

March | 2013

Operational Relevance of Behavioral & Social Science to DoD Missions

Preface

LTG Michael Flynn, Director, DIA

Contributors

Maj. Gen. John Shanahan, JS/J-3/DDGO
Mr. Earl Wyatt, RFD/ASD R&E
Mr. Ben Riley, RFD/ASD R&E
Dr. Robie Samanta Roy, SASC

Authors:

Hriar Cabayan, SMA OSD
David Adesnik, IDA
Chandler Armstrong, USACE ERDC
Allison Astorino-Courtois, NSI
Lt Col Alexander Barelka, USAF AFMC
Thomas Bozada, USACE ERDC
David Browne, PACOM
Charles Ehlschlaeger, USACE ERDC
Dana Eyre, SoSa
LTG Michael Flynn, DIA
LTC John Ferrell, SOUTHCOM
LeAnne Howard, SOCOM J5
Robert Jones, SOCOM J5
David Krooks, USACE ERDC
Anne McGee, NPS
Timothy Perkins, USACE ERDC
Dan Plafcan, OUSDI
Lucy Whalley, USACE ERDC

Editor:
Sarah Canna
NSI
scanna@nsiteam.com
301.466.2265

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

Contents

Preface	1
LTG Michael Flynn.....	1
Background: A World in Transformation	3
Maj. Gen. John "Jack" Shanahan	3
Mr. Earl Wyatt.....	4
Mr. Ben Riley.....	5
Dr. Robie Samanta Roy	5
Introduction	6
Why Are the Social Sciences a Necessary Element of DoD Planning and Operations?	7
The Social Sciences as a Key Element within the Broader DOD Mission Space	8
Applications of Social Science Knowledge	9
Stability Operations.....	9
Deterrence and Compellence Operations.....	10
Shaping Operations.....	10
Counterterrorism and Counter-radicalization Operations	10
Planning and Assessment.....	11
Workflow/Organizational.....	12
Decision-making	12
Mission Competency Analysis	12
Knowledge Management in the Cyber Realm.....	12
Social Sensors.....	12
New Analytic Techniques.....	13
Way Ahead	13
Conclusion	15

Preface

LTG Michael Flynn

Director, Defense Intelligence Agency

Operational and strategic environments are becoming more complex, less predictable, more connected, and more problematic. The way the Department of Defense (DoD) and the intelligence community (IC) conducts analysis needs to change to meet these new challenges. This requires a reorientation toward, and investment in, multi-disciplinary, holistic, and comprehensive analyses informed by rigorous sociocultural methods and tradecraft. As suggested by the Defense Science Board (DSB) Task Force on Understanding Human Dynamics, the DoD must institutionalize best practices that learn from social science programs and processes and make them available across the full spectrum of military operations to mitigate the likelihood of armed conflict.¹

Analysts need to challenge their mindsets and learn to make connections between disparate, oftentimes competing, data points to create a full picture, which will require the development of new innovative methods of conducting analysis. Sociocultural tradecraft needs to be developed and implemented that integrates new concepts, defines new standards, and creates hubs of expertise. Through these changes, analysts will be able to spend more time understanding fundamental phenomena using proven sociocultural tools and methodologies.

Though sociocultural analysis has come to the fore with recent counter-insurgency experience, its relevance extends far beyond these operations. Indeed, its relevance may be greater in the future security environment than in contemporary operations. America's security environment faces a diverse set of challenges, all of which are shaped by sociocultural dynamics. An aging population, as well as internal social and political challenges, will require greater attention to understanding traditional allies (e.g., Europe and Japan). Africa is in turmoil, facing both positive (with dynamic emerging economies) and negative (remnant post-colonial challenges and Islamist extremism are a potentially lethal combination) realities. South Asia faces a youth bulge and an emerging middle class that will challenge existing sociopolitical structures and regional social movements. The Gulf, the Middle East, and North Africa are undergoing a region-wide set of social transformations of a scope last seen on the world stage in Europe in 1848 or in the post-World War One era. In addition, Latin America faces the end of long-standing dictatorships, change in the Andean region, and an emergent world-stage actor.

