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**Countering Violent Extremism**  
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## TRACKING THE SPREAD OF VIOLENT EXTREMISM (DIPAK GUPTA)

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### Ideas and Violence

The question of a link between idea and action came directly to the fore in the aftermath of the shooting at a town hall meeting in Tucson, Arizona, which left six dead and nearly twenty injured. Immediately, many on the “left” assumed a connection between the action of the gunman, Jared Lee Loughner, and the current confrontational discourse of the political “right.” Those on the right just as quickly asserted that the responsibility for the shooting rested solely with the one who pulled the trigger. Amid the finger-pointing and heated debates, most, including the President, were happy to take the safe middle ground by absolving provocative words as cause for violent actions. While not condoning, *Time* magazine concluded that the link between incendiary talk and “...Loughner’s action is, to put it charitably, completely idiotic” (Cloud, 2011). It is, of course, impossible to link the behavior of an individual—mentally deranged or not—to “fighting” words uttered by an opinion-maker without having made any direct contact. What is lost in the debate is whether violent speech can lead to violent acts against those whom the perpetrators have never met.

Major Nidal Hasan opened fire on his colleagues at Fort Hood, Texas on November 5, 2009. He was found to have corresponded with radical Islamic cleric Anwar al-Awlaki. There is no evidence that al-Awlaki actually urged Hasan to shoot his fellow servicemen (Ross & Schwartz, 2009). Therefore, if Mr. Awlaki were to be brought before a U.S. judge, it is doubtful that his culpability for mass murder could be proven or successfully prosecuted. It seems clear that evidence linking ideas and violent acts cannot be generally established by looking at an individual case; instead, such clues must be sought at a macro-societal level.

The best evidence of a link between the speech and violence can be found in the “wave” theory of terrorism, proposed by Rapoport (2006). Rapoport argues there have been four waves in the history of modern terrorism (anarchism 1880-1920; anti-colonialism 1920-1960; new-left movement 1960-1990; religious fundamentalism 1990 - present), where a central idea has spurred violence across the world. The “waves” are characterized by: a) a cycle of activities revealing both expansion and contraction phases, b) which cover multiple nations, and are c) “driven by a common predominant energy that shapes the participating groups’ characteristics and mutual relationships” (p. 10).

According to Rapoport, the fourth wave, whose primary driving force is religious fundamentalism, started in the early 1990s. The existence of a minority group in a large country with a strong ethnic

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identity often coincides with religious differences and conflict. For example, the Catholic minority in Northern Ireland, the Hindu minority in Buddhist Sri Lanka, or the Sikh minority in Hindu India are cases where religion and national aspirations are closely intertwined. However, the central force of the fourth wave is different: today's fundamentalist movements aim not only to replace current governments but also to transform their nations into a manifestation of their image of religious purity. Thus an understanding of how ideas spread and what makes certain messages "stick" is central to understanding how individuals are motivated to join extremist organizations and engage in violence.

### **The Process of Spreading of Ideas**

If the global spread of radical political ideology seems surprising, we should note how freely other ideas flow, inundating us. From fashions to toys—bell-bottom pants to cabbage patch dolls—trends seem to appear suddenly from nowhere. In the Western cultural ethos, the idea of individualism is pervasive. Advancements in the fields of social psychology (Tajfel, 1978, 1981, 1982), experimental psychology (Kahneman and Tversky 1984; Haidt 2006), evolutionary biology (de Waal, 2006), and cognitive sciences (Damasio, 1994; Pinker, 2002; Westen, 2007) clearly demonstrate the importance of group behavior and identity in our decision-making processes (Baumeister & Leary, 1995; Denissen, Penke, Schmitt, & van Aken, 2008; Fiske & Yamamoto, 2005; Gaertner & Iuzzini, 2005; Geer & MacDonald, 2010; Leary & Cox, 2008). Research clearly links the power of perception regarding in-group status and the prejudices that arise between groups (Hewstone, 1993; Mullen, Migdal, & Hewstone, 2001). This diverse body of research demonstrates that, as social beings, we crave to belong to groups (Maslow 1968) and when we do, we derive great satisfaction by adhering to their explicit rules and implicit norms. We tend to be altruistic toward members of our chosen group(s) and oppose, sometimes violently, any perceived rival groups. Furthermore, some argue that people follow cultural dictates (Staub, 1989) not only because they generate personal utility, but also because through "doing" (or "consuming") they "become" somebody (Schuessler, 2000). So when we choose to wear a certain article of clothing, buy a certain gadget, or drive a certain car, we not only derive pleasure the consumed goods generate for us (the instrumental part of our demand), but also they help us establish our *identity* (the expressive aspect of our demand) as members of our chosen groups (Gupta, 1990, 2008). Similar to these consumers, the participants in a global terrorist movement, beyond satisfying their own personal needs—varying from power, prestige, monetary gains, salvation, or even the otherworldly hope for 72 virgins--*become* the person they want to be as members of the group to which they belong. As a result, when an idea gains momentum, the number of people increases who are seeking to identify with the idea by being part of the growth community/movement.

