Sociocultural Data to Accomplish Department of Defense Missions: Toward a Unified Social Framework: Workshop Summary

DETAILS

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Sociocultural Data to Accomplish Department of Defense Missions

TOWARD A UNIFIED SOCIAL FRAMEWORK

WORKSHOP SUMMARY

Robert Pool, *Rapporteur*

Planning Committee on Unifying Social Frameworks

Board on Human-Systems Integration

Division of Behavioral and Social Sciences and Education

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This workshop summary is based on the discussions at a workshop convened by the Board on Human-Systems Integration on August 16-17, 2010, and organized by the Planning Committee on Unifying Social Frameworks. The planning committee members identified presenters, organized the agenda, selected paper authors, and facilitated the discussion, although they did not participate in the writing of this report. This summary reflects their diligent efforts, the excellent presentations by other experts at the workshop, and the insightful comments of the many workshop participants.

This study was sponsored by the Office of Naval Research, and the committee is grateful for the interest and support of two of its program officers: Captain Dylan Schmorrow, Medical Service Corps, U.S. Navy, and acting director, Human Performance, Training, and BioSystems Directorate, Research Directorate, Office of the Director, Defense Research and Engineering, Office of the Secretary of Defense; and Ivy Estabrooke, program officer, Human Social Cultural and Behavioral Sciences, Office of Naval Research, and assistant director, Human Social, Culture, Behavior Technologies Human Performance, Training, and BioSystems Directorate, Office of the Director, Defense Research and Engineering, Office of the Secretary of Defense. The committee is grateful for their support throughout the study as well as their assistance in locating critical information in support of the committee's planning efforts.

This summary has been reviewed in draft form by individuals chosen for their diverse perspectives and technical expertise, in accordance with

procedures approved by the National Research Council's Report Review Committee. The purpose of this independent review is to provide candid and critical comments that will assist the institution in making its published summary as sound as possible and to ensure that the summary meets institutional standards for objectivity, evidence, and responsiveness to the study charge. The review comments and draft manuscript remain confidential to protect the integrity of the process. We wish to thank the following individuals for their review of this summary: Noshir Contractor, Department of Industrial Engineering and Management Sciences, McCormick School of Engineering and Applied Science, Northwestern University; Waldemar Karwowksi, Department of Industrial and Management Systems, University of Central Florida; and Carol Mathews, Behavioral Sciences, Sociology, Century College, White Bear Lake, MN.

Although the reviewers listed above provided many constructive comments and suggestions, they were not asked to endorse the content of the summary, nor did they see the final draft before its release. The review of this summary was overseen by William C. Howell, Department of Psychology, Arizona State University and Rice University. Appointed by the National Research Council, he was responsible for making certain that an independent examination of this summary was carried out in accordance with institutional procedures and that all review comments were carefully considered. Responsibility for the final content of this summary rests entirely with the author and the institution.

Prior to the publication of this report, one distinguished workshop presenter, Brant Burleson of Purdue University, passed away. His expertise and eloquent presentation on social support and influence were valuable and appreciated contributions to the workshop. On behalf of the workshop participants, the National Research Council staff wishes to express their gratitude to Dr. Burleson for his support of the workshop and its objectives despite his own personal battles.

Contents

1

Introduction

Sociocultural data are of growing importance to the U.S. military. A variety of factors are behind this trend, including the increasing emphasis on accomplishing military missions and strategic objectives without using force, often through cooperation and collaboration. Thus in such theatres as Afghanistan or Iraq, the military's traditional goal of defeating an armed enemy is expanding to include such missions as winning the goodwill of the local population. This in turn can be helped by insights and techniques from the study of human-systems integration (including critical issues for effectively processing data, training service personnel, and designing human-centered technologies) as well as from the behavioral and social sciences.

Recognizing this, the U.S. military has in recent years supported a variety of programs devoted to understanding the influence of social and cultural factors on human behavior and, in particular, to the area of human, social, cultural, and behavioral modeling. At present, a large number of different modeling frameworks and approaches to the data are being used in this modeling, and none of them is widely accepted across the broad collection of people who develop and use these models.

In 2009 the Office of Naval Research requested the National Research Council's Committee on Human-Systems Integration, recently renamed the Board on Human-Systems Integration (BOHSI), to hold a workshop that would examine some of these issues. Overseen by BOHSI, the ad hoc Planning Committee on Unifying Social Frameworks selected the workshop's presenters and commissioned paper authors from a wide

variety of disciplines, including anthropology; sociology; criminology; communications; modeling; and neural, cognitive, and social psychology. The Workshop on Unifying Social Frameworks: Sociocultural Data to Accomplish Department of Defense Missions, was held August 16-17, 2010, in Washington, DC. This publication is a summary and synthesis of the presentations and discussions that took place during that workshop.

The importance of the issues discussed at this workshop is reflected in the breadth and depth of experience of the audience members who elected to attend the two-day event (see Appendix A for a complete list of participants). At the start of each day, the entire workshop audience (including planning committee members and presenters) was asked to introduce themselves by name and professional affiliation. The interdisciplinary expertise attracted to the workshop provided a unique opportunity for rich dialogue. Roughly half the audience consisted of practitioners and the other half of academic researchers. Practitioners were drawn from agencies across the government and the military and represented a spectrum of missions, from senior diplomats to tactical ground forces. They interpreted the workshop presentations on the basis of potential applications to long-term strategic national interests and immediate crisis needs in Iraq and Afghanistan. Furthermore, audience members from academia thoughtfully considered gaps between what research knows (and may know in the future) and what the military needs to be successful. The diversity of the audience at this workshop was a critical element in discussing sociocultural data from an interdisciplinary perspective, and its contributions are evident throughout this report.

The statement of task for the workshop (see Box 1-1) defines three specific issues for the workshop to address: the types of data needed to provide a complete picture of the cultural terrain of a given region; the frameworks and databases in use by the military in analyses of sociocultural behavior; and methods and tools that can be used to aggregate sociocultural data from disparate sources into a meaningful whole. In addressing these different issues from different perspectives, the workshop speakers and discussants covered a wide range of topics, as is evident in the pages that follow, from which two broad themes emerged.

TWO THEMES

The first theme centers on data: its collection, its use in models, and questions about what exactly constitutes sociocultural data. Captain Dylan Schmorrow, acting director of the Human Performance, Training, and Bio-Systems Directorate, Research Directorate, Office of the Director, Defense Research and Engineering, Office of the Secretary of Defense, commenting from the workshop sponsor's perspective, explicitly identified this as a

BOX 1-1
Planning Committee Statement of Task

An ad hoc committee will plan and hold a public workshop focused on the methods and tools relevant to the subject of Unifying Social Data Frameworks. The workshop will feature invited presentations and discussions that will include

1. an analysis of what sorts of data are needed to provide a comprehensive picture of a given region or country (e.g., Iraq, Afghanistan) in order to provide cultural and diplomatic knowledge for Department of Defense personnel;
2. an examination of current frameworks and databases used by ONR, while considering alternatives and additions which may prove to be more useful; and
3. an analysis of methods and tools that may effectively combine disparate data sources into a meaningful whole (e.g., through data management and data mining).

desired focus: "For me, a big thing I would like to take to my senior leadership is clarification in the understanding of what data are needed and valid innovative methods for getting it." A number of speakers throughout the workshop touched on aspects of sociocultural data, and the most in-depth discussions came during the final workshop panel, when presenters grappled with a number of difficult epistemological and practical questions concerning sociocultural data and their relationship with sociocultural models.

The second theme is concerned with the overall topic of the workshop, "unifying social frameworks" and, more broadly, the application of theory-based approaches from the behavioral and social sciences to broad military contexts. Captain Schmorrow referred to this in his comments when he described the array of sociocultural approaches being used across the Department of Defense, all with different data and different models, asking, "How do we begin to do something that will support everything from intelligence analysts, operations analysts, operational planners, war gamers, folks in the field?" Much of the research funded by the Office of the Secretary of Defense's Human, Social, Culture, and Behavioral Modeling program, while tightly focused, seeks to enhance and provide innovative solutions in the broad scientific, modeling, and analytic domains. While narrowly focused projects can be and are quite valuable, he said, still, they strive for "commonality or something generally useful across domains, because I believe the benefits would be huge."

Several of the workshop presenters addressed this issue, either directly or indirectly, and they generally observed that attempts to create broad,

integrated approaches to social science issues or to base practical applications on such integrated theoretical foundations are not likely to be successful. Perhaps the most forceful proponent of this point of view was David Kennedy of the John Jay College of Criminal Justice, whose presentation described a program that has dramatically cut the homicide rate in several American cities by targeting so-called core offenders. In the past, Kennedy said, it was common in the fields of criminology and criminal justice to believe that "there is something unifying that, if we get it right, it will tell us what to do." People in those areas spent a great deal of time working on broad theories about the causes of crime and about who is likely to commit crimes, thinking that at some point those theories would point the way to successful programs for reducing crime rates. "That turned out to be a fruitless project," he said. What has worked has been intense, tightly focused programs that draw on the experience and insights of front-line people. The programs are informed by existing social science and research in a broad variety of areas, but they are not derived from the research or from any broad theoretical understanding.

Robert Rubinstein of Syracuse University offered a similar observation toward the end of his presentation on models of cooperative behavior in various cultures. Any efforts to find a general predictive model of the social and cultural elements of cooperative behavior that could be applied without reference to specific contextual factors would be a "fool's errand," he said, because it would generate technique without any validation against the real world.

Mark Bevir of the University of California, Berkeley, approached the issue from a very different direction but ended up with a comparable take-away message. Discussing data and models from the perspective of the philosophy of the social sciences, Bevir argued that sociocultural data can best be thought of, not in terms of objective facts, such as are dealt with in the physical sciences, but rather as stories or narratives about the meanings that people attach to things or situations or actions. "Policy makers should expend a lot more of their time than they do exploring diverse stories about the data," he said, "and they should see that these stories can be ways of seeing new aspects of a phenomenon in front of them. So instead of imagining that the data [will] provide them with a guarantee of a certain sort of knowledge which is going to inspire certain action, they should see these as useful stories from which they can learn and know that there's going to be a gap between the stories and the action. They should use the stories as a way to entertain hypotheses and see new aspects in a way that, although you can't formulate it in a straightforward scientific way, informs their decision making and action in a way that does enrich and improve it."

More generally, Captain Schmorrow indicated in his comments that, in addition to long-term research programs, the Department of Defense

is looking for sociocultural tools to make into capabilities that can be put to work quickly. "The challenge is that I don't think we have tons of time," he said. "I cannot emphasize enough how much the operational people want this information [sociocultural data and capabilities] and want to be able to make the right decisions. It falls on all of us to make sure that we do our best to provide them that type of data." Furthermore, the techniques must be taught to soldiers as part of a training and education system that is subject to a variety of constraints (see Box 1-2).

