitative comparative analysis.

Typological Theories

The first qualitative methodological contribution is typological theories. Several qualitative methodologists have advanced typologies as a means for organizing and explaining complex phenomena (George and Bennett 2005; Elman 2005). George and Bennett (2005, p. 235) defined a typological theory as

> a theory that specifies independent variables, delineates them into the categories for which the researcher will measure the case and the outcomes, and provides not only hypotheses on how these variables operate individually, but also contingent generalization on how and under what conditions they behave in specified conjunctions or configurations to produce effects on specified dependent variables.

That is, typological theories involve three steps. First, describing all possible causes of an outcome and their potential combinations. Second, hypothesizing the effects of each cause or combination of causes on the outcome, including whether outcomes differ under certain conditions. Third, assigning cases of observations to each cell of the typology. This is distinct from conventional theories that focus on one cause of an outcome, and test whether it seems to matter (for example, whether a criminal past increases the likelihood of radicalization), as typologies accept that multiple causes can contribute to an outcome. It is also distinct from descriptive approaches that highlight the nuances of a phenomenon, but do not make any hypotheses concerning the causes of the phenomenon, as broader causal claims are central to typological theories.

Analysts construct typological theories using a combination of inductive and deductive reasoning (George and Bennett 2005). They can review the theoretical literature on a phenomenon to identify possible causes of the outcome of interest, and organize them as a typology; for example, an analyst constructing a typology of radicalization would first specify commonly-cited causes of this phenomenon, including membership in an insular clique, attachment to a radical individual, or socioeconomic conditions that promote a search for an identity. The analyst would then identify a number of interesting cases of a phenomenon and assign them to the relevant typological space (e.g., an individual who radicalized through a clique, an individual who radicalized through personal grievances, etc.). "Empty spaces" in the typology—those combinations of causes that were not assigned a case—could then be used to refine the understanding of radicalization by focusing efforts to identify potentially missing cases and/or guiding the exploration of the feasibility of counterfactuals.

The thereby constructed typological theory can serve a variety of purposes (Bennett 2005; Elman 2005). First, it can *describe* the phenomenon and its causal theories. Analysts might use the typology to clarify what they mean by the outcome of interest (e.g., "what is radicalization?") as well as particular types of the phenomenon ("what is a radical who emerged through group dynamics, as opposed to one who was a loner?"). Similarly, an analyst could use a typology to organize theories concerning a phenomenon (Bennett 2013). In many areas—including radicalization—numerous theories exist that often overlap in terms of the causes they highlight, complicating attempts to compare the relative strength of theories. Analysts could group similar theories into a higher-level category (e.g., various theories of radicalization

discussing personal grievances under a general "personal grievance" entry), and use these to enrich the typology.

Second, it can *classify* cases of a phenomenon. The simple act of placing a case into a certain typological space can assist analysts in identifying what the case is an example of (a lone wolf radical, a person radicalized through the internet, etc.) (Elman 2005). This facilitates comparison of similar and different cases; especially in the area of radicalization, similarities among radicalized individuals may not be apparent at first glance. Analysts could then use the classified cases to create a research design (George and Bennett 2005). For example, if there are two cases of radicalized individuals who are similar in every respect except for whether they were abused as a child and the extent of violence in their ultimate behavior, analysts could use these two cases to explore the role of child abuse in radicalization.

Finally, it can be used to *explain* a phenomenon (Elman 2005; George and Bennett 2005). By describing and classifying cases of a phenomenon through a typology, analysts may identify patterns that were not immediately apparent. A hypothetical example would be that every case of someone failing out of college corresponded to radical behaviors without deep-seated radical beliefs, whereas completion of postgraduate degrees corresponded to equally radical beliefs and behaviors.

