

INFORMATION OPERATIONS

RETAKING THE HIGH GROUND

Dennis Gibson

Senior Vice President

Gibson_Dennis@bah.com

Stephen Moore

Vice President

Moore_Stephen@bah.com

RETAKING THE HIGH GROUND

OPERATING IN NEW TERRAIN

It's no secret that the Islamic State's (ISIS) skillful use of social media has played a central role in its rise and continuing success. The terrorist group can reportedly generate as many as 200,000 tweets and disseminate an average of 38 unique propaganda events each day.¹ Still, it's not the volume of ISIS messages but their rapid spread and powerful impact that make ISIS such a dangerous force. In the hands of ISIS propagandists, social media has dramatically increased the group's reach and influence. Gruesome videos of ISIS atrocities spread fear and intimidate its enemies into submission, while news and events are quickly promulgated with ISIS' own interpretation and message. Through its adept use of Twitter, Facebook, Tumblr, and other social media, ISIS not only draws a continuous stream of new recruits to its regional strongholds but now inspires followers to commit terrorist acts in the Western nations where they live.

Clearly, social media is pushing the boundaries of information operations (IO) and the concept of the traditional battlespace. While ISIS and other U.S. adversaries are exploiting social media as a reliable force multiplier, the United States and its allies are actively exploring new and innovative ways to use new media as an effective tool of influence.

Context Setting: Making Sense of Battlefield Effects

IO can be described as the integrated employment of information-related capabilities and other lines of operation to influence, disrupt, corrupt or usurp the decision-making capability of adversaries while defending one's own.² As such, message speed and impact are essential to operating effectively in the "networked" information environment. In the context of social media, the concepts of the "network effect" and "viral" activity help explain the medium's potency as a force multiplier:

- **Network Effect.** This creates the impact. A network effect occurs when a good or service becomes more valuable as more people use it. For example, the Internet's impact and value grew exponentially as the number of users multiplied and reached a critical mass of usage.
- **Virality.** This generates the speed. An image, video, or information is said to "go viral" when it circulates at increasingly rapid rates—at Internet speed—as the number of people sharing the video becomes so large that they create a massive, multiplying effect that accelerates circulation and viewing throughout the world.

Although network effect and virality are different phenomena, they often occur together. In such cases, each reinforces the other to magnify both the speed at which messages spread and their overall impact.

ISIS leaders have demonstrated a masterful understanding of how to maximize both network effect and virality when using social media. For example, one might think that a video showing ISIS soldiers rampaging through a village and executing innocent people would constitute a public relations disaster. Not so for ISIS—they seem to know just how far to go with the images to evoke a response without crossing the line of unacceptability. Operating within this balance, the group knows that these videos will be widely shared and discussed—that they will go viral and create a huge impact in both shaping perceptions and promoting ISIS goals. Such videos serve to frighten opponents and weaken resistance in other villages, inspire ISIS social media followers to join its winning cause, and sow anxiety and division within and among the United States and its allies regarding how best to confront ISIS. At the same time, ISIS fighters also post photographs of themselves playing with cats, giving toys to children, and engaging in everyday activities to paint a utopian view of

“ [ISIS] blends traditional media platforms, glossy photos, in-depth articles, and social media campaigns that can go viral in a matter of seconds. No matter the format, the message of radicalization spreads faster than we imagined...”

James Comey, FBI Director³

life in the new “caliphate.” That the fighters themselves shoot and post many of their videos resonates with a generation of viewers who create and share their own content.

OUR PERSPECTIVE: GETTING INSIDE THE DECISION-MAKING PROCESS

While networking technologies, such as social media, are constantly evolving, the principles guiding military decision making, particularly in an operational setting, remain fundamentally unchanged. When engaging an enemy or difficult challenge, successful commanders rely on the four-step decision making process—observe, orient, decide, and act (also known as the OODA Loop)—to achieve their objectives. Commanders who can carry out the OODA Loop decision-making process with more speed and accuracy than their adversaries will control the pace of engagement and, almost always, prevail in a conflict. And commanders who can get inside their adversaries’ OODA Loop—for example, by disrupting their adversaries’ ability to observe or orient themselves—will increase even further the probability of success.

Information is a key component of the OODA Loop. Military commanders recognize that information superiority—the operational advantage derived from the ability to collect, process, and disseminate an uninterrupted flow of information while also exploiting or denying an adversary the ability to do the same—will give them a decided advantage.⁴ And so, the Pentagon has pushed to deploy military technologies that can leverage this increasingly available volume of information. From releasing observation balloons and deploying surveillance aircraft to launching satellites capable of surveillance, reconnaissance, communications, meteorology, location, early warning, and more, the U.S. military is pursuing the information “high ground” to get a clearer view of the environment in which they are operating.