Beyond specific regional events, globalization generates its own complex changes. Increasing social and economic interaction, rapidly evolving communications technology

¹ Defense Science Board. (2009). Task Force on Understanding Human Dynamics. OSD AT&L. <http://www.acq.osd.mil/dsb/reports/ADA495025.pdf>

and media systems, transnational criminal organizations, global corporate structures, and emerging global civil society, may all combine to shift radically the strategic environment. Furthermore, the development of the "cyber-world" is far more than a mere technical evolution; it has profound social causes and consequences. Furthermore, as events in Mali highlight, the challenge of Islamist radicalization has not been fully resolved. In addition, the dynamics of emergent powers: regional (Iran), resurgent (Russia), and global (China) are profoundly shaped by their internal social and political dynamics. All these phenomena are ones that have long been studied by social sciences. They can only be understood by integrating sociocultural analysis—informed by both social science and area specific/historical studies—into a comprehensive analytical framework.

These changes make imperative the development of sociocultural tradecraft. Profound change is underway in the sociocultural realm, and the IC needs to be able to understand and respond to it. Better understanding the sociocultural environment provides decision makers with sufficient levers to decrease conflict and stay in the pre-war and post-war environments. However, sociocultural tradecraft is more than an issue for the pre-war and post-war environment. Sociocultural dynamics are central to the prosecution of modern conflict. In the contemporary era, the perceptions of populations are increasingly the center of gravity of all conflicts. Thus, investments in sociocultural tradecraft contribute to preventing the onset of conflict, to effectively prosecuting conflict if it comes, and to ensuring attainment of political goals and sustainable peace after the end of conflict. Greater attention to sociocultural tradecraft is central to allowing the IC to accurately reflect and be adaptive to the new demands of the 21st century across the spectrum of challenges we face.

Background: A World in Transformation

This paper emerged from the “A World in Transformation: Challenges and Opportunities” Strategic Multi-layer Assessment (SMA) Conference in November 2012.² Leaders from across the USG addressed the emerging challenges of the 21st century for defense analysts, planners, and operators. The first decade of the 21st century has ushered in a period of rapid change across the globe: demographic upheavals are challenging the status quo, classic nation states are in decline, and people are more interconnected than ever. Panelists agreed that in this uncertain environment, the social sciences³ play an ever-expanding role. Thought leaders from across the defense community discuss the relevance of social science to DoD operations in this section.

Building Frameworks to Inform Whole of Government Response

Maj. Gen. John "Jack" Shanahan

Deputy Director for Global Operations, Operations Directorate, Joint Staff

A paradigm shift is occurring across the globe. We do not yet know how the world will look when this shift is completed, though it is already being characterized within the Interagency as the “new normal.” We must consider two paradigms. First, adversaries and potential adversaries—often grouped under the rubric of Violent Extremist Organizations, or VEOs,—are becoming syndicated in ways we did not fully anticipate or appreciate a decade ago. We are witnessing a rising trajectory of communication, collaboration, and sharing of ideas, weapons, lessons learned, and tactics among disparate VEOs that once seemed to have very few common interests or goals—or even if they did, they were unable to join forces in ways that represented a more significant threat than they did in isolation. VEO cooperation, coordination, and synchronization are enabled by the explosion of social media and almost-instant global communications. At the same time, we are not keeping up with this VEO paradigm shift; when we do, it is often in a predominantly tactical and reactive manner. In short, our adversaries and potential adversaries are more rapidly and effectively shifting paradigms than we are.

There is an unmistakable ideological component to this paradigm shift. We are in danger of losing the strategic narrative, the so-called ‘battle for ideas.’ Our adversaries and potential adversaries are engaged as never before in a competition for the ideological high ground. Distorted ideas and ideals that were easily brushed aside twenty years ago are finding an unprecedented audience and gaining a dangerous foothold in the ungoverned spaces of the Internet. We need a government-wide global strategy to counter VEO ideology; social

² Please email Sarah Canna at scanna@nsiteam.com for the complete conference proceedings.