Viewed in terms of how quickly a technique or method could be put to work—or whether it could be put to work at all—the presentations

BOX 1-2
Training and Education in the Armed Services

As a late addition to the workshop agenda, Allison Abbe with the U.S. Army Research Institute, described the types of training and education provided to Army ground forces in the area of human social, cultural, and behavioral sciences. The basic distinction between training and education, she said, is that "training is for the known, education is for the unknown."

Much cultural training is offered in predeployment when a unit knows where it is going. The training tends to be culture-specific, and, Abbe said, much of it is not really training at all. "It's more country orientation, to tell you the dos and don'ts of the place you're going to be deploying to, help people learn a little bit of the language, some of the gestures that they should and should not use in that region." With all of the other things that must be taken care of during the predeployment phase, cultural training has relatively low priority, she said, and 50 minutes is a typical amount of time that is devoted to it.

Cultural education, in contrast, is provided at various times over the span of a military career and not simply during predeployment. It focuses on more in-depth information and understanding. Over the past couple of years, Abbe said, all of the services have been developing service-wide strategies for teaching cultures, languages, and regional information in order to prepare service members for the types of operations now being undertaken in Iraq and Afghanistan. All of the services are trying to figure out the best way to deliver this sort of education, she said.

Traditionally, much of the career development in the services has been offered through in-residence courses, with individuals being sent to the schoolhouse for a certain number of weeks. Now, however, a number of efforts are under way to develop approaches that do not require time in residence at a school. "Because culture is seen as an add-on and not a primary focus for most personnel, they're trying to figure out if there are ways we can do this via distance learning, through knowledge management, knowledge sharing among personnel, and things like that," Abbe said. For example, the Command and General Staff College has a program in which some people never go into residence but instead get a master's degree entirely via distance learning while doing other things.

One final distinction, Abbe said, is that much of Army training is offered at the level of the unit or team, whereas career development is focused on the individual learner.

tended to fall into two categories. Some presenters, such as Kennedy and Hsinchun Chen, of the University of Arizona, described methods that have already had success in other fields (crime prevention and the identification of terrorists, respectively) and could presumably be adapted for use by the military in a relatively straightforward way. Other presenters, exemplified by Jeffrey Sanchez-Burks of the University of Michigan and Brant Burleson of Purdue University, offered details about various sociocultural phenomena and, in particular, described how attitudes and behaviors differ from culture to culture. These presentations, while providing insights that could be valuable to military personnel in cross-cultural contexts, were generally more focused on sociocultural theory and research rather than on tools that might be adapted to use in, say, Afghanistan or Iraq.

As Catherine Tinsley of Georgetown University, a member of the workshop planning committee, explained in her introductory remarks, the workshop was organized in terms of the various broad types of activities in which the military engages. In particular, she went on, "Given those key activities, what is the appropriate social and cultural knowledge that is needed to do those activities most effectively?"

WORKSHOP AND REPORT ORGANIZATION

The first panel focused on sociocultural knowledge and methods that can help the military succeed in conflict environments: combat, counterinsurgency, counterterrorism, and so on. The second panel looked at more cooperative relationships and what types of sociocultural knowledge are necessary for military personnel who are working cooperatively with people to make local populations feel safer, including such missions as postconflict operations, negotiations, and diplomacy. The third panel's subject was nation building and the sociocultural awareness that is necessary for such missions as helping partners develop stability, security, and governmental functions. The fourth panel focused on persuasion and the sociocultural knowledge that may help make persuasive messages more effective in fostering social change. A fifth panel was devoted to the methods and tools that are needed to acquire and utilize sociocultural data and knowledge.

This summary is structured to follow the same broad outline. The next chapter, Chapter 2, summarizes the workshop's keynote address, which was delivered by Major General Michael T. Flynn, U.S. Army, via a live telephone call from Afghanistan. MG Flynn described the current situation in Afghanistan and how sociocultural knowledge and methods are being applied by the International Security Assistance Force (ISAF). The speech provides valuable context for the remainder of the workshop.

Chapters 3 through 7 describe the presentations and the discussions that took place in Panels 1 through 5, and Chapter 8 revisits the broad themes of the workshop and several lessons learned as offered by the closing speaker, David Laitin of Stanford University.

The purpose of this report is to document the key ideas that emerged during the two-day workshop presentations and discussions. The report is confined to the material presented by the workshop speakers and participants. Neither the workshop nor this summary is intended as a comprehensive review of what is known about the topic; although, it is a general reflection of currently available research and literature as discussed at the workshop. The presentations and discussions were limited by the time available for the workshop; see Appendix A for the workshop agenda and a list of participants. Some important subjects and areas of research were not covered in the workshop, and their omission from this report should not be interpreted as the planning committee's assessment of their value one way or another, but only that time did not allow them to be presented or discussed at the workshop.

This report was prepared by a rapporteur and does not represent findings or recommendations that can be attributed to the planning committee as a whole nor individual members. The workshop was not designed to generate consensus conclusions or recommendations but focused instead on the identification of ideas, themes, and considerations that may contribute to understanding the current full spectrum of military operations with a sociocultural perspective. The report summarizes views expressed by workshop participants, and the planning committee is responsible only for its overall quality and accuracy as a record of what transpired at the workshop.

2

The Situation in Afghanistan

In his keynote address, Major General Michael T. Flynn, U.S. Army, provided context and background for the workshop by describing the situation in Afghanistan. In particular, he described how the military currently deals with various sociocultural issues that influence the success of its mission there. MG Flynn is in Afghanistan as the deputy chief of staff, intelligence (CJ2) for the International Security Assistance Force (ISAF).

THE IMPORTANCE OF CULTURAL AWARENESS

MG Flynn began by acknowledging the importance of cultural awareness to the Department of Defense's mission in Afghanistan. "Understanding the local customs and culture is absolutely critical," he said. But not just in Afghanistan. Many parts of the world are under extreme stress right now where the military could find itself at some point in the future, he observed, and it is important to have a good understanding of their culture and customs so that military personnel can prepare quickly for whatever new mission they are given. "Are we prepared now?" he asked. "The answer is probably not."

The situation was similar when the U.S. military invaded Afghanistan in 2001. "Appropriately applying respect and sensitivity to local customs and culture can actually help you win the war," MG Flynn said. "I think that's where we made a mistake out here in Afghanistan, because it wasn't something that we understood, and, frankly, for a couple of years

we thought we could kill our way out. At the very beginning of the war, we just sort of bombed our way into Afghanistan and drove the Taliban and Al Qaeda back into the FATA [federally administered tribal areas]."

Since that time, however, the military has come to understand the importance of taking sociocultural factors into consideration, he said, and it has put into place a number of programs and policies that reflect that new mindset.

WAYS IN WHICH THE MILITARY TAKES SOCIOCULTURAL FACTORS INTO ACCOUNT

Part of the military's new approach in Afghanistan is attitudinal, with an effort being made to recognize the ways in which the local culture is different from American culture and to respect those differences. But there are also more concrete ways in which the military is taking sociocultural factors in the country into account. MG Flynn described several specific examples of these new approaches.

Showing Respect and Sensitivity to Local People and Customs

Women make up half of the population in Afghanistan, playing a major role in Afghan families. Thus, MG Flynn said, he has come to appreciate the value of female engagement teams, who communicate with local Afghan women apart from the men, leading to often extremely insightful information collection. "The Marine Corps has done a great job of recognizing that early on," he said. "They organized themselves in one regiment, and then that caught on, and then they subsequently organized themselves within the Corps." It would be a good idea if the Army would take that approach in the same way, he said. "Some commanders do apply the female engagement teams, and they're very successful, but it is based on the commander. When that commander leaves, the next guy comes in and he doesn't think it's such a hot idea." Thus it would make sense to turn this into a much more widespread, centrally based practice.

A second example of showing respect and sensitivity to the local culture is understanding how to work with the *shura*, or Islamic council. "It's more than a meeting," MG Flynn said. "It's how these people communicate, it's how they make decisions." This can be frustrating for Americans who desire immediate and definitive decisions, despite inherent delays of the American bureaucratic system.

"A *shura* can last a couple of hours, or it can last a couple of days. What we've got to understand is that that's the process of this environment, that's how they decide. So when you go to talk to someone, you don't go talk to a district governor or a tribal leader and . . . make a decision. That's not how it works." Instead, you meet with a group of people

who sit around and discuss the issue until everyone understands the issue clearly, and then they go back and have their own mini-*shuras* in their own villages. And it may be two or three months later before they return with a decision.

Similarly, he said, it is important to understand the tribal nature of Afghan society and to work with tribal leaders in whatever the military is trying to accomplish. It is normal for Americans to seek out elected political leaders with whom to interact, he said, but in many parts of Afghanistan such political leaders don't exist. "So who is in charge? There's the family elder, and then there's tribal leaders. And what you've got to do is you've got to understand how to deal with them."

Human Terrain Teams and Atmospheric Programs

In the question and answer session following his speech, MG Flynn discussed two other related techniques for understanding and working with Afghans. First is human terrain teams, which include social scientists embedded in deployed military units to assist in military decision making.[1] The teams are intended to help military commanders understand the local culture and history and to help engage and communicate with locals. So far, he said, the teams have been quite valuable.

"The number one performance measure is whether I can pry them out of the commander's hands [to whom they are assigned] when I need to reallocate them on the battlefield. I can tell you I have not been successful, not once. In 2007, we had one human terrain team out here. By the end of this month, we're going to have 23, so that should tell you that there is a desire to have this capability on the battlefield." The human terrain teams provide commanders with an extraordinary amount of information and help, MG Flynn said, putting the commanders in a position to understand the social factors in the environment more accurately and thus to make better decisions. In the future, he would like to see the U.S. military have an expandable capability—in the sense that it would be possible to bring in the appropriate number of human terrain teams when they are needed—but he does not think it is necessary for each brigade to have a human terrain team as a permanent part of its structure.

The second technique is the atmospherics program, which is not an intelligence program, but an information one, MG Flynn said. "This is a very challenging environment, particularly because of the security conditions, and the atmospherics people go out and operate in that environment. A couple hundred of these individuals put themselves at risk

[1]For more information on the U.S. Army Human Terrain System, see http://humanterrainsystem.army.mil/Default.aspx [October 2010].

and go in and out of villages and towns and urban areas, and they just get a sense, kind of a fingertip feel, and they push that information back into a broader information system." That in turn gives MG Flynn and his analysts a flow of information that allows them to see trends in the environment. In particular, he said, it allows them to notice when patterns begin to move away from the norm.

