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About the CTC Sentinel

The Combating Terrorism Center is an independent educational and research institution based in the Department of Social Sciences at the United States Military Academy, West Point. The CTC Sentinel harnesses the Center's global network of scholars and practitioners to understand and confront contemporary threats posed by terrorism and other forms of political violence.

The views expressed in this report are those of the authors and not of the U.S. Military Academy, the Department of the Army, or any other agency of the U.S. Government.

The Proceedings of the 2015 West Point Senior Conference



General Joseph L. Votel addresses U.S. troops.

USSOCOM

OF Lieutenant BEHALE General Robert L. Caslen, Jr., Superintendent of the U.S. Military Academy at West Point, and his predecessors, the Department of Social Sciences (SOSH) has convened the Senior Conference every year since 1963, with the exceptions of 1969 and 2013, to discuss national security topics in a sequestered, informal setting. The goal of the 2015 Senior Conference was to bring together diverse ways of thinking about the challenges posed by terrorism. This year's theme, "Counterterrorism: Unconventional Approaches to an Unconventional Threat," was intended to focus discussion on what one attendee described as "the hardest problem" the United States is likely to face for a long time. In the spirit of previous years, West Point brought together eminent scholars in the field of terrorism, representatives from international organizations, non-governmental organizations, private industry, and the U.S. government, in addition to senior military leaders.

The CTC Sentinel is devoting this issue to the results of this endeavor with articles that highlight the most interesting avenues of exploration and discussion. The issue begins with General Joseph L. Votel, commander of U.S. Special Operations Command (USSOCOM), who has kindly provided an augmented version of the keynote speech he delivered at the conference. The CTC's Dr. Nelly Lahoud and SOSH's Dr. Robert Person then provide an overview of the themes addressed during the twoand-a-half-day event. Finally, several attendees have graciously agreed to expand on their presentations from the conference and further share some of the insights that may help advance thinking, counterterrorism and strategy. An article by Pete Favat and LTC Bryan Price looks at how marketing skills can help weaken our opponents. Interviews with Usman Raja and Dennis Gleeson explore their thoughts on deradicalization and how to think about terrorism, respectively. The issue concludes with an article by Dr. Yaneer Bar-Yam discussing his work on the science of complexity and its implications for counterterrorism policy and strategy.

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Understanding Terrorism Today and Tomorrow

By General Joseph L. Votel

General Joseph L. Votel, commander of U.S. Special Operations Command, graciously delivered the keynote speech at the 2015 Senior Conference and took the opportunity to set out the gravity and scope of the issue under consideration. The article below is adapted from his speech.

I'D LIKE TO start by posing a basic question to this distinguished audience. What makes an effective terrorist? Now, I don't necessarily mean that question in the way you might first consider.

You might think that I'm asking you to reflect on ideology, socio-economic factors or a general sense of disenfranchisement, but that's not quite where I'm heading. Personally, I do not think there is a singular or consistent cause for terrorism.

Nor do I believe that the impact of their actions defines an effective terrorist. A suicide bomber who drives headlong into a crowded market is really no different than a suicidal maniac who attacks a classroom full of kids. I really mean: In the end, what allows a terrorist to achieve his or her objective?

As I reflect on acts of terrorism over the last 40 years—and there have been too many of them—I note two common characteristics: the targeting of innocents and the factor of surprise. Several case studies illustrate these commonalities.

In 1972, Palestinian terrorists from the Black September group broke into the Munich Olympic Village and stormed the Israeli dormitory. They took 11 hostages, eventually killing them all, along with a German policeman. This event, carried out on the world stage through televised coverage of the Olympics, literally brought terrorism into our homes in real time.

Thirteen years later, on October 7, 1985, four men representing the Palestine Liberation Front (PLF) hijacked the MS Achille Lauro off the coast of Egypt and demanded that the vessel set course for Tartus, Syria.

Before the hijacking was over, one elderly American passenger had been killed, pushed overboard in his wheelchair.

A decade later, on April 19, 1995, American citizen Timothy McVeigh, assisted by Terry Nichols, angered by FBI actions at Ruby Ridge and Waco earlier in the decade, detonated a rental truck full of explosives outside of the Alfred R. Murrah Federal Building in Oklahoma City, killing 168 people—including a large number of children in a daycare center.

And we are all far too familiar with the more recent attacks conducted in our homeland. The horrendous violence

"What makes a terrorist effective is unpredictibility, surprise, and the exploitation of things that are common to us, but which we often take for granted."

on September 11, 2001 and two years ago in Boston both trace their origin to religious fanaticism.

Unfortunately, that fanaticism and violence continues today, as the Islamic State, a group we knew almost nothing about 18 months ago, and their adherents use car bombs, explosives, beheadings, hostage taking, and lone wolf attacks to further their aspirations.

But what do all of these terrorists have in common? It's not the way in which they planned or executed their attacks. It is not who they targeted. It is certainly not that the PLF, Timothy McVeigh, Usama bin Laden, the Tsarnaev brothers, or

ISIL share some common underlying ideology.

The simple, unfortunate threads of continuity are twofold. First, although they were motivated by different beliefs and ideologies and pursued different objectives, they extended those beliefs into behavior that we find unacceptable—the targeting of innocent persons.

The second characteristic is less obvious, but perhaps more disturbing. It's that we were surprised by each of these events, and that we continue to be surprised to this day. With 14 continuous years of experience fighting terrorist networks, how is it that we were unable to see the rapid rise and growing prominence of ISIL?

Inside this is also the answer to my rhetorical question. What makes a terrorist effective is unpredictability, surprise, and the exploitation of things that are common to us, but which we often take for granted.

I don't know if I can describe what terrorism will be or look like in the future. Historically, we don't do particularly well at this. Why is that? Why do we fail to anticipate actions that so directly threaten our security?

Well, as Yogi Berra said, "It's tough to make predictions...especially about the future." In all seriousness, it is really hard to predict what people will do—particularly when we can't always define their motivation and inspiration.

There are, actually, many factors that contribute to this shortfall. One of the biggest factors is our tendency to myopically focus on a singular root cause, to find that one answer to the "why" question and then attempt to apply a laser focus on that one cause while effectively ignoring other potential reasons.

Our focus on ideology is a great example of this. Sunni-Wahhabism is in vogue today, and is winning our attention right now, but I am not so sure I agree that it is the singular root cause for terrorism.

In fact, I'm not sure there is ever a singular root cause. What about the results of rampant unemployment? Dissatisfaction with corrupt or oppressive government regimes? Social or cultural disenfranchisement?

There are three broad reasons why I think we continue to have problems in effectively predicting and preventing terrorism. They have to do with adaptability, persistence, and imagination.

"From Guy Fawkes and his Gunpowder plot of 1605 to the attacks on our consulate in Erbil in April, terrorist groups adapt and exploit developments in technology, culture and social norms."

Complex threats continue to evolve and manifest in ways we don't completely understand. Terrorism has survived and evolved throughout the ages.

From Guy Fawkes and his Gunpowder plot of 1605 to the attacks on our consulate in Erbil in April, terrorist groups adapt and exploit developments in technology, culture, and social norms.

Terrorists also persistently improve on tried and true methods, developing new and innovative ways to execute their attacks. The evolution of improvised explosive devices (IEDs) is a case in point.

In 14 years we have seen terrorists go from crude exploitation of military ordnance to factory-manufactured devices designed to penetrate top level armor, and experiments with body bombs.

This evidence simply drives home the point that terrorists have always adapted their methods, techniques, and approaches to match the tools and opportunities of the day. We should not expect anything else in the future. Complexity makes it easier for them.

Terrorist groups have also evolved—more of today's groups are disassociated from nation-states and are becoming singular influences in their own right. ISIL not only coerces and subjugates its victims to an ideology, but it also seeks to govern physical space. They are adapting to a perceived need and attempting to fill space left vacant by sovereign governments.

In addition, the social media boom has allowed terrorists to recruit and communicate better and faster. And they are learning—they learn from their mistakes and lack of operational security. They are self-aware. They remain anonymous and adapt to their environs. Their organizations exploit our complex hyper-connected world and metastasize like a cancer.

For many reasons—legal, cultural, bureaucratic, or financial—we have not adapted well or quickly. Even though we recognize the tools and methods the terrorists are exploiting, it's frequently difficult to connect all the dots.

It's even more difficult to maintain focus on the problem for the long term. Our inability to persistently apply pressure often allows individuals and groups to surprise us with their actions and capabilities.

The evolution of the Red Brigades, a paramilitary organization born in Italy in the 1970s, is one example of this dynamic. The Red Brigades gradually lapsed into inactivity through the 1980s and 1990s.

However, a decade after their supposed demise, a new group emerged calling itself the "Anti-Capitalist Attack Nuclei." This group materialized, seemingly from nowhere, exhibiting a continuity of ideology, symbols, and communication styles with the allegedly defunct Red Brigades. Some individuals from this new entity were even known to have been original Red Brigade members.

We're seeing a very similar phenomenon today in the way that al-Qa'ida in Iraq and others resurrected to form a core under the banner of ISIL.

Our political system, news media, and national attention are consistently drawn to the next crisis and have little patience for dealing with long-term issues. This tendency affects budgets,

"[We] are consistently drawn to the next crisis...
This tendency affects budgets, resources, and our talented people. The terrorists know this, they exploit it, and they keep pressing forward."

resources, and our talented people. The terrorists know this, they exploit it, and they keep pressing forward.

Acts of terrorism, both large and small, come at us from almost every direction, and in creative ways that we often don't anticipate.

One of the findings from the 9/11 commission concluded that we simply lacked the imagination, and belief, to envision that a group of terrorists would learn to operate large commercial passenger airliners and then fly them into tall buildings where thousands worked.

This led us to collectively dismiss intelligence reports pointing in that direction. The lesson that 9/11 taught us

¹ The 9/11 Commission Report, pp. 339-348.

is that saying "that will never happen" is only ever true until it does.

Over the last 18 months we have seen more than 23,000 persons converge on the Levant in response to ISIL's call for action. What do we imagine they will do when they return to their homelands?

We do not spend enough time considering all of the contributing factors—looking through social and cultural lenses, studying and mastering technologies, understanding the multiplicity of ideologies, or connecting local to regional to global events—at least not quickly and efficiently enough to be predictive and preventive.

"The case studies... are a reflection of the kind of terrorism we're familiar with. But we can ill afford to think that we will continue to face the same foes in the same way using the same tactics."

Implications for the Future

I firmly believe that the ability of terrorists to rapidly adapt in our complex world, combined with our lack of persistence and imagination, will continue to create blind spots in our counterterrorism efforts. The implications of these gaps are significant.

Terrorist attacks, like the case studies mentioned earlier, are a reflection of the kind of terrorism we're familiar with today. But, we can ill afford to think that we will continue to face the same foes in the same way using the same tactics.

In the future, we will have to come to grips with new types of terrorists, such as the computer-savvy individual who knows how to exploit rapid technological advances and the ubiquity of the internet. Terrorists in the future will be even more sophisticated and will continually improve their capabilities in virtually all aspects of their operations and support.

As societies become more connected and interdependent. manv more will become aware of their cultural disenfranchisement and disadvantages. Across the country and around the globe, connected youth are becoming more and more desensitized to unacceptable and violent behavior absorption of various electronic inputs, to include streaming news, entertainment mediums, and video games.

Computerized traffic and public safety systems and electronic banking will be among the new terrorist targets. It might be that the spectacular attack in the future will lie not in how many people you kill or injure, but in how effectively you can paralyze major urban areas by changing a few ones and zeros, or potentially disrupt the functions of financial systems. Just imagine the lasting impacts of those types of events happening without warning.

The incredible proliferation of devices that connect us to the "internet of everything" will be both tools and targets for terrorists. Experts say that by 2020 there will be more than 40 billion wirelessly connected devices, and that all of them could be easily hacked.²

In the future, we should think of disparate and isolated "lone wolves," still independent, anonymous, and elusive, but now connected to each other in cyberspace—forming "wolf packs."