³ The Merriam-Webster Online Dictionary defines social science as “a branch of science that deals with the institutions and functioning of human society and with the interpersonal relationships of individuals of as members of society.” For the purpose of this paper, social science is used broadly and includes, but is not limited to, the disciplines of anthropology, archaeology, area studies, behavioral science, communication, development studies, economics, history, human geography, law, linguistics, political science, public administration, psychology, and sociology among others.

science can and must play a central role in both understanding and competing against the VEO ideology. In today's information environment, the Internet and social media are among the most potent weapons in the VEO arsenal. We must engage readily and continuously in this electronic battlespace or we will lose the clash of ideas.

Federal agencies are working to respond to a broad spectrum of complex social threats facing the United States in the 21st century including radicalization, cyber radicalization, instability, and insurgency, but there is no uniformity of approach. The social sciences can provide a rigorous framework to explain these phenomena and to guide research, analysis, and operations. Social science knowledge, methodologies, and models inform the commanders so that conflict stays left of boom. However, further research is needed and operators need to better understand the role and potential of social science to inform decision-making and to ensure our paradigm shift is as substantial and as enduring as that of the VEOs.

Responding to Emerging Threats

Mr. Earl Wyatt

Deputy Assistant Secretary of Defense, Rapid Fielding in the Office of the Assistant Secretary of Defense for Research & Engineering

One of the Rapid Fielding Directorate's (RFD) missions is to respond to emerging threats by identifying, developing, demonstrating, assessing, and rapidly fielding innovative concepts and technologies to meet operational needs. The social sciences are uniquely positioned to contribute knowledge, tools, and models to address some of the most pressing questions facing operators and decision makers today including:

- How do we best anticipate and disrupt the triggers of violent actions?
- How do we prepare for the unintended consequences that may result from U.S. engagement?
- How do we communicate U.S. intentions and foster trust in a country with decentralized government?
- How can we defuse the need for kinetic engagement and measure the success of these efforts?
- How do we best strengthen and measure the benefits of building partner capacity?

To address these questions, we need social science models capable of scaling up or down to address a wide range of divergent threats. This is critical to establishing a leaner, more agile force to effectively operate across all domains. It is imperative that the delivery of these technical capabilities is accelerated to win the current fight.

Multidisciplinary Responses to Complex Challenges**Mr. Ben Riley**

Principal Deputy, Deputy Assistant Secretary of Defense for Rapid Fielding in the Office of the Assistant Secretary of Defense, Research and Engineering

Threats in the 21st century are increasingly complex and require multiple perspectives and disciplines to understand and anticipate challenges. No longer can the DoD rely solely on subject matter experts to understand and engage with populations. The social sciences need to be deployed at the tactical level. Social science insights, theories, and models give the commander the kind of information that is critical for him to achieve his mission in complex environments. However, it is not enough to employ social science tools and methods in the operational environment. The tools require the intellectual curiosity of the commander in the fields. The community needs to concurrently invest in training officers how to employ social science tools and methods.

The Changing Role of Social Sciences in the DoD**Dr. Robie Samanta Roy**

Professional Staff Member, Senate Armed Services Committee

The changing nature of warfare emphasizes the need to develop a deeper understanding of the human perspective. Conflict is emerging in diverse corners of the world, and the DoD needs to develop the expertise in each of these regions. Social science initiatives are crucial for understanding this human terrain.

However, investment in the social sciences faces a few obstacles. First, the gap between the research and user communities needs to be bridged and narrowed. Second, coordination within the research community needs to be improved to eliminate redundancy, focus on meeting warfighter needs, and quickly transition from basic to applied research. Third, the emphasis on multidisciplinary approaches must be maintained and further developed including bringing together experts from across a broad spectrum of disciplines. Fourth, the community needs to do a better job of developing measures of effectiveness (MOE) to understand the impact of operations on communities of interest. Finally, the community needs to address the verification and validation of high quality data, models, and theories.

It is necessary to shape the future direction of social science programs now. This shaping will include the training of future experts to ensure that these efforts are sustainable. Additionally, through increases in international cooperation, greater insight on “the other” will be gained. Furthermore, research into the role of political and religious ideologies needs to be pursued. Finally, the convergence of behavioral science and neurobiology will help inform future challenges including how best to respond to adversaries that do not have the same ethical constraints that the U.S. does.