Stability Operations Information Centers

Previously, MG Flynn used a kinetic concept of an operations information cell as a tool in the pursuit of Al Qaeda. Recently, he said, he has adapted and expanded those cells to a different purpose and renamed them Stability Operations Information Centers, or SOICs. "We were using it in a previous life where I was worried about how many Al Qaeda we needed to capture or kill, but now I'm worried about how many people we need to protect." Stability is the focus now (for more information on SOICs, see Flynn et al., 2010).

"Stability Operations Information Centers are really critical," MG Flynn said, as "a different and effective approach to better understanding the motivation and the concerns of key centers of the local population. We're into our second iteration out here right now, and the feedback has been great, and the application has really helped."

Intelligence

During the Iraq war, MG Flynn said, the U.S. military began using fusion centers, or units in which several capabilities are integrated in order to deal with a specific problem or problems. They were focused mainly on the kinetic war—the conflict with armed enemy fighters—in which the goal is to kill or to capture. Recognizing that greater attention needs to be paid to the population and the government of Afghanistan, the military has adapted the fusion centers to have a broader and somewhat different focus. "We brought the concept here a couple years ago," he said, "and this past year . . . we just morphed how they operate and what they do and how they integrate." Now they are focused primarily on the nonkinetic war, on "understanding the elements of governance, the elements of development, and the elements of the social fabric" with which the military is working in Afghanistan.

DEALING WITH INFORMATION

In an environment like Afghanistan, MG Flynn said, information needs to be processed, managed, and shared as quickly as possible. "We

will win if we can decide faster and adapt faster than the enemy," he said, "but one of the things we weren't doing very well is, we weren't leveraging our ability to communicate with each other and to flatten our structures to speed up decision making."

People in many organizations, but particularly the military, are concerned that if they flatten their organization structure—that is, remove some of the need to communicate up and down a rigid command structure and instead focus more on communications across the organization—then they may lose control. But, he said, such a shift actually makes it possible to gain more control by flattening the information flow so that "when a decision needs to be made, it gets to the decision maker much faster, and the decision maker is much better informed because he's been informed over time rather than waiting to be informed at the last minute." A great deal of flattening has taken place in the U.S. military and other military forces in Afghanistan over the past year, he said. There are still improvements that can be made, but things are much better today than they were a year ago (for more information on MG Flynn's perspectives on this issue, see Flynn et al., 2010).

Afghan Mission Network

One of the ways that the military has begun using technology to leverage knowledge is to expand what is called the Afghan Mission Network, MG Flynn observed. "We basically created one communications system . . . that brings in 47 nations on one network,[2] and it goes back to the United States, it goes into Europe, it goes into any of those nations that are non-NATO as well." It took about a year to get the single communications system working well, he said. "We're not quite there yet, but we're much, much better. I would say we're probably 80 percent today."

This is how all joint operations involving a number of different countries should be run in the future, he said. "If you're operating on different systems in a coalition environment, forget about speed of information, forget about speed of decisions—you'll always be behind the adversary."

Providing more details about the Afghan Mission Network, he explained that it is the coalition's primary C4ISR (command, control, communications, computers, intelligence, surveillance, and reconnaissance) platform. It is a virtual single domain for all of the national networks, including the U.S. military's CENTRIX, the LPSF system of Canada, the Caesar system of Italy, and Overtask of the United Kingdom.

[2]As of December 2010, there are currently 49 nations participating in the Afghan Mission Network.

In planning for the network, the decision was made that there should be a single system that allows everyone in the entire force to communicate with one another and with their headquarters back in their respective countries. "We had to build technology to facilitate process, versus processes that have to adapt to the technology, especially communications." The network did not require a great deal of technical adaptation, MG Flynn said. It required policy adaptation. It required someone to decide that it would be okay to share between the systems. Security considerations demand that appropriate firewalls exist between the systems, he noted, but technologically it was straightforward to do.

LESSONS

MG Flynn ended his address by recounting two overall lessons provided by the experience in Afghanistan.

First, he said, warfare has changed fundamentally. "Twentieth-century warfare was defined by fire and maneuver, the components of which were speed, distance, and lethality. Twenty-first-century warfare is defined by information and intelligence, and the subcomponents of that are precision, perception, and understanding, more than speed, distance, and lethality."

The U.S. military has the technological capability to hit a target with a missile with exceptional precision, but its aim is only as good as the information about the target's location. The military targeting process has five components—(1) find, (2) fix, (3) finish, (4) exploit, and (5) analyze—and four of those components have to do with information and intelligence, he noted. Only the "finish" is a kinetic process.

"Now, put that model into a nonkinetic social engineering construct, and maybe it's not find, fix, finish; maybe it's find, feel, understand," he said. "Two components that definitely stay in this cycle are exploit and analyze. Exploitation to gain advantage, or to further understand, or to further a decision-making process. . . . And analysis is still very important because there are volumes and volumes of information."

"But what is it that you are trying to do? If you're trying to change the sense of the community that you're dealing with and how they perceive you, you cannot do that kinetically. Trust me, you cannot do that kinetically. But if that is not an appropriate approach for a particular area, and you're just dealing with the population . . . , you've got to understand what are the things that drive that particular area. . . . What drives that village? What drives that district or that tribe? What are their needs? In many cases, you find out that it's not about the money; it may be about some basic services that they want. It may be that they want to put a road in. . . . It could be building a school."

"But we've done stupid things over the years, like we've built schools, but nobody asked if there were any teachers in the village. . . . Nobody understood the environment, and therefore the school is now five years old and decaying, or it's a safe house for the Taliban. It's that basic."

To win that sort of war requires a very different approach and set of skills than winning a kinetic war. This is a particular challenge, he said, because military forces must still be trained to be effective on the battlefield, and they must also be able to succeed in this different sort of war.

In response to a question, MG Flynn discussed the sort of training that he would like to see. First, it would be useful to have a number of analysts who are comfortable in different native languages. "We had one SOIC team out here, and one of the analysts in the team was a former Marine who spoke perfect Pashto and had a good, strong grasp of Dari. That SOIC team produced more of what we called DNA—District Narrative Assessment—just because of the entrée that that team had. . . . A white kid from Middle America talking literally perfect Pashto, and they love it, they absolutely love it."

Not everyone needs to develop a fluent language capability, he added, but it is useful to have "a one- to two-minute capability to introduce yourself, talk a little bit, just to show that you've tried."

Intelligence analysis in Afghanistan is not about order of battle (the number and organization of military forces) or the Taliban cell structure and organization, MG Flynn said. That is already well covered. What he needs are analysts who are trained to understand and learn about the local environment. "I need to know about what makes the people tick, what's important to them, what's not important to them, who are the leaders, who are the informal leaders, who are the referent leaders, who are the real power brokers, who are the malign actors, who are the people that they don't like but in fact have to deal with."

Some of the training would be basic Psychology 101, and some of it would be more anthropological, with an understanding of the social fabric of the local area. The goal is to have analysts who can come in and think not only about the insurgency but also about all elements of the society. "If I could train every analyst like that and get them all to come in here understanding that, we'd be that much better."

The second overall lesson, MG Flynn said, is that it will be important to develop technologies to enable the processes that accompany this new type of warfare—and to do it quickly. "Within my department, sometimes we take years and years to produce something," he said, and then it ends up not being used because it has already been overtaken by newer technology. "I've got all sorts of gadgets that, because of our procurement process, we cannot make fast enough." So one challenge is to figure out

how to speed up the development of military technologies, given the Department of Defense's big budgets and big programs.

It is also important, particularly when operating in a culture such as Afghanistan, to design and build technology in the service of processes rather than attempting to adapt processes to the technology. "I use a sidewalk analogy," he said. "We build sidewalks coming out of a building at a 90 degree angle because it looks good, but kids will come out the door and they'll cut across the front lawn, and over time there's a new path built by the shortest walk between two points. We've got to be careful that we don't bring this 90-degree attitude and 90-degree culture into a society that's looking for the shortest path between two points. Again, we've got to build technology based on the processes that exist, and it will improve those processes."

Finally, he said, it is important to develop ways to speed up the sharing of information across both technical and cultural barriers. "We designed the Four Eyes system post-World War II [a system for intelligence sharing among the United States, Great Britain, Canada, and Australia], and then Five Eyes [intelligence sharing among Four Eyes plus New Zealand], and now we've got eleven eyes for certain things," he said. "We have to look at how we share information in a world where information is just exploding." With both the number of partners and the amount of information increasing, it is becoming increasingly challenging to share information while keeping it protected from those who should not have access to it.

3

The Conflict Environment

As has always been the case, the main focus of the U.S. military today is to carry out successful operations in environments of conflict, but the types of conflict environment in which the military operates now are dramatically different from what has long been the norm. In place of battlefield combat with distinct front lines, often taking place in the countryside, today's armed forces are more likely to carry out their operations in urban areas or villages with few clear boundaries. Similarly, the lines between combatants and civilians have become blurred, as the combatants are often dispersed throughout the civilian populations, and a civilian today may be a combatant tomorrow.

Because of these changes, sociocultural knowledge has become an increasingly important factor in the success of military missions in conflict environments. The workshop's first panel addressed ways in which a sociocultural approach can offer new perspectives on conflict and violence that may improve the chances of success in such missions as combat, counterinsurgency, and counterterrorism operations; collecting and securing light arms and military weapons; protecting local noncombatant populations; and militia and criminal gang suppression.

To this end, speaker Hsinchun Chen described methods he has developed to identify "dark networks" of criminals and terrorist groups; David Kennedy detailed ways to significantly reduce homicide rates in large cities by identifying and focusing on the groups most likely to be involved; and Kerry Patton described how both the military and the intelligence

community could benefit from the establishment of a new discipline of sociocultural intelligence.

MAPPING THE DARK WEB

When dealing with terrorists, one of the most difficult problems to overcome is that they are mostly hidden, so that it is difficult to identify them and follow what they are doing. In his presentation, Hsinchun Chen of the University of Arizona described how he has used information from the Internet—forums, chat rooms, video postings, and so on—to identify potential terrorists and to map out their web of connections.

Beginning in the late 1990s, Chen developed a system called COPLINK that provides a way to link information from a large number of criminal justice databases, such as collections of detailed criminal reports from local police departments (for additional background information, see Hauck et al., 2002). He also developed a variety of software tools for analyzing the collected data, such as one called COPLINK Detect, which searches for the presence or absence of links among people, vehicles, places, and offenses in the police reports, allowing investigators to notice connections that might otherwise be overlooked.