These packs can share tactics, techniques, and procedures with one another, instantaneously move resources across the web anonymously—

all while they collectively plan and execute their attacks.

What Can We Do?

Just because we have not always been successful at countering violence in the past does not mean we should not strive to do better in the future. In the near term, we must contain the use of violence and oppression—unilaterally, multi-laterally, by, with, and through.

We must disable and counter propaganda and information operations. We must address known causal factors by strengthening vulnerable populations and improving their ability to identify, characterize, attribute, and defend against terror networks and threats.

"Our whole-of-government efforts...must work better. It is imperative that we share a common operational view—across U.S. agencies and with our international partners."

Our counter-terrorism architectures and capabilities will need to be more agile and more integrated. We need a common strategy. Understanding this complex environment will require mature global networks and effective links with our interagency teammates and partner nations—allowing rapid synchronization of information across agency, regional, national, and international boundaries.

Often this will mean working with nontraditional partners. But, by leveraging a global network that is already present in every region of the world, we can create the time and space necessary to address poor governance issues that have contributed to the emergence

^{2 &}quot;Internet of Things By The Numbers: Market Estimates And Forecasts," *Forbes*, August 22, 2014.

of threats such as Boko Haram, al-Shabaab, and others.

Our whole-of-government efforts aimed at addressing violent extremism must work better and in conjunction with each other. It is imperative that we share a common operational view—across U.S. agencies and with our international partners—of vulnerable populations and ensure our limited resources are applied to assist those governments and areas in addressing circumstances that lead to increased motivation and opportunity for terrorists.

Given that many foreign terrorist fighters or "want to be" fighters and supporters virtually document everything on social media, we must confront the issue of privacy versus public safety.

We are going to live in a world that is more connected than ever before, and this connectivity will make us more vulnerable. But it also offers us a means to overcome and, ultimately, silence and defeat the dissatisfied few who we identify as terrorists. We must contest this space and own it.

Conclusion

How we arrive at a less violent and more harmonious existence in the future rests on the shoulders of the men and women on the frontlines against terrorism. But the outcome will only be as good as our aim.

Practitioners in large part rely on organizations such as the Combating Terrorism Center to establish the intellectual underpinnings of this field, allowing us to better know the enemy, and helping us best direct our precious resources.

We can become more effective at preventing attacks if we can utilize the collective imagination of our network to build the partnerships and processes we need.

We must also maintain the proper perspective, understanding that this is a global problem that will require global solutions.

"We are going to live in a world that is more connected than ever before, and this connectivity will make us more vulnerable. But it also offers us a means to overcome and, ultimately, silence and defeat the...terrorists."

If we're able to do these things and maintain our persistence, understanding that this is an enduring conflict (a "long war" as General John Abizaid³ often reminds us), and if we can learn from our past mistakes, not only in countering ideology, but in identifying the multitude of motivations, tools, and techniques that enable them to do harm, we have a chance to forestall the effects of violent extremism.

Our nation is depending on us and I look forward to being a partner in this effort.

General Votel is commander of U.S. Special Operations Command (USSOCOM), headquartered at MacDill AFB, Tampa, Florida. A native of St. Paul, Minnesota, General Votel attended the U.S. Military Academy at West Point, and was commissioned in 1980 as an Infantry Officer.

As a general officer he served in the Pentagon as the Director of the Army and Joint IED Defeat Task Force and subsequently as the Deputy Director of the Joint IED Defeat Organization established under the Deputy Secretary of Defense.

He served as the Deputy Commanding General (Operations), 82d Airborne Division / CJTF-82, Operation ENDURING FREEDOM, Afghanistan and was subsequently assigned as the Deputy Commanding General of the Joint Special Operations Command, Fort Bragg, North Carolina. His most recent prior assignment was as the Commanding General of the Joint Special Operations Command.

^{3 &}quot;Gen. John Abizaid Speaks on Leadership and Current Hot Spots," Claremont McKenna University College, May 2, 2013.

In Search of New Approaches

By Nelly Lahoud and Robert Person

THE 2015 SENIOR Conference featured open and honest discourse among a wide range of participants, including senior representatives from the military, counterterrorism practitioners, policymakers, NGOs, international institutions, and partner nations. The result was a deeper understanding of the challenges facing the counterterrorism community and the identification of some signs pointing the way ahead for the field.

These successes were made possible by the balance of informal conversations, keynote presentations, and formal panel discussions organized under Chatham House rules. The attendees were able to approach the topic of unconventional approaches to the unconventional threat of terrorism in a way that encouraged honest reflection and genuine sharing of viewpoints and ideas. As a result, only those participants who have contributed formal articles to this publication will be quoted.

Understanding the Problem

Addressing the threat emanating from terrorism and developing effective counterterrorism and appropriate strategies and tactics is contingent on understanding the basic nature of the problem. As one participant stated, "being clear about the problem is the key to getting strategy right." It's a warning that has a long history.1 And yet, from the vantage point of some of the participants, the Western counterterrorism community collectively come up short on this count. "We have done a poor job of knowing the enemy. We won't name them, and we won't talk about them." This comment from one conference participant alludes to debates not about specific organizations such as al-Qa`ida or the Islamic State, which clearly governments will name, but rather concerns the naming of the broader, long-term threat posed by groups on the basis of their ideological persuasions.

It is no surprise that a critical spirit defined the conversation in a conference designed to explore unconventional approaches to counterterrorism. This spirit is driven in large parts by the struggles of successive U.S. administrations to devise effective and lasting ways to reduce and manage the spread and appeal of terrorism through strategy and policy.2 One attendee succinctly summed it up, stating, "Before 9/11 we got it wrong, and we got it wrong afterwards. Asleep at the switch before, overestimated the threat

"Being clear about the problem is the key to getting strategy right."

afterwards." This individual underlined their belief that the consequences of some early mistakes in this conflict continue to generate serious challenges, including the ascendance of the group that now calls itself the Islamic State.

The problem, though, is far more severe than simply either over- or underestimating specific terrorist groups. Many of the participants noted how a lack of an appreciation for, or focus on, the complex factors that drive and help to sustain terrorism has contributed to a narrow view of tools or strategies available to combat this phenomenon; a narrow view, which has led the United States and other states to place perhaps too much emphasis on kinetic solutions at the expense of other approaches. The consequence, one individual declared, is that the United States has "grossly under-resourced the non-military aspects" of counterterrorism.

Reframing the Problem

Discourse at the conference soon moved to an old, but surprisingly useful analogy for thinking about the problem. This paradigm sees terrorism and global society in holistic terms with the political, economic, and social systems akin to a complex organism whose health is dependent on a number of interrelated factors. In this analogy, terrorism is a disorder, or a malignancy like cancer, that requires treatment.

The dangers of pursuing this analogy too far are obvious. Like any shorthand—as highlighted by Dennis Gleeson later in this issue—it can encourage absolutist and limited thinking. Equally though, it can be useful in framing the problem and highlighting avenues of research.

The analogy was introduced by a presenter, Yaneer Bar-Yam, who discussed new approaches to complex strategic environments (a topic he explores more deeply in his article later in this issue). He argued that global society is "a highly interdependent system" that consists of multiple distinct, complex sub-systems. Thus, the "comprehensive global strategy" to counter terrorism, as was called for by several attendees, is more usefully understood as one that addresses the political, economic, social, and cultural realms. This is because "the violent extremists we are talking about are not separate from the systems they are embedded in," and their actions demand a multifaceted set of treatments within the multiple social systems in which they operate. The discussion turned to how understanding the science of complexity and the impact of scale can help shed light on the problem, vielding some interesting avenues of exploration regarding the different types of organizational structures and the environments in which they perform best. Bar-Yam pointed to the similarities between the organizing principles of regular unit structures in the armed forces and the neuro-muscular system (e.g., centralized command, large scale response), and between special operations forces units and the immune system (e.g., distributed command, small scale response).

And at the risk of abusing the healthy body analogy, the malignancy of terrorism demands "we need to be as concerned about the health of the tissue as we are about the pathogens themselves."

Failure to address the basic conditions necessary to promote a healthy society

¹ Jeffrey D. Simon, "Misunderstanding Terrorism," *Foreign Policy*, Summer, 1987.

² Rosa Brooks, "U.S. Counterterrorism Strategy is the Definition of Insanity," *Foreign Policy*, June 24, 2015.

can produce unintended negative consequences. As evidence, participant held up the example of the 2003 U.S. invasion of Iraq, an event that spawned a vast array of unanticipated downstream effects. This individual pointed out that "we were confused" as to why "we were not welcomed as liberators who brought Jeffersonian democracy to the people," before going on to explain that "when your basic needs are not met," then one's needs "become very primal and less idealistic." By failing to meet the "basic needs" of Iraqi society, the speaker implied, the door was opened to the chaos that has ensued.

Distinguishing unhealthy elements in society from healthy ones in order to develop well targeted strategies gives rise to the challenging problem of data and metrics, which occupied a central place in the conference's discussions. Unfortunately, this discussion yielded more questions than answers and more challenges than solutions, highlighting the difficulties faced in gathering usable or reliable data on terrorists. "Getting metrics is hard because we are not sure what our goals are," was one rejoinder from the conference. And while there is a tendency for all oversight systems to be gamed, metrics are essential within the counterterrorism community in order to evaluate the effectiveness of programs and inform changes to policies and tactics.

A related challenge is that a concentration on goals and the data needed to achieve them can lead policymakers and practitioners to overlook vital concerns. If the counterterrorism community only attempts to answer questions for which there is data available, then it risks missing new threats. One participant argued that using the number of "bad guys" eliminated as a primary metric of success only leads to a game of "Whackneglecting the detection a-Mole," of future threats, the evolution of organizations, and/or their control over territory. Nonetheless, the conversation turned to an innovative program that regularly surveys intelligence analysts regarding the key questions that need to be answered, as well as the data necessary to answer them. While the "right" data may not be available, this bottom-up approach at least casts a

wide net in determining the needs of those who are on the front lines of data gathering and analysis for the purposes of counterterrorism.

A more grassroots approach to gathering metrics is one that uses data from social media in communities where terrorist organizations are embedded or likely to gain a foothold. The appeal of such an approach—though difficult to operationalize efficiently—is that it is "organic" and not necessarily constrained by the biases or blinders of intelligence gatherers. The realities of participation in social media as raised in the discussion do, however, point to

"Terrorism...should be understood as a chronic problem, with moments of acute threat."

some concerns about the viability of this approach to generating representative data about the public mood in areas of concern. One participant warned that "only one percent of social media users are content creators, with an additional nine percent of users as contributors." The challenge continues to be developing robust, metrics and reliable data sources that can better help policymakers and practitioners detect, target, and address the underlying causes of terror before violence occurs. The consensus seen during the symposium was that the United States and other Western nations are frustratingly far from solving that challenge.

Addressing Challenges

Terrorism-like many malignanciesshould be understood as a chronic problem with moments of acute threat. Effective counterterrorism operations require vigilant monitoring and ongoing action across the various complex systems that comprise societies if we are to minimize the probability of terrorism's reemergence. This, historically, has been a challenge for the United States and our short national attention span, one that leads us to downplay threats in the absence of major terrorist attacks. While the

absence of such attacks is commendable, one speaker noted, it does not mean that we can afford complacency given the evolving nature of terrorist groups.

One participant argued that when it comes to the issue of facilitating action and strategy against the dynamic terrorism threat, there is a need for the U.S. government to develop a "middle way." In the view of this participant, this approach would grant the United States a set of standing counterterrorism authorities to deal with terrorism problems that sit between those that it can affect from the two main sets of authority that guide U.S. counterterrorism policy: 1) the Authorization of Use of Military Force (AUMF), which has been used to guide the U.S.'s war against al-Qa'ida and to counter large-scale terror problems; and 2) the more restrictive and smaller set of authorities which allow the United States to conduct targeted counterterrorism actions to prevent, shape, or respond to a specific event. The participant's point in suggesting this was really a call for the United States to realize that the polarity of the low and high response authorities associated with each of these approaches are not aligned with many of the middle ground threats that the United States now faces.