As we’ve seen, in today’s networked environment, social media has emerged as an additional and important factor in the commander’s topographical assessment of the battlefield, but “mapping” the social media terrain has proven extremely difficult. Four critical factors have complicated the task of analyzing social media:

- **Variety of data.** The easy, low-cost access to social media platforms has yielded countless numbers of platforms and users who are easily able to share text, photo, video, audio, and other forms of data.
- **Volume of information.** Social media conveniently aggregates common interests across broad demographic and geographic spectrums, multiplying both network configurations and opportunities to create and share data.
- **Velocity of exchange.** Cloud technologies and the applications that use them have accelerated the frequency of incoming data that needs to be processed, multiplying the number of short

message service (SMS) messages, Facebook status updates, credit card swipes, etc., that are being transmitted every second of every day.

- **Veracity of the reporting.** The ease with which users can create and alter data has lowered the quality and validity of data, as well as its usefulness, unless the data can be effectively verified for timeliness, accuracy, and completeness.

Despite these challenges, commanders continue to observe after waiting for collection assets to assimilate data and analysts to process and interpret what they have received. They orient based on inputs and further interpretations from organizational staff that may be conflicting or, worse yet, wrong. As a result, they decide with generally incomplete, imperfect, and possibly biased information. Finally, commanders act without being able to forecast the likelihood of success or having direct and immediate access to the tools required to execute their preferred course of action. Gaps and weaknesses in each step slow the speed and reduce the impact of action as each OODA Loop cycle begins again.

ISIS appears to have the advantage in this new terrain. Their propagandists understand their target audiences and how to exploit the different types of social media for desired effect, so they have been able to tap into its speed and impact. Their decentralized structure enables them to decide and act quickly to disseminate images and messages before we have time to develop or promote an alternative version, thus helping to promulgate their propaganda as the accepted truth. As a result, their social media activities get them “inside” our OODA loop, disrupting our ability to orient and complicating our ability to act.

Certainly, the U.S. military can improve its ability to use social media to support IO. But, engaging our adversaries one tweet at a time is not likely to significantly improve our ability to achieve U.S. strategy objectives. Instead, we should integrate social media understanding into our broader IO approach so commanders can better control

the momentum of the decision cycle, operating with greater speed and impact.

**OUR APPROACH:
ACHIEVING ADAPTABLE RESULTS AT
INTERNET SPEED**

If we characterize social media as a group of Internet-based applications that build on the ideological and technological foundations of Web 2.0, and that allow the creation and exchange of user generated content, we must also recognize the nature of our interaction with target audiences has changed as well. Figure 1 summarizes the change state - the new perspectives we need to acknowledge to fully realize the potential of this new terrain.

MOVE FROM THINKING IN TERMS OF:	...TO THINKING IN TERMS OF:
Pushing Message to the Audience	Pulling Audience to the Message
One-Way Messaging	Interactive Conversation
Attention as the Goal	Attraction as the Goal
Hard-to-Measure Results	Real-Time Metrics
Rigid Protocols for Engagement	Adaptive Response to Inputs

Figure 1

What does this shift mean? Fundamentally, it means accepting and embracing the idea that social media is a means to generate conversations. Instead of thinking in terms of fighting campaigns, operators should start thinking about creating and maintaining conversations—because it is the ability to translate conversations into results that truly defines the potential power of social media in IO.

We all know what a conversation is: an informal exchange involving two people or a small group of people. In the course of a conversation, information and insights are shared and, in some cases, the perspective of the participants is changed. During each exchange, each contributor needs to think about what they are hearing and form plans to respond. In effect, they need to decide what they plan to say as they hear what others are saying. If the objective is to convince participants of something, it is generally best to prepare persuasive arguments in advance—including counter-arguments - so that challenges can be identified quickly and addressed decisively.

Absent this preparation—when caught off guard in a conversation—it is hard to respond quickly or appropriately. But the reverse is also true. If the direction of the conversation is anticipated, and participants can plan a few steps ahead, it is easier to decide what to do to ensure each argument is conveyed accurately and in a timely manner.

This same approach can be used in social media for IO. That is, we create a conversation where we can sense what is being said, assess how we should reply, and then do so in a way that accurately represents our core message. In fact, this is the OODA Loop in action!

In the world of IO, a commander's action is limited to steps that the military can take to cause an impact. In the past this meant we took an action that pushed information out and hoped it had the effect that we intended. What is becoming clear now, however, is that to maximize our chances of achieving our operational goals, we must create a clear and compelling conversation and structure it in a way that capitalizes on network effect and virality. That is, using the network effect as a guide, we should strive to create messages that achieve greater impact as they touch more people. In addition, using the phenomenon of material “going viral,” we should attempt to get our messages to as many

members of our target audience as possible, in as short a time as possible.

While thinking in terms of a conversation helps set the proper context for understanding, it also reinforces the biggest issue operators are facing in terms of capitalizing on social media: turnaround, or response time. Sustained conversations allow us to get—and stay—inside our adversary's OODA Loop by stealing away his target audience. In a person-to-person conversation, there is time to think things through. On social media, however, engagement occurs at Internet speed. Effectively performing the various steps of an OODA Loop at this speed, and in a way that addresses the challenges of variety, volume, velocity, and veracity, calls for a new engagement model. Fortunately, revolutionary advances in the field of decision science are answering the call.