After his work on COPLINK, Chen said, he became interested in the area of international security when he read the book *Understanding Terror Networks* by Mark Sageman (2004). "He was making the claim—and also providing the data—that most international jihadists are using the Internet as a recruiting, assignment, training, and communication tool," Chen said. "He says this is leading into something called leaderless jihad." This description of the terrorist world convinced Chen that he could develop tools to help in this area as well.

His academic background is in computer science, Chen explained, and specifically in the discipline of intelligence and security informatics, which he described as using information technology systems, databases, software models, and other computer-based tools to deal with security-related issues (see Chen, 2006). Although COPLINK is not directly related to the work he has been doing on terrorist networks, the two share a common approach: that of combing through vast amounts of information looking for understanding and insights.

When he first started work on his new project, which he called Dark Web to refer to people who were present on the Internet but trying to remain hidden or "in the dark," his goal was to "collect all the terrorist-generated content in the world." He looked at Aryan Nation, the Ku Klux Klan, and other domestic groups in the United States. He looked at Arabic-speaking groups and Spanish-speaking groups. Eventually, however, he decided to focus mainly on jihadist groups, Islamic-inspired groups, and

individuals expressing interest in holy war. He has developed a multistep process to collect and analyze data from the sites that such groups host or visit (see Figure 3-1).

The first step, Chen said, is to identify as many places as possible on the Internet that have a potential connection with Islamic extremism and terrorism. "We started out collecting websites, and we got into forums and blogs and YouTube." The people who are putting this information on the web are interested in reaching new listeners, so it is generally straightforward to sign up and get access to the sites. Then his group starts to collect information from the sites using web crawlers that go from page to page, gathering information from each (for more information, see Fu et al., 2010). "We hide our identities so that they don't know we are spotting them," Chen said. It is also necessary to find ways to disguise the fact that the crawlers are pulling out so much information, as it can cause the web servers running the terrorist sites to slow down. There are various ways to accomplish this, Chen said.

"Our collection is about 10 terabytes in size," he said. "We are close to about 5 billion pages of messages, all generated by [the potential terrorists], not by news reporters." The content is drawn from about 10,000 websites. Much of the content—about 80 to 90 percent—is political discus-

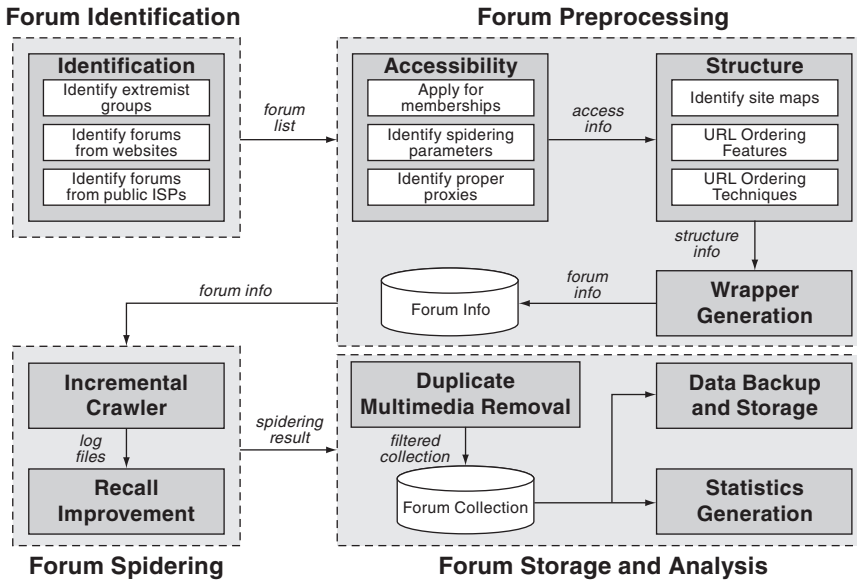


FIGURE 3-1 Dark Web Forum Crawler System.
SOURCE: Fu et al. (2010, p. 1,219). Reprinted with permission from John Wiley and Sons, http://interscience.wiley.com [January 2011].

sion or social discussion, but a small percentage of it is violent and radical. When his group first identifies a new site of interest, they investigate it thoroughly, downloading all the relevant information. After that they update information from the site about once a week.

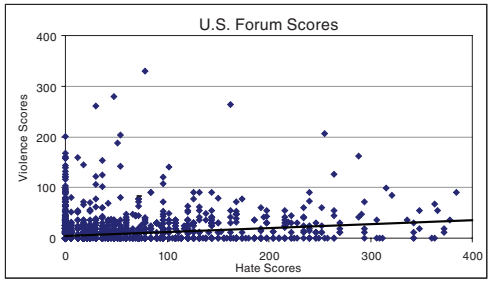
The content they collect includes a large variety of file types, Chen said. Many of them are indexable, with written words that can be recognized by a computer: HTML files, Word files, PDF files, and so on. "What is more interesting are the multimedia files—the images, the audios, and videos." They make up 40 to 50 percent of the files collected in terms of volume, that is, the number of bytes of storage they require. "These are extremely graphic," Chen said, and many of them are focused on improvised explosive devices and other weapons. "They show how to create them, they show their qualities, and so on."

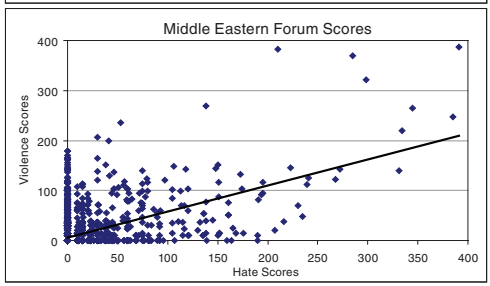
As they are collecting these files, Chen said, they are also recording the relevant information about the files: the metadata. "We know who sent it at what time. We know their screen name, we know their font size, we know the font color, we know the PDFs, we know the image file, we know the size—everything."

They then analyze the files in a number of ways, all of it done automatically with computer software. For example, they use different computational linguistic tools to find out the sentiments expressed and the ideas being discussed in the various files. They also look at the textual features, the style, and the genre of the writing.

In particular, Chen discussed identifying two types of sentiment: hate and violence. Working from the text of the message, they pull key words from the text and then use them to define a hate score and a violence score. "There is a big paper describing how you define violence and sentiments," he said (Abbasi et al., 2008). Once the messages have been scored for various emotions, the scores can be analyzed mathematically. As an example, Chen showed the results of a correlation analysis between hate and violence for groups in the Middle East and groups in the United States (see Figure 3-2). In both cases there is a clear correlation between the hate and the violence scores in the messages, Chen said, but the correlation was much stronger for the Middle Eastern groups than for the U.S. groups. Furthermore, there were significantly more violent sentiments expressed by the Middle Eastern groups than the U.S. groups.

Another type of analysis creates a profile or signature for each message. Because each writer tends to string words together in slightly different ways, if one has enough writing from a given author, it is possible to determine a set of characteristics that sets that writer apart from others and enables the identification of other messages written by the same writer. "For English text you can reach about 95 percent accuracy, for





	U.S.	Middle Eastern
N	4676	3349
beta (slope)	0.079	0.682
t-Stat	21.354	48.265
P-Value	0.000	0.000
R-Square	0.076	0.486

Strong hate and violence correlation, especially for Middle Eastern groups.

FIGURE 3-2 Measuring hate and violence: United States versus Middle Eastern groups.
SOURCE: Chen, unpublished data, Eller College of Management, University of Arizona.

Arabic about 92 percent," Chen said, but it is necessary to have 5 to 10 messages by the same writer in order to create the signature.

It is particularly useful to analyze the social networks revealed by the various postings and responses. From the interactions among the various actors, it is possible to determine such factors as how central or how important a person is to the network of other people with whom he or she interacts. This in turn can be combined with such measures as how violent a particular person's messages are.

The resulting analysis has shown, for example, that the violence level of a user is very stable and is very hard to influence by other users. However, Chen said, as people spend more time in the Dark Web forum, their language tends to become more violent. "Violent users try to incite violent ideas by starting many threads," he said, "but typically other people don't participate. So they reply to as many threads as possible to try to introduce their ideas into other peoples' threads."

Based on this work, Chen has created a web-based data set and set of tools that can be used by people interested in learning about terrorists. The current version of this Dark Web Forum Portal contains 13 million

messages posted in 29 major jihadist forums in Arabic, English, French, German, and Russian. The 29 sites have 339,000 members, but about half of them do not take part in any of the discussions. They seem to be just lurking and listening in on the conversations.

The tools provided with the portal allow users to analyze the contents in various ways. There is a search tool, for example, that can be used either inside a single forum or across multiple forums to find threads or individual messages that contain particular key words. Google translator[1] will translate key words for searchers in various languages or translate messages and threads from one language to another. Network analysis tools make it possible to analyze and visualize the connections between individuals as revealed by their interactions on the forums. It also identifies particularly important individuals as indicated by the number and types of interactions they have with others. A sentiment analyzer tool performs sentiment and affect analysis of forums, measuring member opinions and emotions. And a text analyzer looks at various language characteristics in messages, displaying the results using various visualization tools.

In response to a question, Chen explained that he validates his tools with standard computer science methods. "You reserve a set [of characteristics] as the gold standard that you know the right person's identity, and you keep it separate," he said. "Typically, you look at performance metrics of accuracy, recall, and precision."

A better question, he said, is whether the techniques are actually useful for a given problem. "That is actually a lot more difficult question." Answering it requires testing his techniques against other techniques on such measures as how quickly a person can be identified. "System time savings, case closures—those are the things that people in the field care about." And for some of these tools, he said, he has indeed shown that they are useful methods.[2]

Finally, Chen briefly described a similar project he has begun that looks at political, social, and economic issues rather than jihadist ones. At the moment, this Geopolitical Web is focused only on issues relating to the countries of Yemen and Somalia. "I wasn't brave enough to look at Iraq and Afghanistan," Chen said dryly.

"The framework is very similar [to the Dark Web]—collecting economic indicators, political indicators, and country indicators," he explained, "but I started with mass media and news. I also collected

[1]See http://translate.google.com/ [October 2010].

[2]The set of tools that Chen developed to explore the Dark Web is available for registered users through the University of Arizona website. See http://ai.arizona.edu/research/terror/ [October 2010].

chatters in the social media, but these chatters are different from Dark Web." While most of the Dark Web information comes from forums and YouTube, the data for the Geopolitical Web is taken from forums, blogs, and Twitter messages. "Twitter is very interesting. These are other things that [users posting on Twitter] care about at a particular point in time."