Furthermore, as has been regularly documented in past U.S. counterterrorism conferences, effective counterterrorism requires coordination. Each of the agencies, actors, and governments involved in counterterrorism activities must communicate and collaborate rather than stovepipe their operations. A participant warned the room that we must "mind the gaps," lamenting that despite significant progress having been made over the last decade, "the CIA, Department of Defense, NGOs, the private sector, and international partners are not pulling together today" to develop and implement a comprehensive global strategy on terrorism. While this is certainly not a novel finding, the fact that this issue is still being raised after 14 years of counterterrorism conferences studies is of note in and of itself.

Indeed, the question of leveraging partnerships with foreign governments,

the private sector, and the NGO community occupied significant parts of the conversation during the conference. But the discussions surrounding partnerships were marred with difficulties, not all of which could be easily addressed. For example, how should humanitarian organizations and other NGOs fit into a counterterrorism framework? Indeed, the activities of NGOs are essential in a world where civilians tend to be the primary targets of terrorist groups and are often victims of collateral damage; yet what if in some cases, as one participant asked, supporting NGOs "inadvertently funds the enemy?"

Further, from the perspective of humanitarian organizations, terrorism is a political label, which could mean that "today's enemy can be tomorrow's ally," a nuanced understanding that echoed comments from other participants who warned about the dangers of oversimplifying the language used to describe terror groups and their goals.

More importantly, such organizations are keen to distance themselves from the political dimension of the problem. Among the many reasons for this is to protect their primary mission of saving lives; if their stance is deemed partial to any of the parties to the conflict, their mission is politicized, which often leads to the flow of operating funds being constricted and/or the movement of their personnel hampered. In short, to paraphrase one participant, humanitarian organizations do not favor partnerships, but they are always willing to collaborate. Since saving lives is what is at stake, collaboration may involve any and all parties, including terrorist groups.

Yet, if partnerships may be considered a liability for some NGOs, there were compelling arguments that in other domains, partnerships are essential and that there aren't enough of them. One participant strongly appealed to go beyond building local and national partnerships, calling for "synchronizing across regions." Further, it was pointed out that partnerships should not be at the mercy of timetables and termination dates extraneous to conditions on the ground. Such an approach inevitably

undermines partner capacity and often causes mission failure. Put differently, the United States should not be in the habit of overpromising and underachieving.

Additionally, one participant suggested that one of the main issues hindering the United States' ability to forge deeper and more meaningful counterterrorism partnerships was often tied to the United States' reluctance to share or declassify information (so it can be shared) with its partners. The participant acknowledged that an understandable hesitancy among policymakers to share information was certainly warranted, but he cautioned the audience that the United States' aversion to more risk in this area might actually damage such relationships because that caution could be misconstrued (or correctly construed) as a lack of trust.

Marketing and communications proved to be interesting and fertile ground. One speaker called to mind a 2007 speech by then Secretary of Defense Robert Gates, who noted that "public relations was invented in the United States, yet we are miserable at communicating to the rest of the world what we are about as a society and a culture, about freedom and democracy, about our policies and our goals."

Inspiration for a more effective communications strategy came from Pete Favat who was involved in the highly effective and innovative "Truth" anti-smoking campaign. That campaign is explored in depth later in this issue, but its lessons about the impact of guerilla marketing, understanding of the target market, the importance of prompting unconventional thought, and the role private-sector communications professionals could play in developing more effective information campaigns designed to prevent the spread of terrorist ideologies cannot be ignored.

Rehabilitation of former terrorists also offered some insights that could be folded into a media campaign. Society should have a way of reintegrating former jihadis. Failing to do this could

3 Robert Gates, "Landon Lecture (Kansas State University)," U.S. Department of Defense Public Affairs, November 26, 2007.

merely create additional problems in the future. The innovative intervention techniques, integrating physical training, peer discussion, charismatic leadership, and theological discussions used in some programs hold some promise despite challenges in scaling up the most successful of them. Usman Raja, who directs such a program in the United Kingdom, shares his experiences later in this edition.

Conclusion

The diversity of representation at the conference engendered novel approaches to counterterrorism that move the discussion forward in meaningful ways. As the global community struggles with the ascension of the Islamic State, it seems clear that policymakers can draw on unconventional sources of inspiration, such as the anti-smoking campaign, as models to stem the Islamic State's appeal.

More precisely, instead of devising counter- and de-radicalization policies focused on peaceful theology, would a campaign using an approach similar to that of the Truth anti-smoking campaign be more effective in turning youth away from violence? Should democracies engaged in counterterrorism model their interactions with non-democratic states on the basis of collaboration rather than partnership, as humanitarian organizations do, lest their support of autocratic regimes breed more terrorism? There may yet be more questions than answers, but the 2015 Senior Conference helped to point out useful avenues of inquiry.

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The views expressed here are reported by the authors and do not reflect the official policy or position of the Department of the Army, Department of Defense, or the U.S. Government.

The Truth Campaign And The War of Ideas

By Pete Favat and Bryan C. Price

THE IMPORTANCE OF the war of ideas between the United States and jihadist organizations has been well understood by our adversaries since 9/11. In the early days of the long war, Ayman al-Zawahari, long-time deputy to Usama bin Laden and al-Qa`ida's current leader, declared that "more than half of this battle is taking place in the battlefield of the media. We are in a media battle in a race for the hearts and minds of our *umma*."

Senior U.S. government officials have also acknowledged the importance of winning the war of ideas from the outset. A month after the 9/11 attacks, Richard Holbrooke wrote an op-ed warning that our adversaries had the upper hand in the propaganda domain. He famously questioned "how can a man in a cave [bin Laden] outcommunicate the world's leading communications society?"²

To better compete with our adversaries in the war of ideas, the U.S. government created institutions like the Counterterrorism Strategic Communications Center in the State Department (CSCC). Despite these efforts, most observers would argue the gap between our enemies and the United States in the war of ideas has only widened in this domain, especially with the emergence of the Islamic State, but why?3

Critics complain that the U.S. government has failed to provide the time, attention, and resources necessary to match the size and scope of the Islamic State's propaganda machine.⁴ Others

suggest the CSCC is the latest casualty in another bureaucratic turf war within the Beltway.⁵ Still another line of argument questions whether the State Department is the right organization for this job⁶ or whether the government should be doing this type of activity at all.⁷ While the reasons for our collective ineptitude remain up for debate, the fact that the United States and the West are losing the battle of ideas to our enemies is not in dispute.

In order to explore new thoughts and frameworks for winning in this domain, the Combating Terrorism Center invited subject matter experts from outside the counterterrorism community to a special Senior Conference panel on the war of ideas. The most interesting solution that emerged from this panel was to take the model employed by the Truth campaign to stop teenage smoking and apply it to the countering violent extremism (CVE) realm.

The Truth Anti-Smoking Campaign

The Truth anti-smoking campaign was a product of the 1999 Master Settlement Agreement, which saw the major tobacco companies settle out of court with 46 states and five U.S. territories that had sued them to recover money caring for sick smokers. Some of this settlement money helped create the American Legacy Foundation, an independent non-profit, organization in public health, which then funded the Truth campaign.⁸

Playing David to Big Tobacco's Goliath, the Truth campaign was operating at a severe disadvantage from the start. Big Tobacco was spending as much as \$13 billion each year in marketing.

Rules," *Washington Post*, May 8, 2015; Eric Schmitt, "U.S. Intensifies Effort to Blunt ISIS' Message," *New York Times*, February 16, 2015; Mazetti and Gordon. 5 Ibid., Miller, Higham, Schmitt.

6 Philip Seib, "Counterterrorism Messaging Needs to Move From State to CIA," *DefenseOne*, October 27, 2014. 7 Ibid., Miller and Higham.

8 See M. Farrelly, K.C. Davis, J. Yarsevich, M.L. Haviland, J.C. Hersey, M.E. Girlando, and C.G. Healton, *Getting to the Truth: Assessing Youths' Reactions to the Truth and 'Think. Don't Smoke'* Tobacco Counter-Marketing Campaigns (Washington, D.C.: American Legacy Foundation, 2002).

9 Michael Sebastian and John McDermott, "Is Big Tobacco Back as a Big Advertiser?" AdAge.com, June Today's average 14-year-old has been exposed to more than \$20 billion worth of tobacco marketing since the age of six. 10 Knowing that 80 percent of smokers start before the age of 18, 11 the tobacco industry focused on 10-year-olds as their prime target. 12 An official document from Phillip Morris in 1981 captured this mentality. "Today's teenager is tomorrow's potential regular customer." 13 Targeting America's youth with smoking advertisements was necessary to find, in industry parlance, "replacement smokers."

In addition to massive funding, Big Tobacco owned some of the most powerful brands in the world. Tobacco companies had cornered the market when it came to empowerment and rebellion. They made smoking cool, glamorous, and sexy. Celebrities in sports, music, and film became walking billboards for the smoking lifestyle.

The ineffective anti-smoking campaign of this time was invoked primarily by parents and came across as preachy and controlling, with trite slogans such as "think, don't smoke." Public service announcements (PSAs) encouraged parents to watch their children to prevent them from smoking. Rather than stemming the tide of teenage smoking, these early anti-smoking ads actually had the inverse effect—in the end, teenagers smoked more.'4

Faced with these dire circumstances, the advertising firms of Arnold Worldwide and Crispin Porter & Bogusky came to the American Legacy Foundation with a bold idea. The Truth campaign was going to "un-market" tobacco. Advertisers who had spent their entire

10, 2013.

10 Terry F. Pechacek, *Best Practices for Comprehensive Tobacco Control Programs* (Diane Publishing, 1999), p. 22. 11 Data calculated from Substance Abuse and Mental Health Administration, Department of Human Health and Services, Results from the 2012 National Survey on Drug Use and Health.

12 Pete Favat, Presentation at West Point Senior Conference 51, April 20, 2015, U.S. Military Academy, West Point, NY.

13 M. Johnston, H.G. Daniel, and C.J. Levy, "Young Smokers Prevalence, Trends, Implications and Related Demographic Trends," Philip Morris Companies, Inc., March 31, 1981, Bates No 1000390803/0855, pg. 1. 14 Ibid., Farrelly, et al.

¹ John Hughes, "In Battle for Hearts and Minds, Iraqi Insurgents are Doing Well," *Christian Science Monitor*, June 20, 2007.

² Richard Holbrooke, "Get the Message Out," Washington Post, October 28, 2011.

³ Mark Mazzetti and Michael R. Gordon, "ISIS is Winning the Social Media War, U.S. Concludes," *New York Times*, June 12, 2015; Ayaan Hirsi Ali, "A Problem Heaven: Why the United States Should Back Islam's Reformation," *Foreign Affairs*, July/August 2015, p. 36. 4 Greg Miller and Scott Higham, "In a Propaganda War Against ISIS, the U.S. Tried to Play by the Enemy's

careers selling things would now try to "un-sell" them. It was the first time this approach had ever been tried, but if advertising caused the problem of adolescent smoking, their thinking went, then advertising could be the solution.

"Out-Branding" Big Tobacco

The plan was to create a brand that was more rebellious than tobacco brands, and to ultimately "out-brand" Big Tobacco. They needed to find a way for the Truth campaign to be empowering and rebellious, not preachy, boring, and controlling like previous PSAs.

To do so, the Truth campaign ironically ended up exploiting the same research bv the British-American Tobacco Company in the 1950s on the psychological needs of adolescents that helped inform their advertising.15 According to this research, all children go through what is called the "age of assertion" around ten years of age.16 At this point, the brain is developed enough where the child wants to assert control and make his own decisions. Parents and children often have conflicts at this age because kids want to start making their own decisions and parents are unwilling to relinquish this decision-making authority. The tobacco industry therefore concluded that 10-to 12-year-olds were the perfect targets for their advertising.17

Big Tobacco also identified the psychological need of teenagers to take risks, rebel, fit in, remain independent, self-express, and be respected. The cigarette met all of these needs.¹⁸

If the anti-smoking campaign aimed to take tobacco away, it needed to replace it with something, not just to fill the void, but something that would also satisfy psychological needs. To do so, Truth aimed to replace cigarettes with the ultimate youth icons—rebellion and the ability to control your own decisions. The Truth campaign needed to be a cooler brand than tobacco, expose the lies and manipulation of the tobacco industry, and remain as far away from

15 Favat presentation, Senior Conference 51.

 $16 \ \mathrm{Ibid.} \ \mathrm{Favat.}$

17 Ibid. Favat.

18 Ibid. Favat.

adults as possible. It needed to be made by kids for kids.