## Spreading of Ideas: A Broad Theoretical Perspective

Joining a social movement is a matter of inspiration and opportunity; therefore, look first at inspiration and the four key components involved in the inspiration process are the messengers, the environment, the message, and the receivers.

According to Rogers' (2003) diffusion of innovations theory, information tends to traverse the stages of *knowledge* (exposure to the idea), *persuasion* (attitude formation), *decision* (activities of choice), *implementation* (application), and *confirmation* (seeking reinforcement for choices), regardless of the scale or group at which such diffusion occurs. Throughout these stages, certain individuals or groups play important functional roles in mobilizing the diffusion through time and space, including *opinion leaders* (those who evaluate initial information and seek group consensus), *facilitators* (those who assist groups in implementation of ideas), *champions* (rhetorical proponents and transformational leaders), *linking agents* (liaisons who facilitate work across divergent groups), and *change agents* (those who facilitate the self-sufficiency of the adopting group).

Journalist Malcolm Gladwell (2002; see also Barabási, 2002, 2010; Lewis, 2009), in examining the question of how innovations or information spreads, asked: How do we arrive at the tipping point, after which, a new idea, a fad, a fashion, or an ideology floods the world? Whereas Rogers (2003) proposed a model in which innovations diffuse rather gradually, Gladwell studied the prototypical success stories of businesses such as the popular footwear, hush puppies, and children's show *Sesame Street*. When we examine the process by which a wave of international terrorism spreads throughout the globe, we observe that this is the same process by which ideas spread, some of which end up becoming global while others remain localized; some make a great impact, but most others disappear within a very short time. In the process, by which little things can make a big difference, Gladwell finds the workings of three broad forces: (1) the messenger(s), (2) the message, and (3) the context.

### The Agents of the Spread of Ideas

Social thinkers from the time of antiquity have argued that gross imbalances within the social structure, such as poverty, income inequality, and asymmetry in power, lead to political violence. However, when these factors are put to empirical tests they, despite age-old assertions of their salience, produce only ambiguous results or weak correlations (Krueger and Maleckova, 2003). The reason for this puzzling dissonance rests with the fact that the factors of deprivation—absolute or relative—only serve as the necessary conditions for social unrest. For the sufficient reason, we must look into the role that “political entrepreneurs” and opinion leaders play to translate grievances into concrete actions by framing the issues in a way that clearly identifies the boundaries of the aggrieved community and its offending group (Gupta 2008).

Gladwell makes a finer distinction within the category of what we generally call, the “political entrepreneurs.” He calls them the connectors, the mavens, and the salesmen. The *connectors* (or linking agents, Rogers, 2003) are the primary nodes of a communication network. These are the

people who know a lot of people and are known by a lot of people as a result of who they are (position, power, money, etc.) or by personal attributes. Maven is a Yiddish word meaning the “accumulator of knowledge” (analogous to Rogers’ “change agents” and “facilitators”). The *mavens* are the so-called “theoreticians” of a movement, the pundits and gurus, who can provide a cogent explanation of the current crisis based on their knowledge and observations. The *salesmen* are those who through their power of persuasion can attract groups of followers (analogous to Rogers’ “champions”). Although there are no specific boundaries separating these three groups of key individuals, any analysis of a global movement will clearly identify people with characteristics of all three. Since the number of people who initially get involved is small, something Gladwell calls “the power of the few.” However, a careful analysis of the spread of ideas would indicate that Gladwell’s scheme is incomplete and there are several other important factors behind the start of a mass movement, namely an understanding of incentives.