As with Dark Web, Chen uses various tools to characterize and represent the data in the Geopolitical Web and then to analyze it. "We have topic, sentiment, time-series data, and social data," he said, "and then we use various metrics to do geopolitical risk identification." One goal of the project, he said, is to see whether he can use all these data to predict risks of various sorts—economic risks, political risks, risks of terrorism, and so on.

It is potentially a very valuable tool, he said, but he and his group need help from collaborators of various types—political scientists, economists, military and intelligence analysts, among others—in order to take full advantage of it. "We are mostly computer scientists," he said. They would like to collaborate with others who can help them take this work to the next level.

IDENTIFYING CORE OFFENDERS

According to David Kennedy, director of the Center for Crime Prevention and Control at John Jay College, in the first couple of years of the 21st century, the murder rates in Chicago's most dangerous neighborhoods were some of the highest in the country. By 2004, however, they had dropped to about a third of their previous level, not much higher than the rates in some of the safest parts of the city. It is a striking example of how sociocultural knowledge and techniques can be applied to identify the most serious offenders in an area and control their most dangerous behaviors, and it may well have lessons that can be applied in military conflict environments.

Kennedy explained that the dramatic decrease in homicide rates was the work of a group led by Tracey Meares at the University of Chicago—and it was no accident. The same techniques have been used to sharply decrease homicide rates in Boston and other cities as well (for more information on the Boston Gun Project, see Kennedy, 2002).

"When I got into this field 25 years ago, it was the very firm belief both of people in criminology and people in criminal justice that law enforcement couldn't do anything about crime," Kennedy said, "and they were right at the time. All the research and all the field experience showed that. That is not true anymore."

Today, there are two principal approaches to preventing crime that have been widely implemented with proven effectiveness. One involves

what looks like ordinary police work, but it is motivated by and carried out with stringent attention to up-to-date information. "When I started in this work," he said, "police departments would get their crime data nine months after the crime happened. Now they get it hourly, and they move people and resources and existing capacities around accordingly, and it turns out that that works very consistently."

The second approach that has been shown to work is to focus on a particular problem in great detail and, informed by theory and research and data, to find ways to address it, always being willing to try new approaches or abandon old ones as necessary. This is the approach that has been successful in bringing down homicide rates in a number of cities.

In developing this approach, Kennedy said, he did not start with some overarching theory or unifying social framework. "It began with on-the-ground observations of what was happening to get people killed, and it drew on enormously rich insights of front-line people in law enforcement and communities, which led to a particular picture of what was happening." This picture of what was happening did not exist in any of the social science or criminological literature at that point, he said, and "if we had started with those literatures, we never would have gotten anywhere." However, once he and his team had a good idea of what was going on, they found that a great deal of existing research in various disciplines was helpful.

The problem that Kennedy focused on was very specific. "The beginning of this was in the crack epidemic," he said. "There were bodies falling right and left. This was about stopping that kind of serious violence." In short, he set out to reduce the number of killings in the most dangerous parts of town. He was not trying to do something about gangs, to fix neighborhoods, or to deal with poverty or racism or other broad issues. "Those are good things to do," he said, and "they are logically connected with these bad outcomes." But history shows that efforts to lower the homicide rate by dealing with these other issues have uniformly failed.

The first step in tackling the problem was to understand exactly what was going on, and so Kennedy analyzed the crime data and spoke extensively with both the people living in the neighborhoods and the police who worked in them.

"Probably the most important thing that this on-the-ground work discovered was that this is all about groups," he said. For example, in Cincinnati he has identified 60 groups of offenders operating in the city who are the focus of his program there. "These 1,500 people are associated as victims, offenders, or both with 75 percent of all killings in Cincinnati," even though they represent only 0.3 percent of the population. Thus it is important to learn exactly who these groups are and how they operate.

One of the most important things to understand about these groups is that, although they are generally referred to as gangs, their structure and

behavior are not what most people associate with gangs. "They are largely leaderless, they are largely inchoate," Kennedy said. "Most of the violence is about personal back-and-forth stuff. It is not in the interest of the group; it actually causes damage to the group. There is nobody in charge, and when there are people in charge, they don't actually control very much. I had a guy who was Mexican Mafia in prison say to me, 'Do we green light things from here inside? Yes, we do. What people say about us is true. Do we control very much? No, most of what goes on out there is just local random street stuff. We couldn't control it if we wanted to.'"

Even if the groups are not gangs in the usual sense, the group dynamics still lead the group members to behave in ways that differ from how they would act as individuals. "Groups matter, because groups are not the same as individuals," Kennedy explained. Groups behave very differently. In this setting, groups carry the street code. Violence is driven by a street code. It is the groups that define that, carry it, and impose it on their members. The groups carry the vendettas and the rivalries that generate a lot of the violence."

Social psychology research has shown that groups tend to extreme behavior—that is, people in groups tend to behave in ways that are more extreme than they would behave if they were by themselves. In theory, Kennedy said, groups may tend to become either quieter or more agitated, but in practice the tendency is toward greater agitation. So people who are already more likely than others to get into trouble, or become violent, become even more so when they are in a group.

Another characteristic of groups is a tendency toward pluralistic ignorance, or a situation in which everybody in the group believes that everybody else in the group believes something that nobody in the group actually believes. "These guys say all the time, 'I don't care about going to prison,' and we take them seriously. No sane human being wants to go to prison, but they all think their boys believe it." Everyone in the group believes that everyone else in the group isn't worried about going to prison, and even though everyone actually is, they all have to act as if they aren't worried about prison.

Studies of these groups have revealed some key facts about their behavior, Kennedy said. First, very little of the violence is about money. People have generally assumed that the violence is driven by the money arising from the drug trade, but that is not the case. "It is vendetta, it is beef, it is respect, it is honor code, it is all this stuff. If it were about money, they wouldn't do it, because it draws heat. But as long as we don't understand that, we keep on focusing on these market issues."

There is also a street code that governs much of the behavior of the groups. It is not spelled out anywhere, but the group members know what it is. "It is about disrespect and how you have to respond to it. It is, The

enemy of my friend is my enemy. It is, We are victims and we are justified in what we do—the power structure has left us no choice. It is, You don't go anywhere for help, you handle it yourself."

Only a very small number of the group members are responsible for most of the killings, Kennedy said. About 5 percent of the 18- to 25-year-old young men in the bad neighborhoods are in the groups, and only about 5 percent of the group members are behind most of the violence. One implication is that it is impossible to identify the core offenders with some sort of top-down approach that looks at risk factors. "There is a huge population of at-risk kids in those neighborhoods," he said. "All the boys are at risk. If you try to identify them by identifying risk factors, you get everybody."

So it is important to identify the specific groups and the specific individuals who are most likely to be involved in violence, and the best way to do that is to speak directly with the front-line police officers familiar with the areas of interest. "The formal records and criminal justice agencies collect vast amounts of information," Kennedy said. "It is just not as helpful in this setting as local people who know what is going on and are willing to share what they have got." Speaking to the higher ranking police officers is nowhere near as helpful as talking with the cops on the streets, who generally know exactly who the core offenders are.

As an example, Kennedy showed a network diagram of the various drug crews in Cincinnati (see Figure 3-3). Each dot is an identifiable group. A straight line between two dots means the groups are allied. A short dashed line means they are feuding. A long dashed line means it could go either way. "This was put together in half a day by sitting down front-line police officers and asking them what they knew about their turf," he said. "This could not have been produced from official records. You can immerse yourself in formal data and never get here, whereas people close to the front lines, they know all this stuff, and nobody ever asks them."[3]

The people in the various nonprofit groups serving these communities have the same information, Kennedy said, and they could serve a similar role. Suggesting that something similar could be done in Afghanistan to identify members of the Taliban, he said that Gretchen Peters, author of *Seeds of Terror* (2009), claims that "everybody in every Afghan village knows who the Taliban are, and there aren't very many of them. Could you then figure out from among those who the impact players are? My guess is that you could."

[3]For more information on partnerships between academics and police in Cincinnati to reduce violence, see Engel and Whalen (2010).

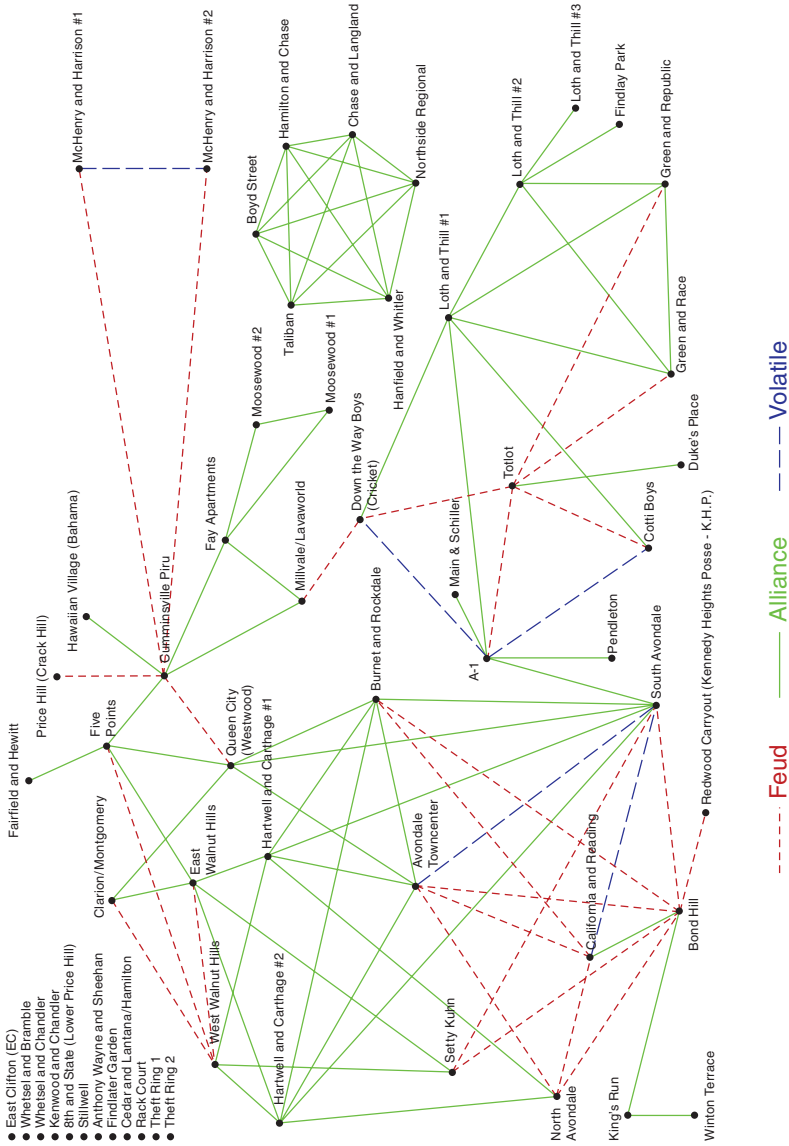


FIGURE 3-3 Network analysis of street sets in Cincinnati. SOURCE: Engel (2010). Reprinted with permission.