Operational Relevance of the Behavioral & Social Science to DoD Missions

Conflict, in all its forms, remains a fundamentally human endeavor. Destroying infrastructure and weaponry can shape an adversary's decisions, but rarely delivers a decisive outcome. Success depends as much on understanding the social and political fabric of the surroundings as it does on the ability to physically dominate them. In an environment defined by the intermingling of friends, enemies, and neutral parties, understanding social and cultural networks becomes just as important as the weapons we employ."

Gen. Ray Odierno, "The Force of Tomorrow"

Introduction

The Department of Defense (DoD) conducts simultaneous operations across a conflict continuum and in dynamic strategic and operational landscapes characterized by complexity, uncertainty, and novelty. The DoD charges commanders to shape security environments, defeat adversaries, and stabilize conflict zones. This charter requires comprehensive understanding of the dynamics by which conflicts emerge including the sociocultural dynamics of conflict and the processes by which stability and sustainable peace can be built. In order to be prepared for the full range of their responsibilities, military staffs must develop the faculties to conduct nuanced analysis and planning commensurate with the human, social, cultural, and political dynamics that they will face. "Operational art requires broad vision, the ability to anticipate the conditions necessary for success before, during, and after the commitment of forces."⁴ The practices and expertise necessary to conduct planning and execution require sociocultural knowledge and methods, in light of the shift to predominantly non-kinetic campaigns anticipated for the 21st century.

⁴ Joint Advanced Warfighting School. Operational Art and Campaigning Primer AY 09-10: Joint Operation Planning Process. p. 167 available at http://www.au.af.mil/au/awc/awcgate/ndu/jaws_campaign_planning_primer_2010v-4.pdf

Why Are the Social Sciences a Necessary Element of DoD Planning and Operations?

The answer is simple: the world cannot be fully understood without considering human psychology, social processes and cultural differences, social change dynamics, and decision-making tendencies. The social sciences provide a fundamental vocabulary through which these dynamics can be understood; consciously or unconsciously, they provide the lenses through which we see the world. As John Maynard Keynes said, "The ideas of economists and political philosophers, both when they are right and when they are wrong, are more powerful than is commonly understood. Indeed, the world is ruled by little else. Practical men, who believe themselves to be quite exempt from any intellectual influences, are usually slaves of some defunct economist."⁵ The choice is not whether to use social science or not, the choice is whether to use it consciously to achieve mission objectives across the full spectrum of conflict or whether to use only the small portions of social science already employed by the defense community.

The social sciences are clearly relevant in the 21st century, which has ushered in a period of rapid change across the globe: demographic upheavals are challenging the status quo, what we define as the classic nation-state appears to be in decline, transnational structures (corporations, criminal organizations, civil society organizations, and diaspora populations) grow rapidly, and people are more interconnected than ever before. It is a more social, more dynamic world that we face and in which we must operate. In this environment, the social sciences can play a critical, foundational role. A rich contextual understanding of the human domain is the key to success. The operational and strategic environments are becoming more complex and less predictable, and a nuanced appreciation of the human domain is essential for effective planning. These challenges include new potential threats in the cyber domain and increasing state fragility in various parts of the globe. Social science can provide insight into why and how individuals, groups, and states act and are evolving.

The requirement for increased use of the social sciences—when planning, executing, and assessing unified and joint operations—is evident in the "Summary of Changes" page of many doctrinal publications revised in the past five years. As noted in these pages, which capture the thinking of a large number of individuals in the doctrinal process, social science enables the operational commander and his staff to

- understand the historical and current sociocultural factors and conditions that generated the need for a military response;
- understand fundamental social processes, the sociocultural "levers of change," and "cultural landmines" that exist within the operational environment and how they will enable or hinder attainment of mission objectives;

⁵ Keynes, J. M. (1936). "The General Theory of Employment, Interest and Money." Chapter 24: Concluding Notes on the Social Philosophy towards which the General Theory might Lead, p. 384.

- understand how military forces conducting operations will impact populations and political and economic structures;
- produce courses of action that exploit kinetic and non-kinetic actions to enable the commander and other U.S. Government (USG) agencies to successfully execute their missions to achieve national strategic objectives in concert with traditional and non-traditional partners as well as the host nation's objectives and needs;
- achieve a mental model of the operational environment rich enough to enable U.S. forces to conduct offensive, defensive, and stability operations simultaneously, as required, in the same operational area; and
- be able to assess changes in sociocultural factors, integrate those factors into comprehensive analyses, understand the impact of the changes on mission accomplishment, and be able to modify existing actions or exercise new options in response to these changes.