### **The Incentive Structure**

The noted economist William Baumol (1990) attempted to answer this important question by arguing that it is the incentive structure within the structure of an economy that creates what he calls, “productive,” “unproductive,” or even “destructive” entrepreneurs. Baumol, of course, does not examine the case of radical political leaders, but he argues (1990: 893) that “while the total supply of entrepreneurs varies among societies, the productive contribution of the society’s entrepreneurial activities varies much more because of their allocation between productive activities such as innovation and largely unproductive activities such as rent seeking or organized crime.” He establishes his hypotheses by drawing historical examples from Ancient Rome and China, Middle Ages in Europe, and the Renaissance. Baumol points out that a society that provides incentives for creative activities, which may go against the accepted norms, practices, and ideologies, fosters more creative entrepreneurs, while those that develop institutional restrictions on free ideas, tend to produce unproductive or destructive entrepreneurs. We can extend his logic to see that the Arab/Islamic nations have largely been non-democratic, where often the only expression of moderate dissent or frustration can take place is within the confines of religious discourse. As a result, many of the people in these societies have channeled their frustration, anger, and a perception of humiliation through religious fundamentalism. This is true even for Muslims living in democratic societies in the West, whereby the frustration and feelings of alienation and anger resulting from discrimination following 9/11 and other attacks and prolonged involvement in warfare in Iraq and Afghanistan has resulted in the radicalization of many youth, particularly in France and England (Sageman, 2008b).

### **The Message**

The information age literally bombards us with innumerable pieces of information every single day of our lives. As we see, listen and/or read them, very few get through our conscious awareness. For example, we may see a billboard while driving or a commercial while watching television or listen to a lecture, and yet may recall absolutely nothing about the specific message they contain only a moment later. On the other hand, sometimes we recall something we heard, saw, or read many years

ago. The question is, what causes some messages to stick? The secrets of stickiness have been the focus of research of psychologists, communications specialists, and scholars from diverse disciplines. Rogers (2003) argues that innovations are more likely to spread to the extent that they (can be rhetorically shown to) demonstrate relative advantage, compatibility with existing ideas, relatively low complexity (i.e., simplicity), trialability (ability to ‘try the idea or innovation’ out before adopting), and observability (perceptual salience in context). Likewise, messages that reinforce these characteristics in an idea, ideology, or course of action, are more likely to lead to adoption. In a related vein, more suited for characterizing the messages of adoption, Heath and Heath (2002), identify six factors that cause messages to stick. They argue that a memorable message must be *simple*, *concrete*, *credible*, and have contents that are *unexpected*, they must appeal to our *emotions*, and should contain a compelling *storyline*.

Simplicity is one of the foremost requirements of a “sticky” message. In the area of political communication, where a leader attempts to inspire a large number of people, sticky messages depend on the simplicity of thought. When we look at the messages of bin Laden, we can clearly understand that in his vision, Islam is under threat from the “infidel” West, the Jews, and their collaborators in the Muslim world. All his communications, long and short, contain this message (Lawrence, 2005). These messages are not simply a litany of grievances, but are concrete in their action plan: It is the religious duty of every Muslim to join the jihad against those who are putting the followers of the Prophet in peril.

The “unexpected” part of a memorable message is experienced when the leader “connects the dots” and explains clearly the confusing world in which they live. To many in the Arab/Muslim world, the message must come as a revelation as they begin to see how the “unbelievers” have been undermining their rightful place in history. Through extreme cunning, the “infidels” not only sapped the energy of the Islamic Empire, but also are plotting to destroy it militarily, politically, financially, and even spiritually. This sudden realization often lies at the core of successful recruiting of new believers to the cause.

Coming from the son of one of the wealthiest families, living an ascetic life, waging war against injustice, bin Laden cut a God-like image in the minds of many in the Arab/Muslim world. These images, often carefully chosen by al-Qaeda gave his messages an immense and immediate credibility.

As human beings, we remember messages that evoke emotions, particularly those that paint a portrait of an impending threat. Fear is most often the primary motivator for collective action. Evolutionary biologists have bolstered the findings of experiments underlying the development of Prospect Theory by Kahneman and Tversky (1979). Prospect Theory simply states that, in the process of evaluating benefits and costs of an action, human beings often place a far greater weight on the fear of a loss than the prospect of a gain. As Heidt (2007, p. 29) points out: “If you were designing a fish, would you have it respond as strongly to opportunities as to threats? No way. The cost of missing the sign of a nearby predator, however, can be catastrophic. Game over, end of the line of those genes.” Thus, fear affects us in a profound way. Hence, it should come as little surprise



that the messages of bin Laden were strewn with dire predictions of the destruction of the Islamic world, which are sure to pass if believers fail to act (Olsson, 2008).