Data science and the related field of advanced analytics are transforming decision science by providing the means for organizations to apply powerful analytic tools to the combined pools of structured, semi-structured, and unstructured data that comprise social media. In essence, data science and advanced analytics integrate the vast array of available data into the OODA Loop and reduce the time required for each phase of the OODA Loop, thus accelerating the difficult stages of observe, orient, and decide for commanders and other decision makers. And with the advent of capabilities like machine learning and so-called deep structured learning, the time needed for human-in-the-loop decision support can be reduced to almost zero—allowing operators to move through the OODA Loop at Internet speed.

Targeted messaging, rapid engagement, and adaptive response are not unique to IO. Marketing firms have been reshaping their business models and analytics techniques over the past few years to address these very issues. The military services are actively pursuing opportunities to learn from the private sector, particularly advertising and marketing companies, to understand how commercial companies are using social media to

promote their brands, identify and reach targeted audiences, and expand their influence and reach in the marketplace—in effect, creating a conversation with the customer. Applying the insights gained by this adjacent field will only help transform IO in the face of rapidly changing networking technologies and social media.

Additional insights and effects can be gained when allied and partner nations provide their regional expertise to assist in shaping and participating in local conversations. Multinational partners have unique cultural understanding and approaches to IO that are tailored for specific targets in ways that may not be employed by the U.S. Allied and partner activities that complement our approach can enhance the quality of both the planning and execution of social media-based IO and improve the effect of battlefield operations.

Our understanding of this evolving social media terrain, combined with our superior capabilities in data science and analytics, can help us retake the high ground by creating and disseminating content that is rapidly shared and produces a meaningful effect. These capabilities—which are available today—will enable us to deliver insights and options to commanders and other decision makers at Internet speeds, giving them faster, more effective OODA Loop capabilities. These technologies also enable us to be more proactive in using social media to promote our IO goals and may even help measure their effect. Overall, a more comprehensive social media understanding will give the United States a strategic and tactical edge both on the battlefield and in the broader realm of international affairs.

NOTES

1. Richey, Warren, “Terror on Twitter,” Christian Science Monitor, June 3, 2015, <http://www.csmonitor.com/USA/Justice/2015/0603/Terror-on-Twitter-How-Islamic-State-uses-social-media-to-draw-recruits-video>
2. Joint Publication 1-02, Department of Defense Dictionary of Military and Associated Terms, November 2010 (As Amended Through 15 February 2016), page 111
3. James B. Comey, Director Federal Bureau of Investigation, Statement Before the Senate Committee on Homeland Security and Governmental Affairs, Washington, D.C., October 08, 2015
4. Joint Publication 1-02, Department of Defense Dictionary of Military and Associated Terms, November 2010 (As Amended Through 15 February 2016), page 110

ABOUT OUR AUTHORS

Dennis Gibson
Senior Vice President

Booz Allen Hamilton Senior Vice President Dennis Gibson is a leader in the firm's information operations business area and serves as the lead Partner in the Pacific Rim. Located in Honolulu, Hawaii, Mr. Gibson serves U.S. government clients in defense and civil agencies throughout the region, including Hawaii, Guam, Singapore, Korea, Japan, and Alaska and across the U.S. Combatant Commands. He is responsible for providing clients with a wide range of services across all of the firm's capabilities, including technology, analytics, strategy and organization, and engineering and operations. He is currently a member of the Military Affairs Committee Executive Council, Chamber of Commerce of Hawaii.

Stephen Moore
Vice President

Booz Allen Hamilton Vice President Stephen Moore leads the firm's Combatant Command/Joint Staff (UCJ) activities, including information operations and live-virtual-constructive training and testing, that emanate from Tampa and Miami, Florida. He serves clients in meeting mission objectives by leveraging his expertise in joint training and exercises, information operations, modeling and simulation, strategy and policy development, and innovative business model development.

Selected for Senior Executive Service at age 35, Mr. Moore served as Deputy Director of the Joint Warfighting Center in Suffolk, Virginia, from 1997 to 2005. He also worked as a program manager and technical director at Imagery and Mapping Agency/Defense Mapping Agency which is now the National Geospatial-Intelligence Agency, and worked at the Naval Supply Systems Command. In 2005, Mr. Moore earned the Chairman of the Joint Chiefs of Staff (CJCS) Distinguished Civilian Service Award.

Mr. Moore earned a B.S. in industrial engineering from Iowa State University, an M.S. in national resources strategy (information warfare) from the National Defense University, and an M.B.A. from George Mason University.



About Booz Allen

Booz Allen Hamilton has been at the forefront of strategy and technology for more than 100 years. Today, the firm provides management and technology consulting and engineering services to leading *Fortune* 500 corporations, governments, and not-for-profits across the globe. Booz Allen partners with public and private sector clients to solve their most difficult challenges through a combination of consulting, analytics, mission operations, technology, systems delivery, cybersecurity, engineering, and innovation expertise.

With international headquarters in McLean, Virginia, the firm employs more than 22,600 people globally and had revenue of \$5.41 billion for the 12 months ended March 31, 2016. To learn more, visit BoozAllen.com. (NYSE: BAH)