Identifying the groups and their members is the key to getting these groups to change their behavior, Kennedy said, but the focus has to be on the behavior of the groups and not the behavior of the individuals in the groups. The standard law enforcement approach is to catch the individuals responsible for the shootings and send them to prison, but that doesn't solve anything. "Each of them is a member of a rival set of 20 people. When they go to prison, there are still 19 of their boys on either side. They are still beefing, they are still shooting at each other. You have changed nothing."

The same thing is true for trying to change individual behavior with social services. "You get somebody to renounce violence. He goes back to his neighborhood. The guys who were trying to shoot him are still trying to shoot him, and his boys say, 'You are going to step up, or we won't have your back anymore.' It is not about the individuals."

So how can the behavior of the groups be changed? First, Kennedy said, it is important to have a clearly defined behavioral goal. In this case, the goal is to get members of the groups to stop killing people. It is not to get them to stop dealing drugs or stealing or fighting.

Kennedy described the approach he has developed as a partnership of law enforcement, community figures with standing in the eyes of the offenders, and the helping professions. The partnership opens a sustained formal relationship with the groups of interest, with plenty of face-to-face interaction in which the groups are told that the shooting and the killing must stop.

Kennedy observed: "My mother says she invented this, and she is basically right. That partnership says to those groups, 'What you are doing is wrong. We expect better of you. We would like to help you. We are not asking—this is not going to happen anymore.' Then you stick with it."

The engagement with the core offenders has three prongs, he went on. First, there must be consequences. They are presented as a last resort, but they are also presented as inescapable: "If nothing else we are doing works, you are not going to get away with this." The sanctions are explained ahead of time, and it is made clear to the members of the group that any legal means will be used to impose sanctions that they won't like.

Because it is the group's behavior that must change, the sanctions should be aimed at the group, Kennedy said, and they must be sanctions that matter to the group. "The most fundamental thing about deterrence is that the only thing that matters is what matters in the eye of the recipient. If you say to these guys, 'You cross the line, and two years from now you are likely to end up in federal prison,' they don't care. If you say, 'Everybody on probation is going to be on curfew for the next six weeks, we are going to do home visits, and you are not going to be able to run

with your girlfriends and smoke dope with your boys,' they go ballistic. You have got to look at it from where they are."

The second prong is explicit moral engagement. "This is the last thing anybody thinks you can do with these sorts of people," Kennedy said. "The cops think they are psychopaths, and you don't talk with psychopaths. The helping people think they are victims, and you don't blame victims. Nobody ever says to them, 'You shouldn't shoot people.' Nobody says it, so they think it is okay. You treat them like rational people. You say the simple mother stuff: 'This is not okay. We care about you. We reject a couple of things you are doing. The ideas you are living by are stupid and wrong and self-destructive.'"

This is most effective, he said, if the message is delivered by people whom the group members already care about: mothers, ministers, activists, and so on. The reason that these people are not already delivering that message, Kennedy said, is because they do not like the police and believe the police are corrupt and trying to hurt the community. "When strong figures in the community don't sanction that sort of thing, it is generally because they are so angry at the outside that they are not willing to stand with the outside against their own." At the same time, the police tend to have their own distrust of and wrong ideas about the community. So it is necessary first to address this mutual distrust and dislike by bringing law enforcement and the local community together to talk explicitly about the misunderstandings and then to turn the talk to common ground and mutual goals.

"You can do what is effectively a reconciliation process," Kennedy said. "Everybody can agree that it is better if neighborhood people say 'Put your guns down,' and that works, rather than having the cops sweep them in." It is particularly effective when a mother stands up and describes how it affected her when her son was killed, "and these guys who everybody has given up on sit there with tears streaming down their faces. They are not out of reach."

The process has clear implications for such places as Afghanistan, Kennedy noted. Just as people in the inner-city neighborhoods of Cincinnati and Boston have beliefs and stories about the police that make them suspicious of their motives and unwilling to cooperate, the Afghan population is leery of American troops. "What I hear from my friends who do work on the ground in Afghanistan," he said, is that "it is common belief that the American military is there to take over the opium trade and keep the money for themselves and that Islamic women are being kidnapped and prostituted on American military bases. . . . If you don't deal with what people think, you are not going to deal with the rest of the structure that gives a few people room to blow up American soldiers. My guess is that if we took these community narratives in

Afghanistan seriously, and dealt with them, that that might hold hope of changing."

The third prong is to offer help to anyone willing to accept it. Help is generally not very effective in these situations, Kennedy said, but it changes the moral calculation. "Neither the community nor the street guys, if that help is seriously tendered, get to say anymore 'I am a victim, nobody will help me, so I am justified in what I am doing.' Even if they don't get a job, they feel more obligated to put their guns down."

There are a number of lessons learned from these successful core offender programs that could be applied in military conflict situations, such as the current conflict in Afghanistan, Kennedy suggested.

First, it is vital to have a specific problem focus. "I don't have a clue what to do about Islamic fascism, but if what we want to do is stop people blowing up Americans and their peers in public and flying airplanes into buildings, that is something I can imagine doing."

Understanding the problem will require learning about the groups involved, the networks of groups, and the network dynamics. And it is important to see the groups and networks clearly and to deal with them as they are, not as we think they are, Kennedy said. Gretchen Peters has told him that "the Taliban has turned into a drug organization. They pay people to plant IEDs [improvised explosive devices]. We are not dealing with ideology here. We have to just see it for what it is."

Furthermore, it is likely that only a very small number of key people need to be dealt with. Again quoting Gretchen Peters, Kennedy said that there is good evidence that this is the case in Afghanistan. "My understanding is that there are about six Taliban leaders sitting there in Pakistan raking in the money from the heroin trade. If I were in the U.S. government, I would go to them and say, 'If the bombing doesn't stop, I will find your money, and I will take it. Thank you for your time.' Which we do on the street, and it works."

Finally, it is necessary to deal with the ideas in the minds of the people on the other side. Ideas matter and they need to be addressed, Kennedy said. "We do not have to believe them to be correct. We need to take them seriously, and we need to recognize that this is a bilateral relationship. It is not them being wrong—it is the relationship that we have with them and the way we are driving each other to bad places."

IS IT TIME TO ESTABLISH A DISCIPLINE OF SOCIOCULTURAL INTELLIGENCE?

In what was perhaps the workshop's most impassioned presentation, Kerry Patton of Henley-Putnam University argued that the single most important step that can be taken to put sociocultural knowledge to work

in military missions would be to establish a new discipline of sociocultural intelligence, or SOCINT.[4]

"Very simply put," he said, "everything that we are doing right now, every single aspect of coming together and brainstorming different methodologies and different modeling programs and analytical tools to understand different social systems and networks, has been going on forever. . . . When are we going to stop brainstorming and start implementing?"

Thanks to study groups, committee reports, and workshop summaries, there is already plenty of information available on ways to put sociocultural knowledge and techniques to work. The problem, Patton said, is that the knowledge and techniques are not getting to the people who need them. "I have been home now [from Afghanistan] for almost two years, and I have been studying all these reports that different organizations are creating on human and social factors. I have asked my contacts in Afghanistan who are still there, have you read these reports? 'No.' 'Why have you not read them?' 'Because they are not getting down to our level.'"

The people who need the information are not getting it for a simple reason, Patton said: there is no group of people in the military or the intelligence community who have the responsibility for dealing with this sort of knowledge. "We have HUMINT [Human Intelligence], we have SIGINT [Signals Intelligence], we have MASINT [Measurement and Signature Intelligence], we have all these INTs, and they work. . . . But we don't have a SOCINT, a sociocultural intelligence discipline in our national security apparatus."

When he has spoken with people in the military and the intelligence community about whose responsibility it is to pay attention to sociocultural intelligence, Patton said, he has received different answers. "I have been told civil affairs operators, this is part of their responsibility. I have been told foreign area officers, this is part of their responsibility. PSYOPS [psychological operations] folks, it is part of their responsibility."

But none of these people has the training or the time to deal with sociocultural intelligence, he said. "If I went up to a SIGINT-er and I said, 'Mr. or Mrs. SIGINT-er, I need you to build a school, I need you to build a micro-hydro dam, I need you to build a hospital in a war-torn country, and while you do this, I still need you to collect SIGINT.' Is that even possible? Obviously the answer is no."

When someone from civil affairs or PSYOPS is asked to collect sociocultural intelligence as well, Patton said, they are so overwhelmed with their primary duties that they skip out on the sociocultural work. There is so much emphasis on collecting intelligence on high-value targets that no one has time to worry about the SOCINT aspect. Thus, although plenty

[4]For more information on Patton's views on SOCINT, see Patton (2010).

has been done to create a fundamental knowledge base in the sociocultural area, "the people who need it most are not getting it."

If the case for SOCINT is to be made successfully, Patton said, it will require an economic aspect. "When the U.S. government wants to introduce something, you better be able to pull out numbers of how this could help out the country economically." But, he said, there are plenty of examples from history in which sociocultural intelligence—although not known by that name at the time—more than paid for itself.

"How many of you remember the banana wars in South Central America? Was that not one of the greatest economic adventures that we ever undertook during that time period in United States history? Easily it could be argued that it was."

"During the cold war, we did very unique operations throughout all of Africa. Some people didn't like our operations there, but economically it did pan out. Same thing with South Central America."

The key to these successes was the use of "unconventional human intelligence operators," Patton said, but after the investigations of the Church and Pike committees during the mid-1970s, such activities were no longer allowed.[5] Such work needs to return, he said, but it clearly must be done while obeying the restrictions placed on intelligence activities since the 1970s. And the way to do that, he said, is to create the new field of SOCINT.

In response to a question about whether the tools for SOCINT already exist and have been field-evaluated, Patton responded that the history of this approach shows that the tools clearly exist to get the job done. "If you look at the history of organizations that implemented sociocultural intelligence initiatives, you will see they are successful. Those that do not implement SOCINT, they do not succeed."

Referring to Kennedy's success in reducing homicides in inner-city neighborhoods, Patton said that SOCINT has been shown to accomplish similar things in foreign cultures. "Everything that Dave was able to do with the street gangs in Los Angeles, I was able to do in Northeast Afghanistan. I have physically interacted with Taliban commanders and subcommanders. Within two weeks of being in Jamaica, I infiltrated [drug lord] Dudus Coke, his entire network. When I was in Nepal, I spoke to the number-one Nepalese Maoist [who] was still alive." In short, he said, it can be done, and it can be done successfully as long as the individuals carrying out the SOCINT have the proper knowledge and training.