Finally, memorable messages come with stories (Fisher, 1984). Experimental studies (Pennington and Hastie, 1988) show that when two similar messages are presented to an audience, one with supporting statistics and the other with a suitable story, the latter (story) inevitably sticks more than the former (statistics). Any good public speaker knows the power of a storyline. Thus, when someone evokes the name of the former British Prime Minister Neville Chamberlain in a negotiation, we immediately decode the implicit meaning regarding the follies of trying to appease an impeccable enemy. Similarly, the mere reference of Vietnam, Watergate, or the Edsel tells a storyline to the listener. Like all other political communicators, bin Laden's speeches were chock full of analogies of stories from Islamic history, which carry important symbolic messages. Thus, when he calls the Westerners, "the Crusaders," or George W. Bush, "Hulagu Khan," their implied meanings leave little doubt in the minds of his intended audience. Similarly, in the radical messages of the white militia groups, the utterance of Zionist Occupation Government (ZOG) or the "tyrant" leaves no doubt among their intended audience as to the identity of the enemy.

Thus, throughout history, the mavens have concocted coherent stories, by borrowing from religion, history, and mythology, with complete sets of heroes and villains, allies and enemies, good and evil that have resonated with the masses. The connectors have spread the stories far and wide, and the salesmen have exploited their power to communicate to recruit eager volunteers.

### **The Context**

There may be great messengers, but the stickiness of their message depends on the sociopolitical, historical, and cultural context. Rapoport (2006) highlights three historical and cultural factors responsible for the spread of one form of the religious fundamentalism (terrorism) wave: Islamism. He argues that the beginning of a new Islamic century, the Iranian Revolution of 1979 and the Afghan War paved the way for it this wave. The success of the Ayatollah Khomeini in bringing about a fundamental change in Iran by driving out the Shah, the closest U.S. ally in the Islamic World, provided a tremendous impetus to many Muslim radicals to choose the path of violent revolution to drive out the infidels and the apostates. Second, a millenarian vision of the arrival of redeemer coincided with the Iranian Revolution, giving the fundamentalists one more sign of a propitious time to rise up in the name of Allah. Finally, the Afghan War resulted in victory for the Mujahedeen against the mighty Soviet military. In their retelling of this victory, the religiously inspired totally disregard the role that the covert U.S. and Pakistani operation played; they simply interpret it as yet another sign of their inevitable victory.

## Opportunity

The explanation of the waves of terrorism included the charismatic connectors, the knowledgeable mavens, and the energetic salesmen. Although these roles explain the spread of ideas, fashions, or ideologies, there is one significant gap in the puzzle with regard to the spread of violent extremism. While ideas spread and many get inspired, only a few actually join violent extremist groups. Literature (Horgan, 2005; Sageman, 2008b) shows that, regardless how inspired message recipients are, few people join violent dissident groups as a result of epiphany; most join due to friendship and kinship and become more active/violent slowly over time. When people get deeply affected by the sight of the suffering of their own people or by listening to inspiring speeches, they seek out friends or relatives with similar reactions or beliefs and, as a result, some of them get involved in political activism. Such people serve as powerful opinion leaders. This has been documented, for example, by O'Duffy (2008), who narrated the process of radicalization of Muslim youths in the UK. Yet, one curious phenomenon has generally escaped notice of most researchers: there is a significant difference in the rates of actual activism between the various national groups. Thus, in Pakistan, while many young men and women from Pakistani background join violent extremist movements, few from the Bangladeshi or the Indian community do so. On the other hand, young men and women from the Maghreb community, similar to the Pakistanis, find ways to become active in the movement. This differential rate may be the outcome of opportunity. Let us explain.

Pakistan was created with a deep scar in its collective psyche. Apart from the trauma of horrific mass killings that preceded the partition, it also inherited the persistent problem of Kashmir. As a result, from the beginning, Pakistani leaders framed the Kashmir issue as an integral part of national identity. Facing a much stronger enemy, Pakistan turned to the jihadis and, in effect, outsourced its war of attrition (Swami, 2007). Since terrorist training camps were established and administered with the full support of the Pakistani government and its ISA intelligence service (Stern, 2003), the camps operated in the open; those who wanted to join extremist groups had full knowledge of their location. Similar training camps, built around extreme versions of Islam, flourished in the North-West Frontier provinces during the Afghan War against the Soviet military with tacit endorsement and resources from the United States, Saudi Arabia, and other Gulf States. These camps became the preferred destination of all the “wannabe” jihadis and provided unprecedented opportunity to those similarly inspired all over the world. Apart from the jihadi training camps, radicalism blossomed in the Islamic schools and madrassahs, many of which were financially supported by Saudi Arabia as a part of their war of religious hegemony (Fair, 2008). By providing opportunity to join and/or to train to the inspired, Pakistan quickly became known as the “most dangerous place on earth.”