Instead of telling teenagers that smoking would kill them, turn their teeth yellow, and cause their breath to stink, the campaign provided unmistakable visuals of what that looks like. For example, instead of simply reporting the statistic that 400,000 people die every year from tobacco-related illnesses, the first TV ad featured teenagers dumping 1,200 paper-filled body bags outside

"The Truth campaign was going to 'un-market' tobacco. Advertisers who had spent their entire careers selling things, would now try to 'un-sell' them."

the headquarters of a major tobacco company in New York City representing one day of the annual death toll.¹⁹

In a follow-on TV ad, 1,200 students wearing white shirts numbered 1 to 1,200 marched outside another major tobacco company headquarters in Kentucky. At a predetermined time, all 1,200 fell down "dead" simultaneously. The campaign filmed the stunt from multiple angles including from a helicopter.²⁰

Because this occurred before the dawn of social media, the campaign exploited unconventional methods to spread their message, draw attention to the lies of Big Tobacco, and make teenagers feel empowered and rebellious. Truth material prominently placed in skateboarding magazines invited readers to cut out signs that were to be stuck in dog feces in order to highlight

the fact that both the feces and cigarettes contain poisonous ammonia.

Another guerilla marketing technique had skate punk readers leave magazines open on bookstore racks to the same spread, effectively serving as free billboards. Yet another tactic instructed participants to navigate to internet sites with anti-smoking advertisements on the screens of every device in an Apple store.

Not surprisingly, the Truth campaign received industry accolades, 21 but more importantly, it helped cut teen smoking by 52% in the United States in the years after the effort. Although nobody at Arnold Worldwide and Crispin Porter & Bogusky would claim sole credit for this achievement, there have been several academic studies that attempt to show the campaign had a significant and independent effect on reducing adolescent smoking. 22

Lessons for CVE Programs

While teenage smoking and radicalization and recruitment by groups like the Islamic State might seem to have little in common, the psychological dynamics at play when trying to combat these phenomena are quite similar. A closer inspection suggests the lessons from the Truth campaign can help improve the West's ability to compete in the CVE war of ideas, particularly in the eyes of young adults.

First, the psychological needs of teenagers are universal and know no boundaries. They hold true from Bayonne to Beijing. The youth flocking to wage jihad with groups such as the Islamic State often display a need to rebel from their parents' generation and a need to fit in with a peer group. Some become foreign fighters to rebel against

21 Jeff Naff, "Top 15 Ads of the 21st Century," AdAge.com, 2015.

22 James C. Hersey, Jeff Niederdeppe, W. Douglas Evans, James Nonnemaker, Steven Blahut, Debra Holden, Peter Messeri, and M. Lyndon Haviland, "The Theory of 'Truth': How Counterindustry Media Campaigns Affect Smoking Behavior Among Teens," *Health Psychology*. 24: 1, 2005, pp. 22-31; David F. Sly, Richard S. Hopkins, Edward Trapido, and Sara Ray, "Influence of a Counteradvertising Media Campaign on Initiation of Smoking: The Florida 'Truth' Campaign,"

¹⁹ See https://www.youtube.com/ watch?v=c4xmFcrJexk. 20 See https://www.youtube.com/

their families, their state regimes, or the West in general. It is no surprise that many of the foreign fighters who flock to Syria and Iraq do so to feel empowered, enfranchised, and respected.

Second, the U.S. government has called upon Madison Avenue to improve its global brand in the CVE space before, 23 but the Truth campaign is a different animal. Previous attempts to incorporate Madison Avenue-style branding into the U.S. government's public diplomacy took a conventional advertising approach that tried to sell America and our value system to the masses in the Middle East, with lackluster if not counterproductive results. 24

A counter-industry campaign like Truth, on the other hand, aimed at dissuading future foreign fighters would not aim to sell a Western alternative to the Islamic State. It would instead attempt to "unsell" what the Islamic State and other groups are advertising. This is not to say that this will be easy, but that the U.S. government has never approached (to our knowledge) the advertising professionals in the private sector that specialize in this kind of advertising. It should.

Third, a critical component of the Truth campaign was that it was perceived to be a campaign made by kids, not middle-aged and established advertising executives. It was intended to be seen as being made by kids for kids, even if seasoned and advertising professionals were actually tapping into the vibe of the younger generation to execute the campaign. Everything from the language, look, style, and feel of the advertisements in both print and video gave the impression that Truth ads were made by teenagers. For the

91:2 (February 2001): pp. 233-238; W. Douglas Evans, Simani Price, and Steven Blahut, "Evaluating the Truth Brand," *Journal of Health Communication* 10:2 (2005), pp. 181-192.

23 Todd C. Helmus, Christopher Paul, and Russell W. Glenn, Enlisting Madison Avenue: The Marketing Approach to Earning Popular Support in Theaters of Operations (Santa Monica, CA: RAND Corp), 2007; Brigitte L. Nacos, "Al Qaeda's Propaganda Advantage and How to Counter It," *Perspectives on Terrorism* 1:4 (2007). 24 Nacos, "Al Qaeda's Propaganda Advantage and How to Counter It."

commercials, the footage often appeared to come from hand-held cameras of questionable quality. The clips were choppy, blunt, and sometimes frantic. They contained a hip, acerbic, and occasional dark sense of humor that appealed to younger audiences, and far less so to older viewers and readers. After all, that was the point. The Islamic State's propaganda is appealing for the same reasons—it is credible and young people can relate to it, even more so than the propaganda produced by their al-Qa`ida predecessors.

In fact, it is this aspect of the Truth campaign—the requirement to keep

"Prospective jihadis do not look to the U.S. government for career advice."

adults as far away as possible from the message-that may be the most important takeaway for those in the field of CVE strategic communications.25 When the corporate office managing the Truth campaign starting receiving numerous complaints from parents and teachers about the various in-yourface and off-putting advertisements, the "suits" could not understand why the campaign's creative team was so delighted. To the Truth team, the fact that their advertisements did not appeal to adults and authority figures was an unmistakable measure of effectiveness. Receiving complaints from adults wasn't a problem to be fixed; it was a sign of success.

The work that the State Department's CSCC has done to engage with the enemy in social media is noble, but being a government entity, its message by definition lacks the authenticity and

25 Recent news that the State Department is funding an initiative to get younger audiences not affiliated with the U.S. government involved in producing social media campaigns to counter violent extremism is a positive sign, but the effectiveness of these programs remains to be seen. See Justine Drennan, "Making 'Countering Violent Extremism' Sound Sexy," ForeignPolicy.com, June 4, 2015.

genuine credibility that is required to influence fence-sitters in the current war of ideas. Prospective jihadis do not look to the U.S. government for career advice. Commenting on this core problem facing CSCC, one former CIA agent quipped, "It's like the grandparents yelling to the children, 'get off my lawn!'"26

Regardless of how witty, hip, and edgy its message may or may not be, the CSCC and its products will be perceived as the counterterrorism equivalent of the old school anti-smoking PSAs. As a case in point, the CSCC's recent "think again, turn away" campaign is eerily similar to the ineffective anti-smoking slogan of "think, don't smoke."

The Way Forward

As evidenced by the unprecedented number of foreign fighters flowing into Iraq and Syria, our adversaries are beating the West in the propaganda domain. Fifteen years ago, Big Tobacco held a similar position of advantage when it came to teenagers and smoking. Federal and state public service campaigns were as unsuccessful in the anti-smoking domain as the U.S. government's efforts are in the CVE domain.

It took the private sector to adopt a risky counter-industry approach to "un-sell" and "out-brand" Big Tobacco with a campaign that appeared to have been made by young adults for their peers. The U.S. government would be wise to elicit the support of private sector advertising firms to execute a similar counter-industry approach aimed at jihadis.

Two caveats are required, however, to establish proper expectations. It is unrealistic to assume that a trendy hashtag campaign or slick advertising are going to convince current jihadis to lay down their arms and stop waging violence. In fact, even the Truth campaign's creators realized that it was going to be more effective to stop future smokers rather than persuade current smokers to quit.²⁷ Nor is it realistic

²⁶ Miller and Higham.

^{27 &}quot;Top Ad Campaigns of the 21st Century,"

to suggest that a counter-industry campaign alone would be sufficient to persuade jihadi "fence-sitters" to choose a non-extremist path. Also, although this kind of approach showed promise in affecting teenage behavior, it may be less effective against an older demographic of foreign fighters are drawn. This kind of counter-industry approach must be a part of a more comprehensive CVE plan that improves how we identify, interdict, and ultimately prevent future extremists from choosing violence. But in the battle of ideas with jihadist groups such as the Islamic State, the United States needs all the help it can get, and a counterindustry approach will likely improve our efforts in this domain.

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The views expressed here are those of the authors and do not reflect the official policy or position of the Department of the Army, Department of Defense, or the U.S. Government.

An Interview With: Usman Raja

By Paul Cruickshank

Usman Raja, a leading British-Pakistani cage-fighting coach with a storied career in the sport, is the managing director of The Unity Initiative, a British-Muslim interventions consultancy founded in 2009 that has deradicalized dozens of convicted terrorists and hundreds of Islamist extremists, and promotes pluralism in the UK. British officials view it as the most successful program of its kind. His team has worked to dismantle the radical views of 25 convicted terrorists after their release from prison through intensive oneon-one mentoring based on the teaching of a spiritual, open-minded, and tolerant interpretation of Islam. Unity also provides training to British police, prison, and probation staff, as well as imams.

CTC: A GROWING NUMBER of individuals convicted of Terrorism Act (TACT) offences in the United Kingdom are back on the streets after serving their sentences, creating a headache for British security agencies. How do you connect and engage with these radicalized individuals?

Raja: In some cases they are channeled toward The Unity Initiative by prison or probation officials soon before or soon after release. But in an increasing number of cases the individuals themselves contact me because they have heard about our successful track record from sources they trust including lawyers, prison imams, fellow Muslim prisoners, and community contacts. One recent self-referral was a British recruit to an Islamic State-linked group who was arrested on his return from Syria. He wrote to me post-sentence from Belmarsh prison telling me he had made a terrible mistake and asking me to help him through his crisis of faith.1

From my experience, the key aspect of striking up a trusting relationship—in which they want to listen—is for them to be impressed by your sincerity. What helps is that like many of them,

I grew up in a tough neighborhood—in my case in east London—and once had fundamentalist Salafi views myself. I came close to fighting jihad in Bosnia in the 1990s. This personal experience—and the delivery of our approach to hard-to-reach elements of society—has given us a legitimacy and access that makes these types of individuals willing to listen.

In about a third of the cases, coaching these individuals in MMA (mixed martial arts) has helped me connect. A lot of these guys got into physical training both as an outlet and for their own protection inside jail, and they think MMA is pretty cool. Getting inside the fighting cage challenges your idea of yourself—believe me—and this gives me an opportunity to bond with them and open up their minds. Training with me gives these guys a sense of discipline and purpose.

The process of dismantling their radical worldview is really intense. It can be a very traumatic experience. They come to realize almost everything that previously gave them a sense of selfworth and identity was wrong. We spend hundreds of hours sitting down one-on-one with each released TACT offender we work with, meeting at least four hours each week for coffee or food in halal restaurants or shopping malls. And they call me up night and day on my cell phone. They basically come to rely on me, and that gives me the opportunity to reshape their perspective. The aim is not just to defuse the potential threat they pose but to transform their entire worldview. This involves convincing them that their previous interpretation of Islam was misguided and instilling in them a spiritual, open-minded, and tolerant understanding of Islam. We've been successful in about 95 percent of cases so far. And nobody I've worked with has been convicted again on terrorism charges.