Possibility Principle

The "possibility principle" is a qualitative method developed by Mahoney and Goertz (2004) to identify "negative cases" of a phenomenon. In the case of radicalization, this would consist of identifying the non-radicalized individuals to be contrasted with the "positive cases" of radicalized individuals. It is well understood that causal inference requires comparing positive and negative cases, but in many phenomena, such as radicalization, the negative cases are not apparent. Is it every single person in a society who did not become a radical? Or every person who has a grievance? Or every person exposed to a particular radical ideology? Using the wrong set of negative cases can significantly affect the results of a study. For example, studies comparing radicalized Muslim-Americans against the entire population of Muslim-Americans find radicalization to be a minor concern, as do studies looking at the risk of death from terrorist attacks as opposed to all other potential risks people face. While this is useful in dispelling overhyped fears or destructive stereotypes, such a broad scope for "negative cases" is less useful for truly understanding these phenomena and providing insight into the radicalization processes.

In response to this issue, Mahoney and Goertz (2004) developed the "possibility principle." They argue that the relevant set of negative observations for a study includes those that could possibly have achieved the outcome, rather than the entire population of observations. While this at first seems self-evident, it is a useful and powerful tool in research. Analysts must first survey research on a topic, both theoretical and empirical, to identify conditions and events that would lead one to expect the outcome to occur. They would then obtain cases that included at least one of these important conditions or events, but did not include the outcome of interest, and include these as "negative cases" in the study. For example, a study of radicalization might identify a variety of factors—such as a personal grievance, psychological issues, and a close friend or family member that is part of a radical organization—as factors likely leading to radicalization. The analyst would then find examples of individuals with some of

108

these factors who did not radicalize; e.g. a friend or sibling of an extremist who advocated only non-violent and democratic means to achieve ideological ends. Comparing these individuals to radicalized individuals would give analysts a better sense of what led the latter to radicalism. This methodology may be particularly useful for understanding the radicalization of someone like Eric Rudolph, the serial bomber convicted of bombing abortion clinics and the 1996 Olympics. Rudolph was one of six children raised in a close-knit family by parents who espoused radical right-wing white supremacist beliefs, yet he was the only member of his family to radicalize to the point of violence (Southern Poverty Law Center 2001). Rudolph's five siblings may be good "negative cases" against which to compare Rudolph.

Two-level Theories

"Two-level theories" highlight the fact that many theories actually constitute two separate levels of analysis: "basic-level" factors that are proximate causes of a phenomenon, and "secondary-level" factors that themselves cause or serve as necessary conditions for the "basic-level" (Mahoney and Goertz 2006). Mahoney and Goertz point to an example from the comparative politics literature on revolutions, which are theorized to be the result of state breakdown, which in turn may be caused by international pressure on the state. Similar theories occur in the context of radicalization. Many observers claim that broad societal grievances create individuals amenable to radicalization, but more immediate causes—like a trauma—actually catalyze the radicalization process. Dzhokhar Tsarnaev, for example, cited the U.S. wars in Afghanistan and Iraq as the motivation for the Boston Bombings, but it may have been his brother's immediate influence that facilitated his radicalization. Likewise, separate theories at different levels of analysis—such as one positing psychological issues and another focusing on group dynamics—could be seen as parts of two-level theories, rather than competing explanations.

The major contribution Mahoney and Goertz make to understanding such "two-level theories" is specifying the different ways the two levels can relate to each other (2006). They can be causal wherein the "secondary-level factors" cause the basic-level factors. They can be "ontological," where the secondary-level defines the basic level. Or they can be substitutable, with different secondary-level factors contributing to the same basic level cause. This can be seen with respect to the different potential relationships between societal grievances and personal trauma in radicalization. Societal grievances could cause personal trauma, for example, if widespread political repression led to the death of an individual's family member, which in turn catalyzed radicalization. Or the societal grievance could be the personal trauma; the trauma that provoked radicalization *was* the political repression. Finally, they may be substitutable; in some cases, societal grievance was the secondary-level factor behind the basic-level cause of trauma, while in others, the secondary-level factor could be substandard socioeconomic conditions. Likewise, separate theories on different levels of analysis—like the above example of psychological issues and group dynamics—could be: competing, with one claiming to cause the other and then cause radicalization; interacting, with psychological issues and group dynamics feeding into one another; or complementary, with group dynamics mattering in some cases and psychological issues in others.