In closing, Patton commented that the United States has already carried

[5]These were Senate and House committees, respectively, investigating intelligence gathering by the Central Intelligence Agency and the Federal Bureau of Investigation.

out what he called "a very interesting SOCINT operation." The Troops to Teachers Program, begun in 2001 as part of the No Child Left Behind Act, helps retired military personnel begin a new career as teachers in public schools. It began with the realization that schools were not doing as well as they should have in specific locations around the country. "So with the Department of Education and the Department of Defense," Patton said, "we came together and analyzed—through obtaining criminal statistics, divorce rate statistics, single-parent statistics, and so forth—a whole bunch of stuff that relates back to the social and cultural norms in geographic areas. What we found was, teachers did not really have an interest to teach at these low-income school districts. However, military members who were getting out would be willing to teach at these locations, and they had a plethora of experiences."[6]

After the program was put into place, analysis of the underperforming areas showed that they had been reduced by almost 80 percent in size. The pockets were still there, but they were much smaller, and they had been contained. The key to the success was to identify the relevant human systems and networks, Patton said. The Troops to Teachers Program provided a way to tie the network of retired soldiers in with the school network. "Unofficially that was a SOCINT operation," he said.

Still, despite its various successes, there is still not a clear understanding that SOCINT is a necessity, Patton said. Part of the reason seems to be that the people now doing analysis of social and cultural systems tend to be academics with no real understanding of the places where their knowledge needs to be applied. "You have read a book or you have read literature about the place, but you have never physically been there," he said. "You have never physically lived in the environment, and you cannot really explain what it feels like to be there, what the texture on the walls is truly like."

Ultimately, he said, the only way that the United States is going to be successful in places like Afghanistan is to have people on the ground who are familiar with current sociocultural thinking and know how to apply it to practical situations. "We need real-world, timely information that is ground truth," he said, "and the only way to get that is by injecting human factors into human systems and networks. That is the discipline of SOCINT."

[6]More information on the Troops to Teachers Program is available at http://www.proudtoserveagain.com/ [December 2010].

4

Cooperative Relationships

In contrast to its role in conflict environments, the U.S. military is also often assigned to provide support and assistance to cooperative governments. This may happen in a postconflict situation, for example, or after a civil war or a natural disaster. The missions may include such things as peacekeeping, treaty enforcement, providing security for refugee camps, and evacuating noncombatants. In such situations, it is not uncommon for the local population, or portions of it, to be uncooperative or not receptive to the American personnel, even if the national government has requested their presence or at least established a cooperative relationship with the United States.

To accomplish their mission, military personnel must be able to convey security and safety concerns in a way that is culturally sensitive and mutually acceptable to everyone. Thus, understanding the contextual, interactive, and communication dynamics of these cooperative relationships is vitally important to success. It is often the case that military personnel put into these situations are not trained or oriented to take on these perspectives; yet, if they are provided with the appropriate knowledge and tools, they can adapt to these potentially dangerous situations and accomplish their missions.

As Andrew Imada, the panel's moderator, noted in his opening comments, "The guiding question for this session was, What sociocultural knowledge will enable Department of Defense personnel to work with cooperative partners to make local populations feel safe?" Three presenters addressed that question: (1) Robert Rubinstein, a political and medi-

cal anthropologist whose work focuses on cultural aspects of conflict and dispute resolution, including negotiation, mediation, and consensus building; (2) Alan Fiske, a psychological anthropologist who conducts research on social relations, including the models in which people characterize their social interactions; and (3) Donal Carbaugh, an expert on international and intercultural communication.

MODELS OF COOPERATIVE BEHAVIOR

In the first presentation, Robert Rubinstein of The Maxwell School of Syracuse University came to grips directly with one of the key themes of the workshop: How much can sociocultural models do, and what are their limitations? In particular, he said, he is fascinated by the question of what data and principles exist that might be used to create a general predictive model of cooperative social behavior.

For a number of years, Rubinstein said, he has worked with United Nations' peacekeeping forces, so he tends to think about cooperation in that context (for more about his work, see Rubinstein, 2008). In particular, he thinks about cooperation "in terms of the question of interoperability and the way culture plays into interoperability." He said that interoperability can be thought of as "the ability of people and organizations to work together smoothly." Ultimately, he is interested in building models of the sociocultural aspects of interoperability.

Sociocultural models have varying levels of complexity, Rubinstein explained. The least complex models are what might be called "traveler's advice." They include the sort of information given to someone who is traveling abroad, mainly advice about the things that one should not say or do so as to avoid a social blunder. "It is a very simple model. It works. People manage to get through a different culture and not make any mistakes." Otherwise, however, it is not a particularly useful model, as it offers no insights in how the people in that culture generate new behaviors.

A somewhat more complex class of models can be described as "stereotyping." As an example, Rubinstein presented a list of generalizations concerning cultural differences between the military and nongovernmental and other civilian organizations. For example: military organizations are hierarchical, whereas civilian organizations are decentralized; military organizations are culturally insensitive, whereas civilian organizations are culturally sensitive; and military organizations appreciate precise tasks, whereas civilian organizations thrive on ambiguity. Such models have a variety of weaknesses, Rubinstein said, including the fact that they assume that all military organizations and all civilian organizations are homogeneous and that each has a stable and static culture. "They give us a very false sense of understanding those groups."

A third class of models looks at cultural styles and dimensions. These are generally empirically based, so they are more sophisticated than the stereotyping models. They classify cultures according to various empirically determined traits. For example, some cultures are said to be direct, valuing self-expression and verbal fluency, and others are described as indirect, with their members tending to use ambiguous language and to avoid saying "no" in order to keep things harmonious. In these kinds of models, some groups are characterized as relying more on linear thinking, putting their faith in logic and rationality and regularly seeking objective truths, and others are nonlinear, with indirect reasoning processes and no attempt to find external truths.

"These models are very useful for some purposes," Rubinstein said. "They have had an illustrious career in cross-culture business consulting. They have had an illustrious life in intercultural communications. They are useful for what they do."

One problem with these models, he said, is that they can create a false confidence so that people act as though knowing how a group typically responds allows them to predict how an individual person will respond—but they do not. "When we proceed from a dimensional model, it is all too easy to think about how a person is going to respond [in terms of how] the group would respond." Although these models do a very good job of characterizing general group traits, they do not actually provide any information about individuals, nor about how behaviors are generated.

A more sophisticated approach can be found in what Rubinstein referred to as "cultural models." He illustrated this approach with a diagram that includes such considerations as language, symbols, rituals, and behavioral models (see Figure 4-1). "If you take a look at this diagram," he said, "you will see that the way people interact, how they talk, what their styles are—they don't just do it. They do it because they have a particular reason to do it, because it is connected in some way."

One of the things to keep in mind about cultural models, Rubinstein said, is that each community will have multiple models that are all "grammatical"—that is, that are accepted by the community as ways in which one decides what is suitable behavior. The particular circumstances in which a person finds himself or herself will affect which model the person chooses to use.

As an example, Rubinstein referred to the "disproportionate revenge among the Khmer Rouge in Cambodia." The anthropologist Alex Hinton, author of *Why Did They Kill? Cambodia in the Shadow of Genocide* (2005), identified two contrasting models in the Cambodian culture, one for disproportionate revenge and the other for compassion and forgiveness.

His second example comes from Mary Catherine Bateson's studies of Iranian theater before the Iranian revolution (e.g., Bateson, 1997). She

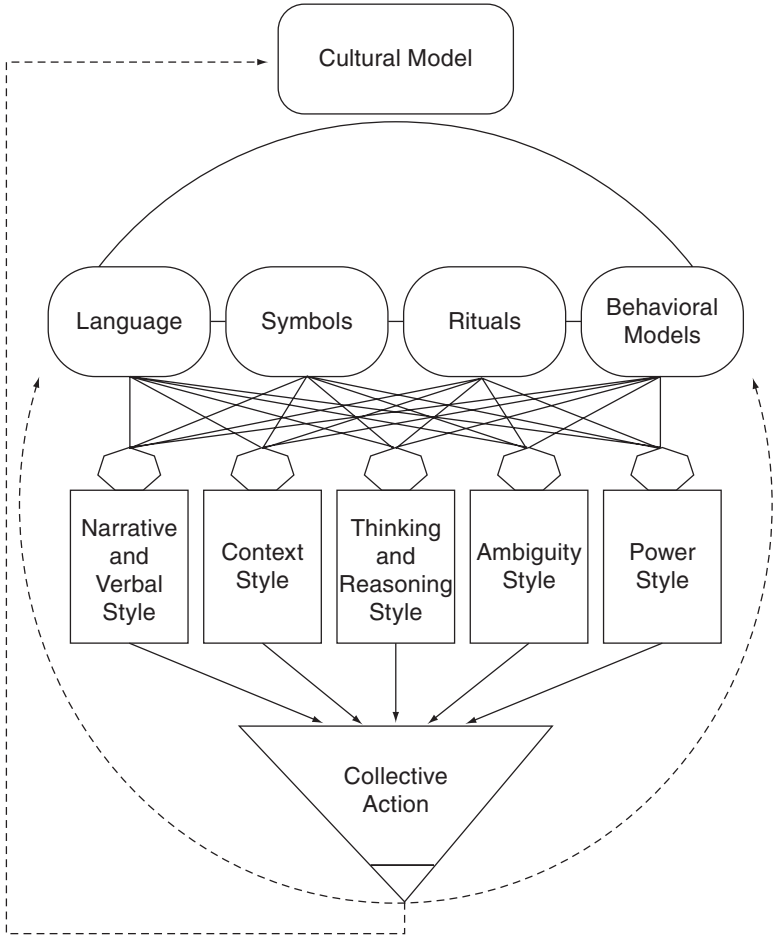


FIGURE 4-1 Culture: Levels of analysis and observation.
NOTE: Cultural models give a sense of the range of possible "grammatical" actions and responses. They do not predict which model will be actualized.
SOURCE: Rubinstein (2003, p. 33). Reprinted with permission from John Wiley and Sons, http://interscience.wiley.com [January 2011].

identifies two models of what it means to be a good man, Rubinstein said. In one model a good man is an entrepreneur, and in the other he is deeply religious and principled. Examining these two models in the Iranian cinema, she found a shift in the popularity of the models over the years.