CTC: But how do you get some of the most hard-core extremists in the UK to so fundamentally change their worldview?

Raja: It's the legitimacy of the Islam we preach. It's based on the teachings

¹ Belmarsh prison in south-east London contains a high security unit that often houses prisoners charged in terrorism cases.

of my mentor Sheikh Aleey Qadir, a Malaysian cleric who is a leading figure in a worldwide spiritual Islam movement that includes the American Islamic scholar Hamza Yusuf and the Jeddah-based cleric Abdallah bin Bayyah, who President Barack Obama recently praised for issuing a fatwa condemning the Islamic State.² Millions of Muslims around the world follow this traditional spiritual understanding of Islam.

Unity's theological expert-my colleague Wael Zubi-is a student and official interpreter of Sheikh bin Bayyah. My mentor Shekih Aleey often comes to London and sits down with the young men I'm working with. These teachers belong to a lineage of learning stretching back to the Prophet Mohammed that predates the writing down of the Quran. Salafis have a narrow and literalist interpretation of the Quran, but it's the oral tradition that shapes the way we interpret it. The oral tradition has primacy. For us, true Islam is open-minded, tolerant, and humanistic. We believe Islam is but one of many spiritual pathways to God. Christians, Jews, Buddhists, and others all have their own spiritual pathways. The Islam we follow doesn't just counter violent extremism; it also counters associated bigoted attitudes like anti-Semitism and homophobia.

CTC: Some Salafis have labeled people like you "hippy" Sufis. What do you say to those who might think it's farfetched to believe that the most hardcore of extremists could be swayed by this spiritual interpretation?

Raja: Our efforts are backed by some of the world's foremost Islamic scholars and the results are there for all to see. Take just one example: Ali Beheshti, a radicalized British-Pakistani who was previously the number-two leader in the British pro-al-Qa`ida (and in recent times pro-Islamic State) grouping al Muhajiroun founded by Omar Bakri Mohammed.³ Michael Adebolajo, the extremist who murdered the British soldier Lee Rigby in east London in 2013, regularly attended Ali's talks. In 2009, Ali was convicted of an arson attack on the house of a publisher of a controversial novel about the Prophet Mohammed.4 After his release from prison he was referred to me by probation officials. It wasn't easy or quick-it took nearly a year-but Ali's views have been totally transformed. He's out on the streets now, helping us counter the extremists' message. He's been particularly effective given his history. Just imagine if he was still working for the other side.

"Many of these groups run ...clubs for young Muslims...but that does nothing to break down their separation from the wider community."

CTC: How important is the work Unity does to deradicalize female radicals?

Raja: It's absolutely vital, but until recently it was totally overlooked. This is a social movement we are dealing with. Families are being radicalized and leaving for Syria to join the Islamic State. We are aware of one woman who took her five children to Syria to join up with the group, with the support of her mother-in-law, among others. Mothers, wives, and sisters reinforce and sometimes influence the radical worldviews of fathers, husbands, and brothers. Women are often the sole gateway to knowledge for the next generation and therefore need to be immunized against this ideology to prevent it being passed down.

My wife, Angela Misra, has successfully transformed the worldview of five convicted female terrorists recently released from prison. As a Muslim convert, doctor, wife, and mother of three, Angela is particularly effective

4 "Three Jailed for Publisher Arson," BBC, July 7, 2009.

in dismantling their radical ideology. Her life story is a direct contradiction to their perception of Muslim women being discriminated against in British society, and this starts the process. Her reputation within the community in effectively helping women with social issues and her certification to provide religious guidance by Sheikh Aleey means that she is then able to tackle the literalist mindset, whilst empowering and supporting women to follow through on their liberated outlook and implement change within their families.

What needs to be understood is that women turn to radical Islam for different reasons: some turn to this ideology in a search for independence from immigrant families with traditional belief structures. Others turn to it in a search for status as a wife or mother.

CTC: How do you assess the overall effort to counter violent extremism in the United Kingdom?

Raja: The results are not encouraging. Too few government officials and civil servants understand the terrain. An interventions industry has emerged in which Muslim community groups tick boxes on forms to get government funding. Many of these groups run sports and social clubs for young Muslims in neighborhoods where there is a high degree of radicalization [in order] to keep youth active and distract them, but that does nothing to break down their separation from the wider British community. Very few are effective. Over the years, some of these groups have themselves espoused fundamentalist interpretations. Salafi Muslim community groups working to counter violent extremism can do little more than defuse radicalized individuals because Salafis fundamentally reactionary in their worldview. I suppose there is a public safety argument for such Salafi community groups working with young Muslims. But unless you can radically transform their worldview, radicals can all too easily tilt back into violence.

CTC: How big a challenge has the rise of the Islamic State posed?

Raja: The declaration of a so-called Islamic Caliphate has created an

² Dina Temple-Raston, "Prominent Muslim Sheik Issues Fatwa Against ISIS Violence," NPR, September 25, 2014...

³ Al-Muhajiroun has periodically changed its name to avoid bans. Names it has allegedly operated under include "Muslims against Crusades" and "Shariah4UK."

unprecedented challenge. I have never seen anything like it. It has electrified a significant minority of young British Muslims. Previously, extremism was something that was endemic but it could be contained. It's now become an epidemic spreading like wild-fire. The analogy I like to use is Communism and the Soviet Union. It was the Soviet Union that gave Communism staying power and legitimacy, and it's the same with the "Caliphate" and violent Islamist extremism. They've legitimized what was previously a fringe deviant jihadist subculture. Its utopian worldview has attracted a lot of support.

When it comes to the threat, the fatwa announced by Islamic State spokesman Abu Mohammed al-Adnani in September 2014 calling for attacks in the West was a game-changer. Those who support the Islamic State here in Britain view it as creating a religious duty to carry out attacks.

CTC: What are the root causes of violent extremism in the United Kingdom?

Raja: The core of the problem is the existence of what I call a deviant and jihadist subculture that often has a criminal undertone. In this subculture, the belief is that they are living in Dar el Harb (the land of war) and that this justifies all manner of criminality, including terrorist attacks. You have groups like Anjem Choudary's al Muhajiroun, whose greatest strength is providing their followers a sense of community by creating a wall between "us" and "them." And this network is spread across Europe and the West, creating an alternative worldview and lifestyle.

The problem is wider than that though. This deviant jihadist subculture subsists in a wider Salafi-absolutist insular community. A lot is written about Muslims feeling alienated from mainstream society, but the problem is that if you are growing up in some parts of east London or "Muslim ghettos" of Europe, then this environment is effectively the mainstream. We need to find ways to break down these barriers. In my MMA training sessions, some of the TACT offenders are now training with white working class youngsters. As well as our work with TACT

offenders, we're also working with hundreds of individuals across London to break the absolutist mindset through group sessions, dynamic workshops, and specialist interventions.

CTC: To what degree has social media played a role in radicalization?

Raja: A lot of research into radicalization has focused on the social media aspect because that's the easiest part to research. But this is just scratching the surface. In the UK, most of the radicalization is going on inside the Muslim community through personto-person contact. You have to tackle

"Previously, extremism was something that was endemic but it could be contained. It's now become an epidemic spreading like wild-fire."

the problem inside the community. When I sit down with young Muslims they tell me what's really going on. One significant development is the growth of Sunni-Shia violence that mirrors what's going on in Iraq and Syria.

CTC: Given the scale of the radicalization problem in the United Kingdom, some experts who have praised your work say that it would need to take place on an industrial scale to make a significant difference. Some might say your success is to a great degree down to your personality—charismatic, driven, and unrelenting in the face of death threats—and that's difficult to replicate. To what degree can Unity's efforts be scaled up?

Raja: We're essentially a three-person team so right now obviously Unity can only make a small dent in the problem, but our results demonstrate our approach works. To scale up, clearly you need people who have the right kind of experience and who are willing to deal with these individuals from a human perspective, but ultimately what will make a difference is the message

not the messengers. We're training up around a dozen people right now so that we can expand our efforts in the UK. But money is tight. We get a small amount from government agencies for some of our intervention work, but we are mostly self-financed and our goal is to eventually raise all the money for our operating costs ourselves. I've worked with several convicted terrorists completely pro bono.

Our long-term goal is to create international branches that will act as hubs propagating and disseminating change while maintaining quality control. We are discussing setting up a "Unity4Belgium" branch and are looking to also export this to other European countries and North America, where we hope to create a "Unity4USA." The goal is not just to work on deradicalization, but to help provide the military, police, probation, and prison officers with a better understanding of the challenge they are facing.

In aiming for these branches, we are consciously countering the efforts of Anjem Choudary and his pro-Islamic State al Muhajiroun grouping in the UK, which in recent years has set up "Shariah4" franchises in Europe. The Sharia4 franchises have supplied hundreds, if not thousands, of recruits to the Islamic State and other terrorist groups. I'm arguably Anjem Choudary's biggest threat. Unity has dismantled the worldview of several al Muhajiroun followers, including Ali Beheshti who outranked Anjem Choudary while the group was led by Omar Bakri Mohammed. If I can rip away people like Ali, just think of what we can do if we can get hundreds of people working for Unity across Europe.

An Interview With: Dennis Gleeson

By John Watling

Dennis J. Gleeson, Jr., was formerly a Director of Strategy in the Central Intelligence Agency's Directorate of Analysis. For the past five years, he has been one of the driving forces behind how analysts might discover, explore, search for, and interact with information in the face of "big data." Prior to joining the government, he worked at the Institute for Defense Analyses and wrote on topics like military innovation, military and effects-based experimentation, operations. During the most recent Senior Conference, we asked him to sit on our Data and Metrics panel, where his reputation as a critical and creative thinker who pointedly questions assumptions and teases out more concise narratives proved wellfounded. This interview expands on some of the ideas he presented on the panel.

The views expressed here are those of the author and do not reflect the official policy or position of the Central Intelligence Agency, the Department of the Army, Department of Defense, or the U.S. Government.

CTC: HOW WOULD YOU characterize the way we think about terrorism?

Gleeson: It's often too simplistic. In the immediate aftermath of the 9/11 attacks, It could be argued that we needed the simple message of then President [George W.] Bush: "Either you are with us, or you are with the terrorists." The problem is that now, almost 15 years later, the discourse around terrorism in many cases has devolved into a simplified shorthand of "good guys" and "bad guys."

CTC: Why is this shorthand problematic? Might it not reflect the criticality of mission or esprit de corps?

Gleeson: It might. The casual nature with which we use terms like terrorist and terrorism suggests that is not always the case though. I think some people do understand the history and nuance behind the shorthand. In other cases, though, I think that absolutist language masks nuances—or context—that might allow for new approaches to

thinking about formulating a policy or executing a plan. That's a problem.

I am concerned by this for a handful of reasons:

First, how we speak and how we think are related. Lera Boroditsky, a professor at Stanford University, found that "the way we think influences the way we speak, but the influence also goes the other way." To me, this means that even if we, as individuals and professionals, routinely rely on and use this shorthand, we create the conditions for a range of cognitive biases like the bandwagon effect or confirmation biases that limit how we might think about a challenge or pursue an opportunity.

My second concern builds on the first: binary thinking limits the courses of action that are open to an individual or a group. I think the best explanation of this came from Michael Ignatieff, a Canadian politician. He wrote,

"An adversary is someone you want to defeat. An enemy is someone you have to destroy. With adversaries, compromise is honorable: Today's adversary could be tomorrow's ally. With enemies, on the other hand, compromise is appeasement."

A common theme at the Senior Conference was the recognition that we cannot "capture or kill" our way out of the long war that we seem to have resigned ourselves to. In light of Ignatieff's argument, binary thinking all but condemns us to those being the main strategies open to us.