Qualitative Comparative Analysis

Qualitative Comparative Analysis (QCA) is a method developed by Charles Ragin as an alternative to quantitative studies (1987; 2008). Ragin focuses on what he calls "set-theoretic" rather than "correlational" analyses. Instead of assessing which causal factors correlate with an outcome—such as radicalization—he calls for analyzing the various necessary and sufficient conditions for an outcome. For example, in the case of radicalization, this would mean identifying numerous factors—like psychological issues, clique membership, and ideological beliefs—that, when combined, lead to radicalization rather than assessing the strength of the relative correlation of each of these factors with radicalization. Analyzing the different combinations of necessary and sufficient conditions that lead to an outcome can take into account complex causal relationships and different pathways to the same outcome.

QCA is a computational tool that conducts set-theoretic analysis of cases. Using Boolean algebra, QCA identifies the necessary and sufficient relationships among a medium-size sample of cases (between 10 and 100) that lead to an outcome in question. Although advanced quantitative techniques can address complex causal relationships, they require a much larger number of observations. While conventional QCA requires dichotomous variables (either "yes" or "no") a later advance, fuzzy-set QCA, allows for the use of variables with multiple values. Thus, QCA is useful for phenomena that are nuanced in nature but are relatively small in number, like radicalization.

Applicability to Radicalization Literature

The contemporary advances in qualitative methodologies are intended to improve qualitative studies without discarding the uniquely valuable aspects of these studies. Qualitative methods assist analysts in identifying useful cases, understanding how theories relate to the empirical evidence, and extending the insights from an in-depth understanding of a single case to a broader population of cases. They also make qualitative studies more transparent and replicable, increasing the acceptance of their findings among scholarly and policymaking audiences. All of these aspects of qualitative methods—and in particular the four discussed here—can greatly contribute to the study of radicalization. Moreover, these qualitative methods can even inform statistical analyses of radicalization, as they can provide a corroboration of results from statistical analysis, identify additional variables or important interaction effects between variables that should be included in the analysis, and enable valid inference through establishing negative cases (Lieberman 2005).

These advances can greatly assist in the essential task of inferring the causes of radicalization. By establishing a set of negative cases that are comparable to cases of radicalization, the possibility principle allows researchers to analyze the conditions and events that cause or prevent radicalization, rather than only assessing factors common among radicalized individuals. Likewise, QCA enables causal analysis even in the absence of a large sample of observations through computational analysis of necessary and sufficient conditions for radicalization.

These qualitative methodologies can also address the extremely nuanced nature of radicalization, including multiple pathways to the same outcome. Radicalization is a complex and diverse phenomenon

made up of varying clusters of beliefs and behaviors. Its causes, likewise, range from individual psychological processes to broad societal grievances, which often interact in unique ways. The qualitative methods discussed here are adept at dealing with such issues. First, typological theories can integrate all possible causes into one typology, while assessing distinct combinations of causes that lead to radicalization. Second, two-level theories can help to structure the assessment of how causes at different levels of analysis—like the individual and societal—compete with or complement each other. Third, QCA is specifically designed to allow for multiple interacting causes and numerous "causal recipes" that lead to a similar outcome.

As a consequence, these and other recent advances in qualitative methods can assist policymakers and scholars in further developing the radicalization research program. For example, typological theories can identify types of radicals that are puzzling to existing theories and certain theorized causes that appear to have a stronger effect on radicalization than others. Studies based on the possibility principle can isolate conditions or events that are important prerequisites for radicalization, thus requiring further study. And two-level theories clarify how causes at different levels of analysis relate, making it easier for analysts to delve deeper into those relationships in follow-on studies.