By employing an inter-disciplinary approach, social scientists can begin to develop conceptual frameworks that will allow the defense community to enhance situational awareness and then model and ultimately anticipate behaviors.

The Social Sciences as a Key Element within the Broader DOD Mission Space

For any problem faced by DoD decision makers, it has been said, there is a “what” and a “so what.” For example, the physical sciences—and the defense-related technologies they have produced for the U.S. military (e.g., ISR R&D)—are exceptional at helping determine what is occurring in the observable world as well as which physical effects can be achieved in a certain situation, opportunity, or against a particular threat. However, because the “so what” of all DoD decisions and planning is at its core a question of inter-cultural interests, clashing values, perceived intentions, and/or threats to notions of current or future security, simple physical observation of what others are doing or what the USG can do are by themselves insufficient. Rather, questions of motivation, understanding, values, and perception require social science perspectives to understand and assess. The ability to interpret social behavior from the point of view of a specific group of interest will help the analyst and decision maker to understand the broader sociocultural dynamics.

The DoD can learn from other successfully implemented social science programs within the USG. Social science has long been used to inform decision making in policy development, program planning, and execution of programs in both government and the private sector. It is important to recognize, as well, that there are a wide variety of applied disciplines that draw heavily upon the social sciences and have developed robust bodies of theories, best practices, and frameworks: these disciplines range from marketing to social work to public affairs to organizational development to community development. An overwhelming number of efforts to draw upon both basic and applied disciplines could be cited from international development, public health, education, social impact assessment, and public safety and law enforcement on the application of social science to what the military would

term planning and operations.⁶ The social sciences are sciences, but they are sciences that face unique challenges because their fundamental subject is the flexible, highly social, clever, morally aware, manipulative, and conscious human species. However, the integrated application of insights from multiple disciplines is facilitated by the development of trans-disciplinary methods. Trans-disciplinary efforts seek to guide both researchers and practitioners in this challenging terrain.⁷

Applications of Social Science Knowledge

Stability Operations

The need for social science knowledge, tools, and methods is most commonly associated with stability operations, where social science is needed throughout all phases of the mission planning and execution. First, it informs initial understanding of the operational environment through historical and sociocultural analysis. This step is critical because it establishes what problems must be addressed to create the conditions for viable peace.

From this initial understanding, the decision makers can then determine what the desired end state should look like. The end state must consider security, governance, rule of law, economic development, and social well-being. Establishing security without addressing the underlying social-cultural issues will only create new challenges over time. Once the desired end state is articulated, social science then supports course of action development. It is likely that future DoD missions will require a combination of kinetic and non-kinetic actions. Commanders must understand the fundamental social processes in play and how they influence the operational environment. These processes and societal structures represent potential levers of change. Used well, these levers may enable the conditions necessary for the end state to be achieved. Used poorly, the result will be a larger set of problems and challenges.

Ultimately, social science helps the commander create a grounded mental model of the social and security dynamics in the area of operations. This mental model reduces the uncertainty of the situation and forms the basis for better decision-making. Most importantly, social science must provide the commander with the ability to monitor and evaluate sociocultural changes in the operational environment. This provides the commander the means to evaluate movement toward (or away from) intermediate objectives and ultimately the desired end state. Understanding change enables the commander to know when to continue operations because the desired results are occurring, modify existing actions because they are only partially successful, or engage in new actions because current efforts are counterproductive.

⁶ Rosenberg, A. (2012). *Philosophy of Social Science*. 4th Edition. Westview Press.

⁷ Nicolescu, B. (2008). *Transdisciplinarity: Theory and Practice*. Hampton Press.

Deterrence and Compellence Operations

At the opposite end of the spectrum from stability operations, deterrence and compellence operations seek to shape the behavior of specific actors in the pre-conflict and during conflict. Social science has a long history of involvement in these operations—stemming from analyses during the Cold War—but much has been learned beyond the initial rational choice theory that informed that early work. Our understanding of individual decision-making, collective behavior, polarization dynamics prior to conflict, and other relevant areas has developed substantially. While we have emphasized that the world is changing, we would also acknowledge continuities—continuities that Clausewitz, Palmerstone, Bismarck, or Kennan would recognize. Dealing with emergent states, assertive powers, and dynamics of threat and counter-threat have been, and will remain, an area where social science can provide substantial support.