Lastly, as a recovering political analyst, binary thinking has the potential to limit analysis and what a leader should expect of analysis. Analysis is about change detection: as a result, segmentation—geographic, organizational (i.e., factions, individuals), domain-specific (e.g., political, economic, societal, etc.)—against the backdrop of time allows the analyst to paint a far more nuanced picture of where a group (or an individual or a faction) is or is going on

some variant of Ignatieff's scale of ally, partner, adversary, or enemy.

CTC: How do we prioritize our efforts?

Gleeson: The challenge for our country is to consider, really consider, the threat—in terms of motive, means, and opportunity—they and other groups pose to US national interests. In that, I tend to agree with folks like Micah Zenko, who has highlighted the tendency to use hyperbole as a political tool. Arm-waving might be great for securing funding for a program, but it is a disservice to the American people insofar that not everything can be an existential threat demanding immediate action.²

There will always be people and organizations doing, or planning to do, things that are inimical to their fellow man, as well as to the interests, security, and safety of the American people; that said, the United States will never be able to respond to each and every one of these people and groups. As a result, the decision to respond—and the costs that we are willing to incur and ask the American people to pay—should be the product of serious discussion and debate, not sound-bite driven posturing that plays well on the news.

CTC: You talked about the challenges that binary thinking poses to analysis. Given that metrics are very much in vogue, could you expand on that?

Gleeson: Everyone is in the midst of shifting to working with larger volumes of more diverse data. The consequence is that, as Viktor Mayer-Schonberger and Kenneth Cukier captured in their book *Big Data*, correlations are likely to be more interesting and useful than, let's say, conceptual models that are based on assumptions and experiences. The correlations, even if they are poorly understood, encourage asking more and different questions, spawn new lines of research, etc.

The challenge is that absent a well understood, easily quantifiable thing they tend to be arbitrary. It might be easy to measure activity or output, but

¹ Lera Boroditsky, "How Language Shapes Thought." *Scientific American*. 304, 2011, pp. 62-65.

² Micah Zenko, "Exaggeration Nation," *Foreign Policy*, November 21, 2014.

it is often difficult to measure effect. Binary thinking makes metrics easy though perhaps not terribly useful: did X number of missions or sorties kill or neutralize Y number of bad guys?

A while back, Jessi Hempel, who's now a senior writer at *Wired*, made this great point in an article for *Bloomberg Business* that still resonates with me. "Metrics madness can lead to confusion, dysfunction, and less innovation, not more.

The common mistakes are putting in too many metrics, measuring the wrong things, misaligning metrics within organizations, and counting what can be counted, not what counts."³

Unfortunately, metrics tend to be recast in ways that help protect participants and programs. They make for great PowerPoint slides; they allow for all sorts of bar graphs and pie charts.

Unfortunately, the charts tend to speak more to activity or output than effect.

CTC: How might we incorporate this thinking in a practical way?

Gleeson: In the context of the Army, I think it ends with doctrine and field manuals. Doctrinal publications such as ADP 3-0 ("Unified Land Operations"), ADP 3-07 ("Stability"), and ADP 3-37 ("Protection") all speak to facets of the challenges and opportunities of dealing with enemies and adversaries that routinely apply "unconventional" strategies and tactics in pursuit of their goals.

The question is how we get from where we are to a conceptual framework that better reflects what we have learned over the past 15 years of contending with and fighting ideologically driven groups that transition between being terrorist groups (as defined by their actions) and insurgent movements.⁴

The Army generated massive amounts of data over the course of its deployments

to and operations in Afghanistan and Iraq. With the benefit of hindsight (i.e., other historical data and reporting), what correlations might be found that spark discussion and debate?

The important thing here is Army data should not—cannot—be the only data considered: what did other government departments and agencies report? What did non-governmental organizations report? The volume of data we routinely generate far exceeds the capacity of an individual to process it; fortunately storage and computational power are both cheap enough to allow for us to consider far more data that we could have even five years ago.

"Metrics tend to be recast in ways that help protect participants and programs. They make for great PowerPoint slides... Unfortunately, the charts tend to speak more to activity or output than effect."

CTC: What is the next step after the analysis?

Gleeson: The next step should be submitting some of the hypotheses and theories that emerge around the correlations to testing. What might a wargame that seeks to undercut an insurgency look like? How might the Army better achieve "stability" and "protection" in the context of commonly correlated conditions? What might small-scale experiments like the ones Hans von Seeckt conducted prior to the Second World War⁵ look like relative to

the challenge of engaging and thwarting ideologically driven adversaries and enemies? How might other partners and players in the theater of operations help?

The final step would be to distill the insights into discrete lessons and philosophies that can be passed on to soldiers throughout the Army. Having worked with the Department of Defense and having come out of another large governmental bureaucracy, I think the key is to find a way to explain what might be a set of complex dynamics or ideas in plain language. Jargon can be every bit as harmful as binary thinking. What would Sun Tzu or Miyamoto Musashi say if they were asked to review the next generation of doctrinal publications?

As a lifelong civilian, these are methodologies I would consider. I am sure the men and women at the Center for Army Lessons Learned and the US Army Training and Doctrine Command are grappling with issues like this.

In the run-up to this interview, I read Major Robert A. Doughty's *The Evolution of US Army Tactical Doctrine*, 1946-1976. In it, he speaks to what I suspect is a core function and responsibility of the U.S. Military Academy:

Doctrine, nevertheless, cannot perform the impossible. It can only provide guidelines for action, not final answers. Given the infinitely varied situations on the battlefield, the application of doctrine requires judgment. While doctrine is important for providing models for adaptation, the prime factors remain the imagination, the inventive genius, and the will to fight of the American soldier.

³ Jessi Hempel, "Metrics Madness," *Bloomberg Business*, September 24, 2006.

⁴ Joint Publication 1-02 - The Dictionary of Military and Associated Terms defines insurgency as "The organized use of subversion and violence to seize, nullify, or chal-

lenge political control of a region."

⁶ James S. Corum, *The Roots of Blitzkrieg: Hans von Seeckt* and German Military Reform, Lawrence: University Press of Kansas, 1992, Williamson Murray and Allan R. Millett (eds), *Military Innovation in the Interwar Period*,

Cambridge, Cambridge University Press, 1998.

Global Civilization and Counterterrorism

By Yaneer Bar-Yam

GLOBAL CHANGES ARE causing both global integration and local divergence of social / cultural domains. As a result, the problem of global security becomes not just one of fighting disruptors of order, but also of understanding what constitutes order. Reinforcing order and its active protection requires understanding the local cultural domains, their vulnerability to disruption, and what must be done to strengthen them and respond when they are unable to defend themselves. Achieving global peace requires addressing the fundamental drivers of unrest and violence-including high food prices and ethnic geography, as well as the way values translate into behavioral and social imperatives. This is at least as essential as combating disorder and violent extremists in pursuit of the universal values of respect for life and liberty.

The U.S. military is the main responder to disruptions of social order globally. Due to the complexity of this task, effectiveness depends critically on rapid decision-making and adaptability to changing global and local conditions. At the recent Senior Conference hosted by the Department of Social Sciences at the United States Military Academy at West Point, I was invited to discuss my work on the science of complexity and its implications for counterterrorism policy and strategy, and show how different organizational models can help in this task.

Action in response to terrorism and other security threats should be understood in the context of changes in the global structure of human civilization. While it is widely recognized that globalization is taking place, the implications of the essential integration of global social and economic systems for security is yet to be fully recognized.

Interdependence results in a common security priority in which disruptions of local social order anywhere lead to greater risk everywhere. While traditional perspectives often focus on national priorities and international relationships, current conditions have shifted to a fundamentally global framework of economic markets and cooperation that includes necessities such as food, energy, and other commodities, as well as manufactured goods and services. This economic integration is part of the social integration that prominently includes widespread travel as well as internet-based information sharing and social media interactions.

"Action in response to terrorism and other security threats should be understood in the context of changes in the global structure of human civilization."

At the same time, cultural values and other local conditions are leading to the divergence of groups from each other. This should not be viewed as a negative development, nor is it practical to divert massive social changes substantially from their course. Diversity is known to strengthen many types of natural systems, and social heterogeneity is consistent with the integrated global civilization becoming a complex organism with diverse roles played by parts of the system.

While it may ultimately be a positive development, social diversity leads to challenges when responding to disruptions of social order, as the interventions that are needed, in governance, economic assistance, and other efforts to establish effective security, are unclear. This also adds to the difficulty of strengthening societies through promoting economic development and nation building, which are well established as complex tasks. Viewed in this way, the military and other responders to security problems must be concerned with the health of social systems, where health has a local definition dependent on the values, economic conditions, and social imperatives.

Principles of Global Security

Since specific national constitutions and value systems cannot serve as a framework for counterterrorism activities globally, it is necessary to develop a more universal perspective that can serve in a context of cross socio-cultural actions. This section articulates basic assumptions that can be justified scientifically and which may serve as part of a framework for action:

Human civilization is an interdependent collection of diverse individuals and groups up to the scale of the world as a whole. We recognize that differences and autonomy are essential to the wellbeing of the whole and that the wellbeing of the system, and in appropriate ways to all of its parts, is an objective of the system itself.

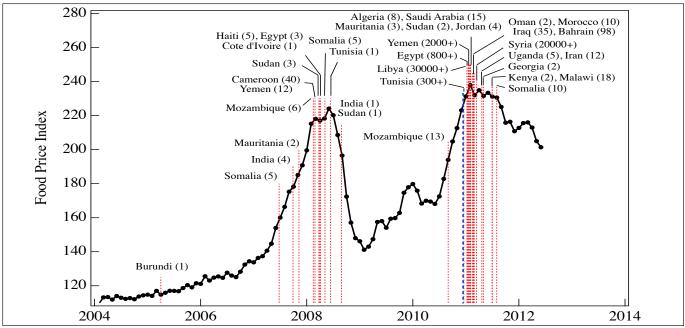
There are universal values that should be present globally. These include a respect for individual life, security, social order, and justice. One of the values that the system must have is to protect itself.

The United States is a powerful part of the global civilization, and has taken a role that enhances the world as a whole and not just itself. This enhancement may include promoting the well-being of others, but does not involve imposing its own values, with limited exceptions for universal values. The United States carries responsibility today for protecting universal values across the world. The U.S. military helps to protect these values against those who would destroy, disrupt and harm parts of the system, from the global down to (almost) the individual level.

Social Imperatives

There are many aspects of local social values and their implications for social order. Developing an understanding of specific cultural imperatives and their implications for governance, economic, and social activities is essential. Here we limit the discussion to two topics for which theoretical insights have been validated empirically: the importance of food prices and the role of ethnic geography in social unrest

Figure 1: Food Prices and Social Volatility



Time dependence of FAO Food Price Index from January 2004 to May 2011 (black line). Red dashed vertical lines correspond to beginning dates of "food riots" and protests associated with the major recent unrest in North Africa and the Middle East. The overall death toll is reported in parentheses. Blue vertical line indicates the date, December 13, 2010, on which NECSI submitted a report to the U.S. government, warning of the link between food prices, social unrest, and political instability.

and violence. By recognizing the role of these factors in global unrest, we can better adopt policies and actions that can prevent disruptive violence and promote security.

Food and Social Unrest

In 2011 protest movements became pervasive in the countries of North Africa and the Middle East. These protests were associated with dictatorial regimes and were often considered to be motivated by the failings of the region's political systems in the human rights arena. Our research demonstrated that food prices were the precipitating condition for social unrest (See Figure 1) and we were able to identify a specific global food price threshold for unrest.1 Our research indicated that, even without sharp peaks in food prices, within just a few years the trend line on food prices would reach the threshold we identified. This pointed to a danger of spreading global social disruption. Our predictions have been realized.2

Addressing the economic problem of food availability for vulnerable populations can alleviate suffering and promote global security.