Conclusion

The study of radicalization—and the terrorist violence it can produce—has developed rapidly since the attacks of 9/11. Building on the enormous amount of scholarship in the last decade, the emerging consensus is that radicalization is an exceptionally complicated phenomenon, characterized by both multifinality and equifinality. In other words, we know that there are many potential paths into and out of radicalism and terrorism and that a one-size-fits-all approach to countering violent extremism is inappropriate. However, the current state of the field offers only limited guidance on how to best tailor CVE policies and approaches to maximize both effectiveness and efficiency. Each of the four advances in qualitative methodologies described above can contribute to the identification of clusters of risk factors and causal mechanisms, which can then lead to more targeted and specific preventative and/or monitoring efforts.

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Mechanics of the Toolbox: CVE Practice and Inform & Influence Activities

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Abstract

Public & practitioner discourse on countering violent extremism (CVE) speaks of "countering ideology" without providing the specific mechanics of how such a process would work. This article demonstrates how that is best achieved in a manner that respects the various mandates in which both the state and "other" cultural constructs interact with one another. As one definition of Inform and Influence Activities (IIA) has it, the Commander is to build teams – Joint and Interagency (and community) partners – to understand the information that comes from complex environments, in order to influence the behaviour of friends and adversaries. The specific mechanics of how to do so regarding CVE are summarized as follows:

1. CVE and IIA are inter-connected.
2. Radical ideology is part and parcel of the adversary's narrative.
3. This ideology is challenged successfully through the use of Trusted Intermediaries (TI's) from the communities in question, who retain "street credibility"; the main currency with at-risk subjects.
4. The practitioner implications of this adversary narrative engagement should employ/deploy Subject Matter Experts (SME's) whose competencies can be leveraged for narrative management during military (or civilian law enforcement) operations.
5. This is very much a battle of hearts and minds, thus we must employ those approaches that appeal to both, emotion as well as intellect.

CVE and Influence Activities: An Intelligence Preparation of the Battlespace

In the military construct, an Intelligence Preparation of the Battlespace (IPB) is an analytical method where the intent and action is to provide predictive intelligence to operators on the ground to plan and execute an operation safely and successfully. The IPB provides the paradigmatic framework in which military planners and policy-makers can understand the full spectrum of adversary capability, including

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its center of gravity (COG) and possible courses of action (COA). This is not an abstract academic exercise rather, an effects-based venture with real consequences on the ground.

Battlespace in the traditional context refers to physical areas under military operation. This is quickly becoming understood to be any space where adversarial activity occurs, for example, "cyberspace" as one such area. The word Battlespace seems to bring with it a notion of militarization, which is accepted in the context of foreign wars in foreign lands but may not be welcome for use in the civilian, public arena. This does not mean that the civilian, public arena could not become Battlespace (Medby & Glen, 2002). In fact, in the eyes of the violent (Islamist) extremist, it already has.

From the 9/11 attacks to the Boston Marathon bombings, as far as this adversary is concerned, every citizen, regardless of their faith, ethnicity or gender qualifies as a fair target of their operations, an acceptable form of collateral damage. The manner in which an individual within a group context arrives at the conclusion that non-combatant civilians are no different than their polar opposite (armed combatants), is something that many researchers, practitioners, community members, family and friends are struggling to understand. The fact of this struggle can be witnessed in the way minority communities react to acts of violent extremism by members of their larger community. For example, partly due to a breakdown in trust with government agencies, the default response of segments "at-risk" members of populations (who manifest clusters of particular risk-taking behaviors) tend to regurgitate claims of "entrapment" with no appreciation of the actual legal meaning of the term.