Shaping Operations

Shaping operations are intended to create conditions that inhibit threats from gaining the trust of the populace and provide friendly forces (U.S. and partners) the freedom of action to conduct operations against the adversary. These operations include, but are not limited to, ensuring friendly forces are appropriately postured to conduct operations, establishing relationships with partner organizations/nations, and conducting influence operations against target populations. The intended result of shaping activities is an environment favorable to interdiction of the adversary at the place and time of our choosing and a foundation for sustainable and capable partner security forces.

More strategically, shaping operations can be understood as a competition for influence over relevant populations. This populace-centric approach recognizes that, in the future, securing influence in the global information marketplace will be critical to influencing the choices of individuals and thus influencing the strategic environment. More importantly, all instruments of national power must be integrated in order to generate the influence needed to achieve U.S. objectives. Social science provides the toolset that allows operators to understand and shape narratives, discourse, and public debate.

Counterterrorism and Counter-radicalization Operations

Counterterrorism and counter-radicalization operations seek to defeat violent extremist organizations. These efforts employ a blend of both threat-based and opportunity-based approaches—a balance that incorporates both direct and indirect lines of operation. It supports a defense, diplomacy, and development construct with added emphasis on understanding and working within the given environment. In order to achieve the desired end-state, the campaign concept must be characterized by actions that erode an adversary's power and influence over the relevant population rather than by defeating the adversary primarily through direct military confrontation.

We have learned that it is necessary to operate against our adversaries both directly and indirectly. Direct operations disrupt their ability to attack our interest and help to establish the conditions under which their organizations can be dismantled and defeated. Indirect

operations diminish the spaces that provide the adversary sanctuary, freedom of movement, and resources. Diminishing such spaces reduces the adversary's freedom of action and counters their ability to project power against our interests. Both approaches, direct and indirect, remain necessary and, when combined, will be sufficient to meet our objectives.

While the direct approach addresses the immediate requirement to pursue terrorists, their infrastructure and their resources, the indirect approach addresses the underlying causes of terrorism, the environment in which such activities occur, and requires a whole of government effort led by other agencies with the DOD fulfilling a supporting role. Moving further left of bang, a critical component of counterterrorism operations includes counter-radicalization efforts.

Radicalization is a complex phenomenon that many different disciplines have studied. The social sciences have provided planners and operators with an understanding of the 'who', 'what', and more recently the 'why' of radicalization. The neurobiology and cognitive sciences communities are working to expand the understanding of the 'why' question. It is essential that planners and operators, who are often on the front line of counter-terrorism and counter-insurgency campaigns, have a deeper understanding of why and how radicalization occurs. With a good understanding of the 'why' of radicalization, planners, operators, and social scientists can avoid relying on anecdotal information. Equally important is an understanding of the drivers of radicalization will help minimize the potential for the unintended consequences of friendly actions to exacerbate radicalization. The investment of resources into understanding the mind, motivation, behaviors, and attitudes will likely yield important insights into why radicalization occurs.

Planning and Assessment

Social consideration can have a substantial return on investment for military operations. As in any military engagement, the successes of these new operational requirements heavily rely on high quality planning and assessment. Assessment of effects is "the function that enables the measurement of the progress and results of operations in a military context, and the subsequent development of conclusions and recommendations that support decision making."⁸

Applied social science plays a large role in the assessment of the operational environment. It can help answer common questions facing commanders such as "what are the social conditions that have precipitated the violent conflict?" and "how are the sociocultural dynamics in this situation likely to affect the military mission?" Answering these questions requires a new understanding of the goals of analysis. In the words of Flynn et al.: "A new concept should seek to explain how populations understand their reality, why they choose

⁸ NATO Operations Assessment Handbook

either to support or resist their governments, how they organize themselves socially and politically, and why and how their beliefs transform over time.”⁹

Workflow/Organizational

Social science’s potential applications have always been broad, and now new organizational structures, jobs, workflows, and information technology (IT) systems all provide yet greater imperatives to consider the role of social science in contemporary operations. New organizational structures are more important than ever as the USG prepares to operate in a budget-constrained environment. Consolidating core competencies while reducing intra-organizational duplication through network analysis is becoming increasingly important. The social sciences can also help organizations look across the organizational, team, and individual level simultaneously to rebuild organizations as we advance into a post-Cold War environment.