Ethnic Violence

The second case study relates to ethnic violence. Efforts to resolve conflicts and achieve sustained peace are guided by perspectives about how conflict is rooted in interpersonal and intergroup relationships, as well as historical, social, economic, and political contexts. Our research indicates that details of history and social and economic conditions are not the primary determinants of peace or conflict. Instead, the geographic arrangement of populations and the degree of autonomy is the key factor (See Figure 2). We have shown that where there are patches of one ethnic group of characteristic size of between 20 and 60 kilometers3 that are completely or largely surrounded by another ethnic group 4 a high propensity to violence

exists.5 This is the conclusion of fundamental theoretical analysis based upon renormalization group methods,6 empirically validated quantitatively for predictions of geographical locations of violence and peaceful coexistence in Yugoslavia, India, Yemen, and Switzerland. Significantly, our theory points to two distinct conditions that are conducive to peace-well-mixed and well-separated populations. The first option corresponds to the most commonly striven for peaceful framework: a well integrated society. The second option corresponds to spatial separation, partition, and self determination-a historically used but often reviled approach. We also showed that within-state boundaries that provide for an intermediate degree of autonomy can also enable peaceful outcomes.7 The success of local

Coexistence," PLoS ONE, May 21, 2014.

¹ M. Lagi, K. Bertrand, Y. Bar-Yam, *The Food Crises and Political Instability in North Africa and the Middle East*, arXiv:1108.2455, August 10, 2011.

² B. Merchant, "The Math That Predicted the Revolutions Sweeping the Globe Right Now," *Motherboard*, February 19, 2014).

³ M. Lim, R. Metzler, Y. Bar-Yam, Global pattern formation and ethnic/cultural violence, *Science* 317, 5844 (2007)

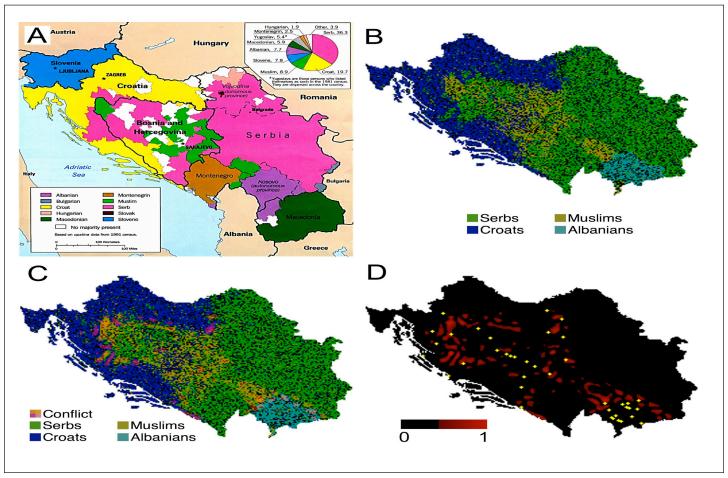
⁴ A. Rutherford, D. Harmon, J. Werfel, S. Bar-Yam, A.S. Gard-Murray, A. Gros, Y. Bar-Yam, "Good Fences: The Importance of Setting Boundaries for Peaceful

⁵ A. Gros, A.S. Gard-Murray, Y. Bar-Yam, "Conflict in Yemen: From Ethnic Fighting to Food Riots." arXiv:1207.5778, July 24, 2012.

⁶ Y. Bar-Yam, "Beyond big data: Important information," arXiv, December 17, 2013.

⁷ A. Rutherford, D. Harmon, J. Werfel, S. Bar-Yam, A.S. Gard-Murray, A. Gros, Y. Bar-Yam, "Good Fences: The Importance of Setting Boundaries for Peaceful Coexistence."

Figure 2: Ethnic Variation in the Former Yugoslavia



(A) Census data from 1991 shown in map form was converted into a spatial representation and used in an agent-based simulation shown in (B). Our prediction of populations likely to be in conflict with neighboring groups (red overlay, (C) and (D)) agrees well (90% correlation) with the location of cities reported as sites of major fights and massacres (yellow dots, (D)).

autonomy is of particular importance as the world becomes more integrated. Adopting various types of federal systems that enable local autonomy for groups of divergent values may result in more peaceful coexistence.

Yemen

We combined the results on ethnic violence and the role of food prices in looking at the case of Yemen. Our research indicates that the origins of violence changed in 2008. Prior to 2008, the locations of violence are consistent with inter-group conflict between ethnically and religiously distinct groups. Starting in 2008, a peak of global food prices coincided with a new wave of violence that spread to the endemically poor southern region with demands for government change and economic concessions. This violence appears to share its origins with many other food riots

and the Arab Spring. The loss of social order and the opportunities for terror organizations in Yemen might be best addressed by eliminating the causes of violence. Inter-group violence might be addressed by delineating withincountry provinces for local autonomy of ethnic and religious groups. Addressing the severe problems triggered by fluctuating food prices can alleviate other sources of unrest. Identifying the means for addressing ethnic friction and despair as drivers of social unrest can dramatically reduce the need for direct military action in Yemen and elsewhere.

Military Organization

A better understanding of complexity can also help inform how to respond more effectively to the challenges posed by terrorist groups. Large and uniform military forces operating in deadly confrontation across a marked border in desert terrain with a clear cut objective of inflicting massive damage on the enemy can be contrasted with loosely coordinated forces fighting in jungle, mountain, or urban environments. These examples begin to illustrate the distinction between conventional large-scale but relatively simple conflicts, and complex conflict.⁸

Hierarchical command of traditional military forces is designed for the largest scale impacts and thus relatively simple warfare. In comparison, distributed control systems, when properly designed, can enhance the ability to meet complex challenges. The existing military literature, however, is limited in providing guidance for design,

⁸ Y. Bar-Yam, "Complexity of Military Conflict: Multiscale Complex Systems Analysis of Littoral Warfare," Report to Chief of Naval Operations Strategic Studies Group (2003).

planning, execution, and assessment of military systems and operations utilizing distributed control.

A conventional analysis of aggregate force size, firepower, and incapacitation of the enemy via attrition provides little, if any, guidance for the conduct of complex warfare. Instead of scale alone (i.e., manpower or firepower), complexity (i.e., the variety of possible actions that can be taken) should be used as a measure of force capability in the

"A better understanding of complexity can also help inform how to respond more effectively to the challenges posed by terrorist groups."

context of complex military scenarios. In a high complexity environment, high complexity forces are more capable than low complexity ones. Thus, war fighting capability must include both the scale and complexity of the forces and the environment in which the conflict occurs.

Scale and complexity are not, however, independently controllable—they are interrelated. The essential role of complexity and scale in military conflict is already present in the structure of military organizations and is percieved using the "complexity profile," o a mathematical and conceptual tool for characterizing complexity and scale in systems. 11 12 (See Figure 3)

The complexity of a military force is linked to its ability to conduct multiple,

partially independent and coordinated actions of its units. This concept is related to command and control structures, its information sensing, processing, decision and communication capabilities, as well as its sociocultural background. Substantial improvement in the complexity of a military force requires a profound redesign of force organization and related training and culture.

It is impossible to have a single organizational structure that effective for all types of military conflicts. An organization cannot be well-designed for success in both large scale and complex encounters. Tradeoffs must be chosen. This analysis indicates that to be successful in as broad a range of conflicts as possible, the military should be partitioned into a variety of functional groups designed to address conflicts of varying scales and complexities, as is currently the case. More generally, if we consider a conflict as having a complexity profile that specifies the number of actions needed at each scale, the forces can be well adapted to the conflict by having a matching complexity profile.

In order to advance the capability of military organizations, it is helpful to understand the relationship between organization and task in other kinds of systems, in particular in functionally corresponding biological systems. There are two paradigmatic types of biological organization that are helpful to consider when we think about highly complex encounters and the role of distributed control. These are the neuro-muscular system. 14 15 16 17

The neuro-muscular system can be understood to be composed of a sensory

Encyclopedia of Life Support Systems, (EOLSS UNESCO Publishers, Oxford, UK, 2002).

 $17\,$ D. M. Pierre, D. Goldman, Y. Bar-Yam and A. S.

system, a decision system, and an effector system. The decision system is a distributed control network that enables high complexity decisions based upon disparate information sources. The effector system is designed for large-scale impacts and consists of highly synchronously (coherently) behaving muscle cells. Because of the networked decision system, the choice of when and which large-scale act to perform can be made highly selectively. The complexity appears because each

"It is impossible to have a single organizational structure that is effective for all types of military conflicts."

act at a particular time can be precise and carefully chosen.

The second paradigmatic organizing framework is illustrated by the immune system, which consists of largely independently acting agents that are coordinated and adopt functional specialization through communication. A variety of types of agents (immune cells), many of which are capable of autonomous movement, have sensory receptors, communicate with each other, and are individually capable of attacking harmful agents. The immune system can be understood to act with high complexity at a very fine scale with many independent agents and does not aggregate to large-scale behaviors. By contrast, the neuro-muscular system performs high complexity behaviors over time due to the distributed control of the nervous system, but at any one time it performs individual large-scale actions of the muscles. This analysis highlights the difference between high complexity at a particular time and high complexity over time as captured by the immune and neuro-muscular systems.

Perelson, "Somatic Evolution in the Immune System: The Need for Germinal Centers for Efficient Affinity Maturation," *Journal of Theoretical Biology*, 186, pp. 159-171 (1997).

⁹ Y. Bar-Yam, "Complexity Rising: From Human Beings to Human Civilization, A Complexity Profile," Encyclopedia of Life Support Systems (EOLSS UNESCO Publishers, Oxford, UK, 2002); also NECSI Report 1997-12-01 (1997).

¹⁰ Y. Bar-Yam, *Dynamics of Complex Systems* (Perseus, 1997), Chapters 2, 3.

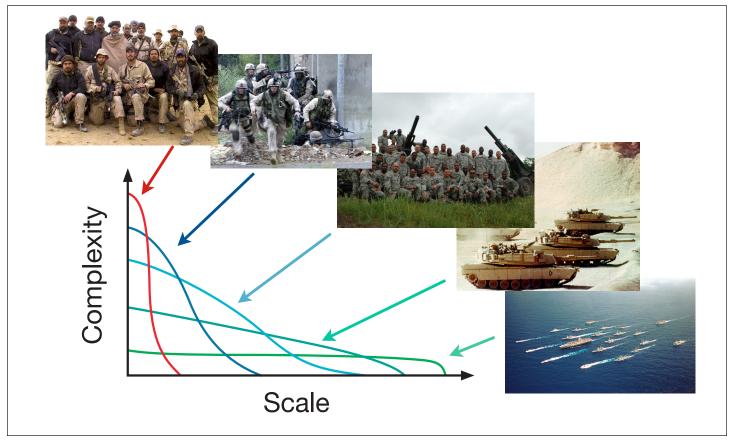
¹¹ Y. Bar-Yam, *Making Things Work* (Knowledge Press, Cambridge, MA, 2004).

¹² Y. Bar-Yam, "General Features of Complex Systems,"

¹³ Ibid Y. Bar-Yam, *Dynamics of Complex Systems*.
14 A. S. Perelson and F. W. Wiegel, "Some Design Principles for Immune System Recognition," *Complexity*, 4, 1999, pp. 29-37.

¹⁵ A. J. Noest, "Designing Lymphocyte Functional Structure for Optimal Signal Detection: Voilà, T cells," *Journal of Theoretical Biology*, 207:2, pp. 195-216, (2000). 16 I. Cohen and L. A. Segel (eds.), *Design Principles of the Immune System and Other Distributed Autonomous systems*, (Oxford University Press, 2001).

Figure 3: Scale Versus Complexity in Military Organization



Schematic complexity profiles (complexity as a function of scale) are shown for military forces. From lower right to upper left: Navy, tank divisions, infantry, marines, and special operations forces. Different organizational structures make forces effective in different environments. Special operations forces are adapted to complex environments.

These differences arise as a result of differences in control structures.

The context in which the immune system operates—internal to the human body it is striving to protect-can be contrasted with the context in which the neuro-muscular system operates, which is in response to external forces or conditions that are separated from the human body by a margin of space that is typically comparable to that of the human body itself. This illustrates the different tasks for which distinct organizational structures are effective. It also illustrates the importance of functional segregation since both the immune system and the neuro-muscular system are parts of the same organism. specialization of subsystems, different types of functional tasks for protecting internal components and responding to the external environment are possible. The examples also show how organizational structure reflects a

tradeoff between scale and complexity. A system designed for large-scale behavior is not the same as a system designed for high-complexity behavior at a fine scale.