The other response is by the majority cultural construct and views regarding minority communities. For example, one of the public narratives concerning VIE's (Violent Islamist Extremists) is that the larger (mythically-monolithic) Muslim community is not "doing enough" against terrorism, inasmuch as the problem begins and ends with this community. This is patently false due to the number of Confidential Human Sources, Agents, Peace Officer and community tips that have foiled multiple terrorist plots. The various stakeholders in the larger Muslim community can do only so much as they are faced with an inherent limit to their ability to influence those are engaging in secret activities. It is the state, with its access to HUMINT and SIGINT capabilities, which gives it the burden of response. With respect to how much the larger community might know of extremists in their midst, the rule (along with its exceptions) is that such communities are largely unaware of certain VE behaviour simply due to secrecy in which members operate.

The purpose of this article is only partly to present the synthesis of the various scholarly arguments on the psycho-social factors, which come together within an individual or an individual acting within the group context. Many academics have commented on the complex issue of what "causes" and what "drives" this phenomenon and each discipline involved seems to arrive at definitions and explanations that are specific to the particular paradigm their field of study represents. In the end, it is the function of academics to *think*, whereas the function of the practitioner is to *do*. It is imperative here that given the knowledge gained from CVE specialists already, policy-makers and operators bridge the gap between the abstract and the pragmatic, in a way that the proper understanding of causes and catalysts of VE can translate into productive countering methods using credible delivery platforms.

It follows that where cyber-based communication technology (CBCT) is an enabler/amplifier of radicalization and violent extremism (AIVD, 2012), any such attempt to counter this threat must also observe the mechanics of how the journey from non-violent to violent means occurs and how it does so at the micro and macro level. Where this understanding becomes relevant for CVE practice can be demonstrated at the micro level with an individual who becomes a "lone-actor" in the extreme manifestation or becomes a terrorist cell, at the macro level of group activity. There is an enormous rate at which at-risk segments use cyber technologies to 1) disseminate propaganda for recruiting purposes, 2) to serve as an echo chamber to reinforce views with one another where the intensification of belief occurs, sometimes using password/data protected forums and 3) to communicate tactical as well as strategic communications. A good example of this latter point is the terrorist group in Somalia, Harakat Al Shabab Al Mujahideen (Al Shabab), which tweeted a play-by-play of a terrorist attack on a courthouse in Mogadishu. Psycho-social factors intersect in a very particular way with technology where emotional and cognitive triggers are exploited by the adversary in its own version of IIA. One of the attackers in the Mogadishu assault was a Somali Canadian who had gone to join the group from his country of residence. It is no exaggeration that this adversary's exploitation of such technologies is sophisticated, deliberate and effective and is evident in the numbers of individuals who have responded positively to their message.

As Maj. Spitaletta (2013) would have it on this point (the psychology of technology and how influence occurs), it is imperative that we synthesize the methods employed in the social sciences (the psycho-social variables, which inherently includes ideology) with recent advances in cyberpsychology and captology (the study of persuasive technology) so as to apply an advanced set of personalized persuasion tactics that can potentially disrupt and even reverse the process of radicalization (most radicals do not become terrorists) as well as potentially reverse the process of radicalization into violent extremism. In fact, where operated professionally and with credible actors, these same methods of persuasion and influencing decision-making can be applied to disruption tactics and reverse the process. This is what has been referred to as "disengagement" (the cognitive shift away from violence) and "deradicalization" (Horgan, 2008) (the cognitive as well as a behavioral shift away from violence). Implementing a program that employ/deploy TI's and SME's to work the mechanics of this disruption becomes an integral component of countering violent extremism in our context.