Sageman (2008b, p. 85), based on his dataset of terrorist profiles, found that most of the violent activists are not only of Pakistani background, but also a disproportionate percentage comes from Mirpur district, a small area in Pakistan-controlled Kashmir. These findings provide evidence for his earlier (2004) “bunch of guys” hypothesis, where a group of (mostly) men join, create a cell, and adhere to the norms of their group. These men may come together at a mosque, initially for no reason other than finding *halal* food or looking for people of similar language and culture. As they



get to know one another, many of them find a strong bond in uniting against a common enemy. Slowly, they may form an informal group of like-minded individuals. Their vociferous vilification of the enemy helps to establish a strong bond among themselves. They tend to seek out information that confirms and reinforces their beliefs from the media and from the Internet. They, in effect, create their own “echo chamber,” where only acceptable voices are heard and opinions reinforced. Those who disagree or have contrary opinions quickly peel off, leaving behind a hard-core group that increasingly becomes more and more radicalized. They only read, listen, or view materials that buttress their own worldview.

These sorts of groupings are common in all social settings. However, if these radicalized members develop the capability and find a way to act upon their conviction, a terror cell is born. As groups are formed, leaders emerge. In the network, they act as central node or “hub,” making contact with other groups or the central core of a movement. As ideas spread, inspiration meets opportunity to produce terrorist attacks. This is why the establishment of strongly Taliban and al Qaeda dominated regions in Afghanistan and Pakistan poses a great security threat to the rest of the world (Hoffman, 2008, McConnel, 2008). Similarly, the failed states of Yemen and Somalia have become a destination of those who are seeking to join the “jihad” against the infidels, non-believers, and apostates.

In the next section we will present a brief explanation of a new methodology for observing the spread of speech associated with such causes. The detailed explanation of continuing work on this NSF funded project can be found on our web site: <http://mappingideas.sdsu.edu/>

### **Mapping Ideas: The Outline of a New Methodology**

The previous section offered a historical perspective on how violent ideas have spread across the world creating waves of terrorism. In this section, we describe an approach that would enable us to understand the process by which the impact of a single event or idea disperses throughout the world over time and space. We believe that this approach can help us detect and track violent extremism.

Before the rise of written communication, people joined violent groups through direct contact with the leaders. Today we are facing a new world, where ideas not only spread at the speed of light they can foster virtual communities of like-minded individuals strewn all over the globe. As a result, today’s violent movements are not top-down systems with a strict hierarchical chain of command (Sageman, 2008b). Today’s groups are less like the old-fashioned Palestinian Liberation Organization (PLO) with Yasser Arafat as the undisputed head of the organization. These days, most groups are expansively networked, open-sourced, decentralized conglomerations of small, quasi-independent individuals hewn together largely by a common source of inspiration (Robb, 2007). They are bound by a loose set of ideas, heavy with symbolic understanding of the actual world. Individuals form virtual communities, their own “small world network,” access one another through computer terminals. Computers are not simply points of information exchange, such as “how to make a bomb;” through these interactions in virtual communities, individuals develop social capital, share ideological interpretations, provide emotional support, raise money, stoke the fires of hatred towards out groups, and plan future attacks. As a result, there are numerous insurgency groups in many parts

of the world that are no longer a single organizational entity. Thus, today, al Qaeda is less of a group than a multi-headed militant movement. So are many radical groups including the white supremacists in the United States and the Naxalites in India (Gupta, 2008).