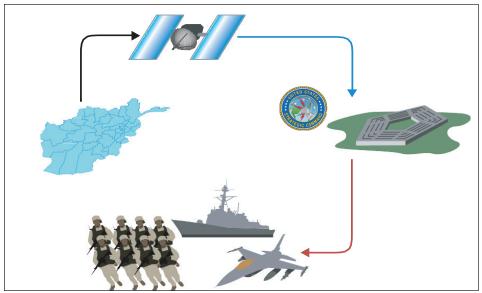
In correspondence with the two biological systems, it is natural to distinguish military organizations by the scale and complexity of their organizational structures and capabilities.

The neuro-muscular system most naturally corresponds to conventional military forces augmented by elaborate decision-making processes that may not yet be well formed, so that actions cannot be made even though the capabilities are present (See Figure 4). In this situation, increasing capabilities necessitate increasing the capacity of decision making processes. Thus, for example, the development of high precision weapons requires

increased decision capacity so that the capability can be effectively used. Increasing jointness and coordination opportunities enables combinatorially greater numbers of military options, but without improving the decision-making capacity they cannot be effectively used. Components of the military such as naval fleets, tank divisions, infantry, and marines, provide capabilities at large and progressively finer scales. This is in correspondence with neuromuscular components: arms, hands, and fingers.

In an advanced organizational concept, the forces involved may be similar to conventional forces, but they are coupled to a distributed decision-making process that enables many factors to be considered in order to achieve desired objectives. Actions in general will probably not be at full force, just as the availability of muscles that can kick or punch does not imply

Figure 4: Military Organization ('Neuromuscular Paradigm')



Schematic of neuro-muscular type military system with information gathering, decision making, and force projection.

that they will be used at full capacity at all times. The objective is to deliver the right force to the right target at the right time through an understanding of the specifics of the situation as it changes in time. Developing such decision-making capacity requires adopting network structures for the decision-making system.

The immune system most naturally corresponds to special operations forces that have the expectation of being embedded in local contexts and serving highly complex, (i.e., diverse) roles. The existence of high fine-scale complexity forces, including special operations forces and integrating diplomatic, intelligence, and law enforcement agencies, and the extensive engagement with non-combatants, training of local forces, non-lethal force, psychological warfare, economic incentives, and economic support, reflects the natural extension of the complex fine-scale actions that are needed for achieving local and global objectives of complex warfare.

Agents interact with each other primarily through local communication to achieve coordination of their individual actions for effective attack, defense, search, or other tasks. The primary role of such coordination is to

achieve the right level and kind of local capability.

In this organizational structure, local coordination replaces the role of command and control of a hierarchical force. The emergent collective behaviors are not directly specified. Indeed, the specific pattern that arises should not be controlled because the pattern is determined by the response of the agents to the local challenges they face in the environment, as well as interactions with each other.

The ability to field a rapidly evolving fine-scale force is the key to complex warfare. Ongoing development of military forces, extending the notion of special operations forces and their technological capabilities (as individuals and as groups), is needed to increase effectiveness when addressing high complexity challenges. Because each circumstance requires rapid adaptation, extensive planning of such innovations is not effective.

A system which is intrinsically built around rapid innovation is much more effective¹⁸ Effective individual

18 Y. Bar-Yam, "Enlightened Evolutionary Engineering / Implementation of Innovation in FORCEnet," Report to Chief of Naval Operations Strategic Studies Group (May 1, 2002).

and team strategies should arise from evolutionary processes.

Conclusion

Combining the two perspectives we have developed, essential aspects of counterterrorism activities are (1) engaging in improving the health of local socio-economic systems including providing food security and preventing ethnic violence by selectively fostering local autonomy where it is needed, and (2) enhancing the ability of military organizations to match the scale and complexity of tasks associated with counterterrorism activities through improved decision-making structures at the scale of engagement, including adaptive local decision-making by special forces, and networks of decisionmakers at the global scale. Scientific analyses suggest that dramatic changes for the better will result from incorporating these imperatives into policy decisions.

Professor Yaneer Bar-Yam received his S.B. and Ph.D. in physics from MIT in 1978 and 1984, respectively. Since the late 1980s he has contributed to the field of complex systems science, introducing fundamental mathematical rigor, real world application, and educational programs. In developing new mathematical methods and their application, he has published on a wide range of scientific and real world problems ranging from cell biology to the global financial crisis.

He is the author of over 200 research papers in professional journals, including Science, Nature, PNAS, American Naturalist, and Physical Review Letters, has three patents, and has given 160 invited presentations. His work on the causes of the global food crisis was cited among the top ten scientific discoveries of 2011 by Wired magazine.

Conference Agenda

Sunday, 19 April 2015

INTRODUCTORY REMARKS

LTG ROBERT L. CASLEN, JR.
Superintendent, U.S. Military Academy
at West Point

OPENING KEYNOTE

GEN(R) JOHN ABIZAID Emeritus Distinguished Chair, Combating Terrorism Center: "The State of Global Counterterrorism Today"

Monday, 20 April 2015

SESSION 1 DETERMINING STRATEGIC ENDS IN COMPLEX AND UNCERTAIN ENVIRONMENTS

This session will be foundational and focus on determining strategic ends in complex and uncertain environments. Before embarking on a critical about U.S. strategic conversation counterterrorism ends, leaders from other fields who face problems of equal (if not greater) size and scope will—from their outside vantage point-offer their appraisal of our problem, as well as share their thoughts about how approaches or strategies pursued in their field might benefit our own. Specific emphasis will be placed on exploring the terms we use to characterize our strategy (i.e., will we ever really defeat al-Qa`ida, its affiliates and adherents?) and on identifying not only what has worked and not worked in terms of our approach, but also what strategy is achievable and sustainable moving forward.

Featured Speakers

Michèle Flournoy CEO, Center for New American Security Dr. Yaneer Bar-Yam Founding President, NECSI

Moderator

Dr. Stephen Biddle Professor, George Washington University

Expert Roundtable

LTG Tony Thomas Commander, JSOC

LTC Bryan C. Price Director, Combating Terrorism Center

SESSION 2 METRICS AND DATA

This session will build upon session one and focus on exploring how we can better metric our performance in the counterterrorism space, and howin specific and concrete terms-we should be evaluating our success or lack thereof. As any student of data science knows, the perception one has of their performance is intimately tied to the metrics they have selected to evaluate their actions and impact. The United States has certainly made some progress since 9/11 in degrading the capabilities of al-Qa`ida and other militant actors who intend to do harm to the United States and our allies. However, the geographic dispersion and decentralization of the terrorist threat and the emergence of entities like the Islamic State illustrate that our approach has not been sufficient, and that there remains a lot to be done. To that end, this panel will examine what certain non-counterterrorism fields can teach strategists about crafting metrics that are useful for gauging effectiveness. The panel will then take a critical look at both the data that can be leveraged and the metrics we can establishor refine-that might help us to gain efficiencies and be more effective in our counterterrorism pursuits over the long term.

Featured Speaker

Brian Macdonald Director of Analytics, Florida Panthers

Moderator

LTC Michael Yankovich Professor, USMA Math Department

Expert Roundtable

Vinnie Viola Founder, Virtu Financial Javed Ali

Director, Office of National Intelligence Management, NCTC

Dennis Gleeson Former Director of Strategy (DI), CIA

LUNCH KEYNOTE

AMB. MICHAEL SHEEHAN
Distinguished Chair, Combating
Terrorism Center
"Unconventional Approaches and

"Unconventional Approaches and our Layered CT Strategy"

SESSION 3 MEDIA AND THE WAR OF IDEAS

session will explore media. marketing, and strategic communications as it relates terrorism and counterterrorism-a nonkinetic area that could be characterized as the "War of Ideas." This is an arena that the United States and its allies have consistently struggled with since 9/11. Not only is the U.S. being outcompeted in this space, but one could also (perhaps provocatively) make the case that it has also ceded this battlespace, an issue which is reflected in the paucity of resources and analytical and operational attention given to this area. The trends we are witnessing in terms of how violent extremist organizations and the individuals associated with or inspired by them are communicating particularly the speed, dynamism, diversity (of platforms), and volume of their communications-pose additional challenges and will likely continue to compound our lackluster performance in this area. To that end, attention in this panel will be placed on hearing from voices from other fields-particularly what we can learn from news and marketing / advertising specialists about how they diagnose the environment we are operating in and what advice they might have about how one could more effectively respond. Emphasis will be placed on identifying why groups like the Islamic State have been so successful in the social media sphere and what we can learn from them, as well as discussing what has or has not worked with respect to our approach in the "War of Ideas" area.

Featured Speakers

Pete Favat Chief Creative Officer, Deutsch Usman Raja Director, Unity Initiative

Moderator

Paul Cruickshank Terrorism Analyst, CNN

Expert Roundtable

LTG William Mayville Director of Operations, Joint Staff David Ensor Director, Voice of America LTC John Gallagher Joint Staff

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SUPPORT

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The views expressed in this report are those of the authors and not of the U.S. Military Academy, the Department of the Army, or any other agency of the U.S. Government.

DINNER KEYNOTE ADDRESS

GENERAL JOSEPH L. VOTEL Commander, USSOCOM

"The Future of Counterterrorism"

Tuesday, 21 April 2015

SESSION 4 PARTNERSHIPS & BUILDING PARTNER CAPACITY

Given the geographic scope of the terrorism problem and the United States' inability to fully defeat the threat of transnational terrorism and deny malign actors safe-haven by itself, partnerships are an essential part of our long-term counterterrorism approach. To that end, this session will focus on relationships and alliances—specifically how we should think about building partner capacity in counterterrorism (i.e. what type of relations are needed to facilitate effective counterterrorism); how those partnerships (and the tradeoffs often associated with them) are best managed and what pitfalls we can avoid in building them; and what success looks like in this domain. Are there specific cases we should look at and metrics that can help us to better evaluate our progress / lack of progress? To broaden our view, the diverse mix of panelists will be asked to share their thoughts about how public-private sector partnerships have been used in their field(s) to help solve or at least better manage intractable, complex problems. This panel will also be asked to evaluate the best way to balance the operational with the political aspects of counterterrorism.

Featured Speakers

CSM Faiz Wafa Afghan National Army Special Operations Command Sophie Delaunay Executive Director, Doctors Without Borders (US)

Moderator

Dr. Alexander Evans Coordinator, UN Al-Qa`ida Sanctions Committee

Expert Roundtable

LTG Robert L. Caslen, Jr.
Superintendent, West Point
MG Wayne W. Grigsby, Jr.
Commander, CJTF-Horn of Africa

SESSION 5 ISLAMIC STATE POLICY SESSION

This session will function as a practical capstone exercise for the conference, whereby the panelists and audience members will be provided with a venue to share their ideas and apply what they have learned to a significant counterterrorism problem: the selfdeclared Islamic State. Through a discussion facilitated by a moderator, panelists and other attendees will be encouraged to provide both 'outside of the box' and practical ideas about strategy, metrics and data, partnerships, and the war of ideasthe four substantive panels of Senior Conference—as it relates to the socalled Islamic State. The goal of this session will be to refine our thinking about this group and how its growth, actions, and influence can be better managed, limited, or countered.

Moderator

Juan Zarate Senior Advisor, Transnational Threats Project at CSIS

Expert Roundtable

RDML Robert Sharp
J2-U.S. Special Operations Command
Nada Bakos
Former CIA Analyst
Brian Fishman

Counterterrorism Fellow, New America Foundation

Many thanks to all the Senior Conference participants for making this event so productive and engaging, and special thanks to our conference executive secretaries, Mr. Don Rassler and Dr. Rachel Yon, our donors, and the Association of Graduates.

COL Cindy R. Jebb, Ph.D.