CVE and Influence Activities: The Mechanics of TI's & SME's

The most basic function of IIA itself (U.S. Army Information Proponent Office, 2011) is to influence subject/group to behave in a particular way by the use of instructional narratives that influence and impact behavior. In the kinetic context of military operations, IIA's will produce a particular awareness of the environment in which adversarial engagement occurs. This awareness is the result of community generated information of adversary capabilities and courses of action. It is also the result of HUMIT and SIGINT capabilities that have added a second layer to assist with verification and correct targeting practices where an adversarial environment exists. In the context of VIE's, if enforcement agencies do not apply correct targeting practices, it will significantly degrade the integrity of surveillance and intelligence operations as the NYPD case has demonstrated (it has been under multiple legal and

116

philosophical attack over the revelations of wide-net spying which did not produce a single terrorist charge). This trust with the community is among the most vital components of any effective CVE strategy and frustration and anger towards it, feeds the cycle of anti-state sentiment, which extremists use in their narratives. Thus, state systems run the risk of having responses to violent extremism, exacerbate it further. This is the very definition of counter-productive.

At present, there is no systematic and comprehensive engagement with the Muslim community when it comes to CVE practice. With respect to IIA, there is a significant gap in terms of the understanding that U.S. military operators already have with it in but with very superficial competencies in CVE. This is to be expected given the fact that VIE is still a particularly peculiar form of asymmetric violence given its religious demeanor. This is not an argument against Islam and "Jihad" (Heck, 2004) because terrorist violence is expressly prohibited in Islam and cannot qualify as "Jihad" at all even if VIE's might claim it to be so. For example, attacking places of worship is specifically forbidden by chapter and verse[13] but that does not stop Boko Haram in Nigeria from attacking Christian Churches on the holy days to maximize the number of casualties. Thus, it is incorrect to say that religious ideology "causes" terrorism but it is correct to say that religion is used to validate such acts. In fact, this is the point about the peculiar nature of asymmetric conflict framed in a very aggressive Islamist worldview: religion in general makes certain actions sacred (example, "Just War") and this process of making scared, directly employs the use and abuse of religious scripture and religious personalities to justify a particular course of action.

The ideology (a systematic body of concepts) that VIE's employ, revolves around the citing of various aspects of Islamic War Tradition. It is tradition like any other of the great civilizations that make up human history and well-situated in the historical context from which it emerges (University of Notre Dame, 2012). Modern day conflicts that are directly situated in countries of different types of Muslim majorities (Sunni, Shia and others) have forced actors to draw relevance of these modern conflicts from their spiritual tradition. It employs the use of charismatic preachers (Osama Bin Laden as the modern archetype) who exploit both emotional and cognitive triggers and forms the mechanics of how their narrative gains traction among discontented individuals. Thus, it will become necessary to engage in similar tactics in order to counter such violent narratives. This can be assisted by facilitating the engagement of two categories of people: Trusted Intermediaries and Subject Matter Experts.

Trusted Intermediaries

TI's are those individuals and community groups who interact with individuals on a frequent basis. This includes theologians that administer to congregations, community activists engaged in social and mental health work and who have no ties to the security enforcement functions of government. This distance from state functions allows them to retain street credibility, which is the currency of value among at-risk segments when it comes to who they will listen to. For example, a proper assessment of the community

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[13] Quran 22:40 "*And were it not that God checks the people, some by means of others, there would have been demolished monasteries, churches, synagogues, and mosques in which the name of God is much mentioned." *The etymology of the word, "Allah" is literally, "The God" and is the same word for God used in the Arabic Bible.*

should yield information on those members who have good rapport with the youth in particular, can assert some authority and authenticity to which positive narratives are associated and finally, speak on behalf of their own religion. It is absolutely _not_ the job of government to promote a particular Islamic viewpoint because the accusations of interference are swift and certain. However, where such narratives are conducive to countering violent interpretations, it follows that government agencies can acknowledge that such work is occurring in the community. On a more direct level of engagement, credible spokespersons from the community should not have to deal with issues such as travel restrictions (as an example) but should be encouraged to disseminate their positive narratives and this ultimately serves the CVE mandate considerably.