Decision-making

Social science can add the nuance that helps policy-makers answer the question: "What should I do?" This is a major role of intelligence analysis and support to operations. This goes one step further, though, by not only (1) providing understanding of the human terrain, but also (2) providing analytic tools and techniques to add rigor to analysis.

Mission Competency Analysis

In the area of jobs, new career fields like cyber warrior and remotely piloted vehicle (RPV) operator promote the need for job and mission competency analysis. These activities define the recruitment, selection, and training requirements for these career fields. Indeed, even existing career fields can be informed by such analyses as we all start to operate in a more culturally diverse environment. New workflows are also emerging that demand the analytic services of social scientists.

Knowledge Management in the Cyber Realm

Knowledge management, and the related social sciences, examines who should be notified of certain events, under what conditions, and why. Of course, many of these requirements are driven by the continued and prolific use of information technology (IT). Cyber systems, RPV’s, reach back capabilities, and virtual teams are all fueled by IT. The cyber environment is different from physical space so we need different ways of operating in it. How we recruit, select, train, fight, and lead in this new environment must all be considered and studied if we expect to excel within it.

Social Sensors

New sensors related to social and mass media can be exploited in such a way as to offer a glimpse into the cognitions and emotions of individuals and populations. Only a few years

⁹ Flynn, M., Sisco, J., & Ellis, D. (2012). Left of Bang: The Value of Sociocultural Analysis in Today’s Environment. Prism 3, 4, p 13-21. http://www.ndu.edu/press/lib/pdf/prism3-4/prism12-21_flynn-sisco-ellis.pdf

ago we did not possess these capabilities. It is likely that these information sources will become even more important as we move past more traditional conflicts towards operations where the cognitions and emotions of a target audience become the primary contested space. With respect to data, developing an understanding of how best to capture and record new social sensors data is required. Further, the fusion of both hard and soft forms of data is critical. The ability to fuse IMINT, MASINT, and SIGINT with social media, mass media, and behavioral survey data is critical to forming a more comprehensive situational awareness of the battle space.¹⁰ This will become even more important as we move past more traditional conflicts towards operations where the cognitions and emotions of a target audience become the primary contested space.

New Analytic Techniques

New social science analysis techniques are also going to be needed. New ways to visualize networks and information flows will be critical to developing the necessary battle space situational awareness commanders will need. Who the central figures are, where the critical nodes are located, and what the organization pressure points, vulnerabilities, and decision-making processes are represent crucial pieces of knowledge when commanders engage the enemy.

One such analytic technique developed by the Office of the Secretary of Defense for Intelligence and the Defense Intelligence Agency is Sociocultural Analysis (SCA), which informs the understanding of people by analyzing societies, populations, and other groups of people including their activities, relationships, and perspectives across time and space at varying scales. SCA is a crosscutting analytic capability set that enhances all-source intelligence analysis in support of a broad and diverse set of military operations at strategic, operational, and tactical levels. It draws upon and integrates social sciences and analytic tradecraft including cultural intelligence, human terrain analysis, human geography, narrative analysis, population-centric analysis, and societal analysis.

Way Ahead

Clearly, social sciences have a role in military decision-making and in helping to understand the impacts of military operations. The question now is how to hone this expertise, refine our processes, and leverage new technologies to take full advantage of higher levels of understanding of the human terrain. The concept of understanding the human terrain is not new. Alexander, Sun Tzu, Napoleon, Clausewitz, T.E. Lawrence, and modern military thinkers all knew the importance of understanding the whole of the society in which they

