EXAMINING WARFARE IN WI-FI

A Review

Wiki at War: Conflict in a Socially Networked World
By James Jay Carafano

Reviewed by Dr. Jeffrey L. Groh, Professor, Information and Technology in Warfare, US Army War College

*D*r. Carafano constructs a compelling narrative examining the implications of socially connected populations in the context of conflict and warfare. The author's general thesis is that "engaging in the war online is not optional." The book begins an investigation of the history of social networking. The author takes the reader on an interesting course starting with the importance of "language as technology." Language provides the medium to build relationships, culture, knowledge, and as a tool to share judgments. He effectively uses vignettes to demonstrate how the legacy of tribal language formed the basis of early social networks throughout history. The intriguing stories of how language played a key role in conflict and warfare, beginning with the Mongol Empire and Genghis Khan and the great hunt or the *nerge*, the Iroquois League during the American Revolution, and the early-nineteenth-century Zulu kingdom in southern Africa, set the tone for the power of social networking. The journey continues to describe the power of myth and storytelling to transfer knowledge within and across social networks. The evolution of sharing information by messenger systems dating back four thousand years to the optic telegraph in the Napoleonic wars through today's digital systems revolutionized how humans communicated in peace and in war. The historical portion of the book does an excellent job establishing the importance of the message, language, and story enabled by the technology to enhance the concept of social networking.

The author moves to contemporary history with a chapter describing the birth of the computer age and Web 2.0. The invention of the Electronic Numerical Integrator and Computer (ENAC) by Professor John Mauchly (1942-45) was a watershed moment for the potential of social networking as well as communication in warfare. Dr. Carafano argues that the invention of the computer sets the stage for creating many kinds of machines enabling communication. Think about today's smart phones, digital music players, personal computers, and tablets. The ENAC was a key enabler to enhance the ability of humans to communicate in the context of social networking. The next piece of the puzzle was to create architecture for computers to communicate. Carafano spends time discussing the Defense Advanced Research Projects Agency invention creating a communication system linking computers to share data over long distances (ARPRANET). The development of ARPRANET is a fascinating story of technological innovation that ultimately evolved into the World Wide Web. Most of us probably know the general facts surrounding the birth of the computer and the World Wide Web. This section provides a much deeper comprehension of the people and technology leading to the advanced social networking tool available today.

The remaining chapters in the book travel through the implications of social networking today. The author points out that social networking

and connected populations present significant challenges to senior poli-cymakers, military leaders, and planners. The nature of the adversary online is extremely diverse. Dr. Carafano provides a useful framework to consider several varieties of adversaries. There are state actors, enabler states, and slack states that have lax laws and enforcement means to allow nefarious actors to operate. Understanding the complexity of this domain continues with a detailed dialogue of the combatants. There are lawful combatants who fight under the control of state as well as unlaw-ful combatants (e.g., criminals) who operate outside acceptable norms and rule-based regimes. The problem planning operations is that lawful and unlawful combatants use similar techniques to achieve objectives in cyberspace (e.g., the threat of violence and espionage) by changing behavior. The author provides convincing evidence to the challenges from China's hacker army to military operations and civilian networks. Russia also has a robust hacker community. The cyberattacks in Estonia (2007) and during the Russia-Georgia war (2009) are examples of the potential danger. The interesting analysis of the loosely connected hacker groups, criminals (e.g., Russian Business Network), and the general population through networking technologies is worth reflection for military planners at all levels.

Dr. Carafano conducts an interesting examination of the US gov-ernment and military struggle to leverage cyberspace to achieve goals. He points to early successes using the grassroots movement of a few young Army officers to create a social media site "Companycommand.com" to share ideas about company command; however, scaling this idea by the US government became a challenge. The United States con-tinues to improve its ability to create a Web 2.0 environment to connect with the American people. Whitehouse.gov and USA.gov are examples of the push to use the power of the Internet to share public information with US citizens. There are military examples demonstrating the value of cyberspace in military operations. The Department of Defense has clearly declared cyberspace an important domain of warfare by creating US Cyber Command in 2009.

The book closes with a serious warning in the epilogue. "Winning the web will not happen by happenstance." Carafano outlines some simple laws of wiki warfare. The first is to know all the competitors in cyberspace. Next, empower people to leverage Web 2.0. This will take skilled leaders who understand the cyberspace domain. The final law is for leaders to develop a vision and strategy to win in cyberspace. A criticism of the book is the recommendations and conclusions in the epilogue provide only a broad framework of a strategy to leverage cyber-space and address the challenges of social media. Future research should expand on the recommendations to develop a more holistic strategy for operating in the cyberspace domain.

The book is an easy read that provides ample evidence to support the notion that there is an ongoing competition in cyberspace using social networks to advance security objectives. *Wiki at War* expands the dialogue on significant contemporary international security issues. Dr. Carafano provides excellent analysis for military planners and senior civilian and military leaders to reflect on the implications of social networking in national and military strategy development as well as operating in the cyberspace domain.