A second area where TI's are useful is where individuals and/or groups come into the orbit of national security operations and are eventually placed in custodial settings. It is imperative that the right pastoral care is made available to such individuals otherwise they will run the risk of either becoming more extreme themselves or radicalize others and these are two aspects that are well known in this context (Mucahy, Merrington, & Bell, 2013). An effective program would have to identify who is most susceptible for extremism. At present, conventional psychopathy checklists used in custodial settings are completely irrelevant for religiously-validated terrorism where psychopathology is extremely rare as a factor. Questionnaires that are geared around particular ideological frameworks (example, "Do you believe America is a Kuffar system?) work far better in assessing threat and risk of recidivism. In this sense, proper deradicalization programs must become part and parcel of CVE practice and has already been implemented with various degrees of success (Horgan & Braddock, 2010) in over 15 countries already (Neumann, 2010).

TI's are effective for CVE because they understand the subject matter being referenced by the VE. The trust which is inherent with social welfare type activists, permits for cognitive openings, which are a part of this process in radicalization leading into violent extremism and are just as important for moving away from radical and extremist thought.

TI's must remain autonomous as much as possible. For example, in a case where an individual comes into the orbit of a national security agency under some form of enforcement action and where a threat and rehabilitation assessment has been conducted by SME's, the individual under investigation can be directly intervened by directing them to a vetted TI. This is one of the methods used by the Victoria Police, Counter Terrorism Coordination Unit in Australia. In Canada, national security enforcement teams have approached the families of such individuals to force a process of de-escalation and discuss possible community leaders they might be interested in talking over this subject with. The police shall not seek information from the TI, impede or otherwise interrupt this process but simply "observe compliance" (have reporting requirements drafted and verified). The suspect individual(s) should feel comfortable that communication is protected in the sense that the TI is specifically not to speak to the authorities unless legally compelled in the case of a criminal prosecution that may follow because of offence recidivism. It is of course true that some offenders have chosen not to de-escalate even when given the opportunity and continue on their path of extremism. This latter group is beyond rehabilitation at this point and can only be served through enforcement and correctional action.

Subject Matter Experts

SME's are those people who are professional knowledgeable about radicalization as well as radicalization leading into violent extremism. This can be achieved through their own personal experiences in the community as well as practitioner experience in some form of national security (intelligence and police) or defense (military) background. The individual(s) in this category would be mission-oriented and understand that their role is specifically not to be engaging in community activism, lest the community think it is being infiltrated under the guise of "cooperation." These are narratives that will most certainly appear and require serious thought prior to embarking on such ventures.

The most important role of the SME is to provide expert advice to decision-makers about the nature of the threat as it relates to ideology in particular. Competencies shall have been obtained through direct contact with some form of enforcement operation where knowledge of TTP's is sound and thus, able to be commented on in a professional and unbiased manner. Many former extremists who have proven themselves active in condemnation of their former groups are essential to engage as SME's in this particular setting because they know precisely, the ideology, method and the tools used by the adversary and those who perpetuate the adversary's narrative.

The SME's could be engaged in the following two ways: First, create a better list of word-strings that is highly focused in order for data collection systems to better separate the wheat from the chaff. This would be the direct result of the insider information that comes from the use of former extremists, highly credible individuals as Google's think/do tank, Google Ideas discovered (Google Ideas, n.d.) when they brought formers from four particular categories under violent extremism: ultra-nationalist, white supremacists, religiously-motivated and urban street gangs. Formers – as they are called – are essential in providing the SME foundation for IIA and CVE functions and as far as extremism remains an issue of networks, fusing technology and human aspects will greatly enhance the likelihood of such CVE narratives having traction where it matters: on the ground.

A second potential mechanism would be to create a corpus of "positioning statements" to readily respond to some narrative that requires countering. Operators can realistically be trained within a short time on the specifics of the adversary narrative to directly engage extremist narratives and not so different from the current manner in which the U.S. Department of State does so with the Center for Strategic Counterterrorism Communications, Digital Outreach Teams (U.S. Department of State, n.d.).