¹⁰ An example of this kind of coordination is the SMA Megacities Reconnaissance, Surveillance, and Intelligence (M-RSI) Project. This proposed effort will explore novel community- and city level remote sensing techniques allowing more accurate sociocultural analyses of areas affected by and affecting rapid urbanization. M-RSI will also explore new methods to understand the changes in population composition in rapidly urbanizing areas. These methods will improve sociocultural analysis at the community- and city level using remotely sensed information. For more information about this effort, please contact Margaret Egan at margaret.j.egan2.ctr@mail.mil.

operate. Most commanders understand this intuitively, but without any specialized expertise, doctrinal processes or tools, they rely on inputs from their staffs, their own contextual observations, and intuition as they conduct military operations. Today's military provides rudimentary training about social mores and customs in an attempt to provide basic knowledge and judgment about how to interact at the tactical level. While this training may prevent an embarrassing gaffe, or worse, during interactions with a local populace, it has no impact on operational and strategic understanding. Commanders and their staffs need assistance in developing and employing an understanding of the operational environment that is grounded in the social sciences. The DoD possesses the expertise that could provide this help but has yet to develop effective ways of making it available to the commander. This is not to say the right expertise does not already exist within the DoD, but rather it is not placed in positions to best influence operational decision makers.

Even within the IC, specialized expertise is often a matter of title rather than education and training. Simply stating that better training is needed to groom better analysts, however, is not an end, but rather one aspect of a larger change of strategic direction the IC and DoD must undergo if we are to achieve the deeper understanding of the human environment that will enable better decision-making. Social scientists, knowledge engineers, psychological warfare operators, and strategic message writers must all be recruited to develop training programs and integrate sociocultural analysis into continuing education programs. Consideration should be given to the recruitment of social scientists as integrated members of the command staff. Whether in the intelligence, operations, or special staff, these experts should be in a position to influence multiple disciplinary skill positions. Staff processes must be inclusive of this understanding in the mission analysis, planning, and execution phases of military operations. Commanders and staffs must learn how to gain better understanding of the human environment and to leverage this understanding to shape it in Phase 0 - Phase 5 operations.

Many of the staff processes for understanding and impacting social behaviors can be supported by modeling and internet-focused tools. Software engineers, behavioral scientists, and cultural anthropologists must team together to develop better tools for understanding and analyzing societies, better models for anticipating the range of possible behaviors of individuals and groups, and more accurate instruments for assessing impacts. Additionally, strategists must learn how to leverage new technologies to influence and shape social behaviors through social media, online entertainment, and other means that are now global in nature. More than strategic messaging, this new approach must begin with a keen understanding (gained via the social sciences) of how best to influence and shape the human terrain, to sense and prevent conflict, mitigate the negative effects of conflict on the society, and achieve more effective resolution in a post-conflict environment.

If recent missions in Iraq and Afghanistan have taught us anything, it is that understanding the human dimension of conflict is critical to mission success. What is needed is not greater awareness of the potential of social sciences to shed light on the human dimension of conflict (that already exists), but coherent methodologies, automated decision support

tools, and the ‘right’ expertise on staffs at the strategic, operational, and tactical levels to make social science findings available and relevant to the decision maker.

The DoD has already taken small, but important steps in this direction with programs emphasizing sociocultural modeling and methodologies such as the MINERVA Initiative, HSCB Modeling Program, and the Strategic Multilayer Assessment Program. However, these efforts are not enough. Developing a deep bench of expertise, specialized methodological training, and better sociocultural analysis tools is needed to achieve mission success in the 21st century.

Conclusion

For much of the last decade, a community of interest within the Office of the Secretary of Defense (OSD), the Department of the Army, and the IC have advocated for the integration of “non-traditional” intelligence “to better understand the human dimension of conflict.” This community has vigorously advanced the importance of sociocultural and human terrain information gathering to inform planning and operations. If the USG uses sociocultural analysis up front, it provides more options to the decision maker and can help establish a more stable environment sooner than would occur absent that analysis. The social sciences present a powerful means of prioritizing to manage more things with fewer resources and forces. Social science can support the DoD over the whole spectrum of conflict by providing rich contextual understanding of the human domain, supporting influence analysis and planning, and anticipating likely effects. The understanding of human interactions gained by the social sciences is core to the DoD mission. If the human domain is central to DoD concerns, the defense community must pay attention to how people and societies think, feel, and live their way into new behaviors and attitudes. Social science can be a critical guide in this effort.