Hence, the spread of ideas in the age of the Internet is a double-edged sword; it can enhance our collective welfare, as well as produce forces that can destabilize the world. Our research aims at understanding the process by which the impact of a single event or idea disperses throughout the world over time and space and impact far flung groups around the world. Traditional approaches to understanding the spread of ideas or events are based on 20<sup>th</sup> century media—such as newsletters, advertisements, physically proximal group meetings, and telephone conversations. However, with the new media of the Internet to the Twitter and Facebook providing new methods of lethal connection, it is important to discern geographic and chronological patterns by which some of the most destructive ideas can threaten our world. These spread of ideas are accentuated by the occurrence of dramatic events such as the killing of Osama bin Laden, the decision to burn the Koran by an American preacher, or even the election of an African American man as the President of the United States. Dramatic events, especially when reported through the new media of cyberspace, have the potential to transform ideas into realities, in ways that can inflame the passions of a small group of targeted audience. A few key examples will elucidate the goals of the research.

The news of Terry Jones, an obscure preacher of a small church in Florida, and his intention to burn Korans spread like wildfire through various media inundating much of the world in general and in the Islamic world in particular. This singular announcement made by a single person touched off violent protests that cost the lives of many and threatened to further escalate tensions and rifts between the West and the Islamic world. This episode illustrates the potential of relatively isolated events to destabilize the world in unforeseen ways and with far reaching consequences.

Today the biggest security threat to the United States comes not from the Arab fighters of the al-Qaeda Central, previously headed by bin Laden, as it did in 2001, but from Western youths inspired by their call for jihad against the U.S. and the West. These messages propose the central idea that Islam is under attack from non-believers. As a result, each incident is picked up by the numerous web sites and discussion groups, which call their various audiences, mostly youth, to arms. However, not all the sites that report or discuss the events are the recruiting tools for the “Jihadis.”

In the aftermath of Katrina, H1N1 outbreaks and immunization campaigns, and the BP oil disaster, the societal absorption and utilization of cyberspace resources becomes an increasingly critical factor in facilitating public and political response to such crises. The public is increasingly merging its reliance on the traditional media of television, radio, and newsprint with its use of the World Wide Web and Internet. Understanding information diffusion (e.g., searching, sending) and acquisition patterns in response to such disasters may significantly facilitate intervention responses, and eventually, prevention responses.

One way to analyze the spread of ideas is to develop and use semantic maps—words, phrases, and patterns of language use—which characterize the seed sites in the spread of ideas. The science of

mapping terrorist activities and memes are already developing at a rapid pace (e.g., Brown, 2009; Chau & Xu, 2007; Chen, Chung, Qun, Reid, Sageman, & Weimann, 2008; Chen, Reid, Sinai, Silke, & Ganor, 2008; Qin, Zhou, Reid, Lai, & Chen, 2007; Reid & Chen, 2007; Seib & Janbek, 2011; Stohl & Stohl, 2007; Xu & Chen, 2008). “Seed sites” are the most influential sites that frame the issues, set the agenda, and lead the first wave of reaction to an idea or event. In the example of sites discussing Pastor Terry Jones and Koran burning, this approach would find, among the seed sites, groups that truly are recruiting tools for the Jihadis. To do this requires the development of semantic maps using basic language analysis tools. Using these maps to guide web searches would provide a detailed picture of how seed sites are reporting an event. By using this linguistic framework, a sophisticated web search would indicate how these groups are reporting an event and influencing each other. To visualize how the ideas are spreading, data could be collected on the spread of these web sites over time and space. By mapping these sites on a world map, the plotted path would reveal that the spread of ideas is not random. That is, there are places that are more prone to host these sites (and accept an idea) than others. Statistical analyses (including spatial statistics and space-time analysis) could be employed to develop an understanding of the potential reasons for a particular course along which an idea spreads. In other words, potential factors that cause “susceptibility” to and “immunity” from a particular set of ideas will be identified.

This methodology has other applications other than homeland security. For instance, it can be used in the area of public health, where after the outbreak of small number cases of an infectious disease in one part of the world, other parts will start reporting its occurrence. By mapping and understanding the causes of “susceptibility” and “immunity” a deeper understanding of the causes of the spread of such a disease may be gained.

It may assist disaster planning and response by clarifying the role of new media in distributing information and influencing public understanding of impending risks. This methodology can also be used in the private sector, where the acceptance of a new product can be traced over time and space giving new tools for marketing strategies.

In summary, ideas are linked to violence. Understanding the spread of ideas and what makes them compelling is essential for developing strategies for the prevention, detection of the emergence, and tracking of violent extremism. A capability to map both the geography and the chronology of ideas over cyberspace, as the ripples of information usage radiate outward from a given event epicenter, will provide new insights into the role of new media in biasing, accelerating, impeding, or otherwise influencing personal, social and political uses of such information and ultimately highlight new solutions for countering violent extremism.

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