A final and more advanced scenario would require vetted, qualified and competent SME's to be involved in the decision-making process of kinetic, military operations including special operations contexts. Being able to "mind the narrative" from the outset, prevents panic from setting in later when something goes wrong. Also, the SME can also be trained to obtain (or already possess) competencies in tactical interrogation, psychology and other skills relevant to the mission so as to exploit cultural sensitivities and mitigate – as much as humanly possible – potential criticisms by diaspora and minority communities of "disrespect." In this context of influence, the perception of disrespect and insensitivity can become fatal to military members if the right triggers are exploited. A number of examples are present of what happens when claims of Quran burning and Prophet insulting is exploited by the adversary.

Final Thoughts

Countering Violent Extremism attempts to be an exercise in which the express aim is to mitigate the negative impacts of violent extremist ideologies, whether they employ ideas on religion, racial supremacy, ultra-nationalism and even gang culture. Members who have competency with these narratives – especially as former members – are the best group to engage in terms of influencing decision-making. As the author's own experiences in this area of religiously-motivated groups have demonstrated, the understanding of the adversary narrative has allowed for infiltration and disruption operations to be successful because of the familiarity with the subject matter, including knowledge of the scriptural references that extremists use. If this approach is so successful to perpetuate infiltration of an active terrorist cell, then a systematic methodology and operation that employs this at the macro level, can be quite useful in facilitating influence among friend and adversary alike. It is thus, vital to begin preparing teams to engage in IIA with a specialization in CVE.

IIA itself is ultimately an exercise in which the express aim is to mitigate the deadly courses of action of the adversary, inasmuch as terrorism is a problem of killing. It is to prepare operators and officers to understand potential trajectories that the adversary may employ in response to the mission by having an understanding of TTP's, which is something that former extremists or disillusioned members possess a wealth of information on. It uses the same basic principles of gaining trust with influencers and leaders, exploiting this proximity to the population (possibly using HUMINT and SIGINT capabilities) and using that relationship to foster cooperation and support of those mission objectives in play.

Engaging Trusted Intermediaries and Subject Matter Experts is one such way to fuse the objectives of IIA and CVE. By applying the mechanics of influencing decision-making that is known by modern research into psychology, neuropsychology and captology as it is related to technology platforms, the IIA field will go through a period of advancement and effectiveness. This will occur by the acquisition of a new skill-set: direct engagement with the violent Islamist extremist narrative in its details so as to leverage those with influence against their narratives. Helping members of the community to directly engage with extremist narratives – without having to worry they'll end up on a list of some sort – is vital in gaining the trust of these communities. The state must give positive-messaging full support when it is being disseminated willfully and without state direction as this is part and parcel of the greater objectives of actually countering negative views instead of just identifying such views as catalysts towards violent extremism but then taking no action to mitigate its effects.

This article hopes to have conveyed certain specific actions that can be taken to fuse IIA activities with CVE practice. It has shown that communities are already speaking out but do not enjoy even acknowledgement from the government of their work. Creating a roster or a network in which the government is one among a number of partners is one way to have the state participate as a partner instead of failing to respond to the perception that government is only interested in enforcement action with no care or attention to prevention. This should be vociferously challenged as part of the CVE doctrine. Finally, working with those individuals who know the adversary mindset due to former activities within such networks and/or by direct exposure in a national security setting is easily the most vital asset that has yet to be exploited. It is hoped that this article begins that process.

120

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Appendix: Lexicon

- The *Activist* category is comprised of groups that pursue their goals by political means only, and explicitly renounce and denounce violence.

- The *Radical* groups do not participate in violence, but decline to condemn it.

- *Militant* groups admit to practicing violence in support of their cause, but not against civilians.

- *Terrorist* groups admit to practicing violence in support of their cause, including attacks against civilian targets to weaken societal resistance.