As the two examples illustrate, a culture can have contrasting models. Still, Rubinstein said, "they are what legitimates or gives moral force to actions. They are what is grammatical. Just as with language, they provide

lots of ways to say things that are understandable, that are acceptable." But, he added, they do not predict actions, any more than the grammar of a language predicts how someone will choose to say that he would like to go get lunch.

This points the way toward even deeper, more complex models of culture—models that take into account the context in which various actions are taken. Various factors influence how people approach a situation, and one of the most important is a person's motivation. "The same person in the same circumstance may react in different ways, depending on the motivational state," Rubinstein said.

As an example, he mentioned that humanitarian workers often say that they don't want to have anything to do with the military, because having soldiers around can influence how the people who need their help will view them. But when some humanitarian workers find themselves in a difficult situation, they may very well ask the military for help. In the same interaction they respond differently, depending on their context and motivational state. By taking context and motivation into account in this way, a cultural model becomes "a dynamic system of meaning," Rubinstein said.

So is it possible to create a sociocultural model of cooperative behavior that can be used to make predictions? Rubinstein discussed briefly some of the features that might go into a model of interoperability. First, there are different levels of interoperability, ranging from operating in a completely unified way to operating completely independently. Second, there are a variety of culture issues that come into play, such as communication style, operating style, and level of trust. The model becomes exceptionally complex.

But no matter how complex a model is, it is never complete. "Modeling is for understanding selective features of the world," Rubinstein said. "It is a heuristic, and heuristics all carry biases." Thus the match between the model and the real world is always by necessity a partial match, not a complete one. In particular, attempting to move from a model that captures group elements of culture to one that attempts to predict individual responses requires data that are simply not accessible, because individual behavior is an emergent phenomenon, one that depends closely on the interaction among individuals, and that will vary according to each individual's motivation and emotional state.

"What I think," Rubinstein ended by saying, "is that trying to find a general predictive model of the social and cultural elements of cooperative behavior is really—let's just be provocative—a fool's errand, and not something that is very helpful to try, because it generates technique without validation against the real world. Things are much too dynamic, and moving from group elements of culture to trying to map individual responses doesn't make any sense."

FOUR FORMS OF SOCIAL RELATIONSHIPS

In the next presentation, Alan Fiske of the University of California, Los Angeles, described four models of social relations that, when understood properly, can help improve the effectiveness of cooperative relationships. "The argument I am going to make," he said, is that "social coordination in virtually all domains of social life in all cultures is organized out of four basic structures, or four relational models."

At first glance, he acknowledged, it might seem hard to believe that in every culture people coordinate everything they do using just these four relational models in various combinations and implemented in culturally diverse ways, but there is a great deal of evidence that this is the case. Relational models theory is based on a synthesis of classical theories along with ethnographic fieldwork, ethnological comparisons across many cultures, and analyses of research in social and cognitive psychology. It has been tested in many studies with many methods and has been applied to understand a variety of domains of sociality in many cultures. At last count, he said, more than 200 articles, chapters, and books have been published by more than 100 scholars to test, apply, or extend relational models theory. It is, in short, a well-established area of anthropology.[1]

The four models that relational models theory uses to understand cooperative behavior are (1) communal sharing, (2) authority ranking, (3) equality matching, and (4) market pricing, Fiske said, and he gave a brief description of each model.

In a communal sharing relationship, people feel connected to each other, they feel that they belong together, and they identify with each other. "People feel that they have something essential in common," Fiske said, "and that differentiates them from other people who don't have that." Furthermore, everyone is seen as being the same. "In any culture, when people are eating communally, sharing food and drink, when they are being generous and kind to each other, they have a communal sharing relationship."

There are many different types of communal sharing relationships, and individuals may be part of several of them at the same time. "You may be deeply in love with somebody," Fiske said. "You may have a communal sharing relationship with other people in your discipline or other people in your work group." These relationships can differ in intensity, from the highly intense connection between lovers or among members of

[1]For more information on relational model theory, see http://www.rmt.ucla.edu [October 2010].

a platoon in combat to the more diffuse sense of commonality and sharing among members of an ethnic group, a nation, or even all of humankind.

In mathematical terms, Fiske said, the communal sharing relationship can be thought of as an equivalence relation. "It is a nominal scale of measurement in which the social world is divided up into categories of people, and everybody within each group is treated as equivalent and different from people in other groups."

The second type of relational model is a hierarchical one, in which people's positions in an authority ranking are clear. The authority is seen as legitimate, with those in higher positions expected to provide guidance and leadership to subordinates, who in turn are expected to be deferential and respectful. "I want to emphasize," Fiske said, "that this is a relationship in which those above are perceived as legitimately, naturally, necessarily entitled to deference and respect from subordinates, but the leaders are also expected to lead, to guide, to stand up for, to speak up for, to protect, and in general to take care of their subordinates." In particular, this is not a relationship in which control relies on force or coercive power. "I am talking about the kind of relationship that would be described in East Asia as filial piety, or the kind of relationship that you would have in the military where you believe that your superiors are entitled to obedience and deference, and where in turn the leaders are expected to look out for their subordinates."

In mathematical terms, the relationship is an ordinal scale, in which relative positions are well defined but the differences among the rankings are undefined. "So you know that a general is higher than a lieutenant, and you know that a lieutenant is higher than a private," Fiske explained, "but you can't exactly say what the distances are, and you can't exactly compare the difference between a lieutenant and a private or the difference between a lieutenant and a general. The order is clear, but the distances are not."

The third type of relational model, equality matching, is one in which people are careful to balance things. "If you invite me to dinner, I owe you one," Fiske said. "If I haven't invited you back, but you have invited me again, I owe you two. Now I invite you back, and I still owe you one. So you can add and subtract. We know what would balance the relationship." The democratic idea of one person, one vote, is an example of an equality matching relationship, as are most games and sports, in which the rules specify equal numbers of players, equal numbers of pieces, taking turns, each side defending one half of the field, and so on. "An equality matching relationship is one in which people attend to the additive differences with reference to even balance."

Like every relational model, equality matching can take on both positive and negative forms, Fiske said. "It can organize violence as well as

cooperative relations. An eye for an eye, a tooth for a tooth—that kind of vengeance, which has been widespread in history, is violence organized in an equality matching way."

Mathematically, equality matching can be thought of in terms of ordered Abelian groups, which have addition and subtraction that obey associative and commutative principles. As a measurement type, it corresponds with interval scaling.

The fourth type of relational model, market pricing, is any kind of interaction that is organized with reference to ratios, rates, or proportions. The most familiar types of market pricing relationships involve money, but money does not have to be involved per se. "The money can be absolutely anything," Fiske said. "It is an arbitrary symbol." Any time that cost-benefit ratios are calculated or efficiency is analyzed, that is a market pricing relationship. Another example is proportional justice—the idea that the punishment should be proportional to the crime. "If you get a parking ticket and the judge sentences you to 40 years of hard labor, what is the matter with that?" Fiske asked. The problem is that the punishment is disproportionate to the crime. Similarly, when people expect their rewards to be proportionate to their effort and their contribution, that is market pricing.

In mathematical terms, a market pricing relationship can be expressed in terms of an Archimedean ordered field, a set of entities that can be multiplied and divided as well as added and subtracted, in which there is a zero point, and every entity can be expressed as a multiple of every other nonzero entity. Multiplication and division are meaningful in this coordination structure, which is homologous to a ratio scale.

These four relational models are the ones that people use to organize virtually everything in virtually every culture, Fiske said. Furthermore, they are highly moralized models. "People think that these are right, that violations of them are transgressions, that morality itself is based on these. People have very powerful emotions about these things."

So what does that mean for social cooperation? It implies, Fiske said, that to cooperate with people in any given group, one needs to answer two basic questions: What relational model are they using, and how do they implement it?

Consider, for example, a humanitarian mission to distribute food. "First, you need to find out what model other people think would be appropriate for food distribution," Fiske said. Is it an authority ranking model? A communal sharing model? And, once it is known which relational model the people use, it is important to figure out exactly how that model is put to work. "Let's say they use authority ranking. You need to know who is in what position in the hierarchy. Who has the authority to make decisions? Then how are decisions announced and transmitted?

Hierarchies . . . can be implemented in innumerably different ways, and you can't function just knowing that authority ranking is the model unless you know who fits in where and how they use authority ranking."

"Or suppose they use communal sharing to make decisions about food sharing. How do they make the decision? Is it a Quaker meeting where everybody pitches in? How do they decide whether a consensus has been reached? And so forth."

Furthermore, once they have decided how to share the food, they may use a different relational model in the sharing itself. They might decide communally to allocate it equally. Or they might vote—an equality matching method—to distribute the food communally, with each person helping himself or herself, or they might allocate the food in such a way to benefit the group as a whole.

The bottom line, Fiske said, is that "if you know which relational model people use and how they implement it, you will have a very, very good chance to being able to coordinate effectively with them, and to understand their judgments and emotions, the motivations behind their actions, what actions constitute transgressions of their models, and how they sanction transgressions. So to coordinate, cooperate, and engage with people in any culture, you need to discover what relational model they are using, how they implement the model, and then you have to invoke that model, make people feel committed to it, and you have to commit yourself to it."

CULTURAL DISCOURSES

People everywhere give shape and meaning to their life as they speak about it. These ways of speaking structure each person's sense of who they are (their identity), how they act, how they feel about what they do, and how they dwell in places. According to Donal Carbaugh of the University of Massachusetts Amherst, the study of cultural discourses reveals the distinctive identities, actions, feelings, and local practices of people in places.

When people from two different cultures meet and converse, it is very easy for them to misunderstand each other because they come to the conversation with very different means and meanings for communicating. Carbaugh described a way of avoiding many of these misunderstandings through a systematic approach he refers to as cultural discourse analysis.[2]

[2]For more information on cultural discourse analysis, see Berry (2009), Boromisza-Habashi (2007), Carbaugh (1988, 2007, 2008), Carbaugh and Khatskevich (2008), Miller and Rudnick (2008), and Philipsen (1997, 2002).

As an example of the sorts of misunderstandings that can arise in cross-cultural conversations, Carbaugh provided an abridged transcript of a conversation that took place between a Nepali farmer and a worker from a nongovernmental organization (NGO) (see Box 4-1). After some initial pleasantries, the NGO worker suggests to the farmer that he try organic fertilizer on his fields. The worker asks the farmer what he knows about using organic fertilizer, but the farmer demurs, insisting that the worker should instruct him on how to use it. "What does an illiterate fellow like me know?" the farmer asks. "We only do things in an ad hoc way. You should tell. Educated and knowledgeable people like you know how to do things properly."

It seems to be a straightforward conversation, but has the NGO worker really understood what the farmer is saying from the farmer's point of view? Probably not, Carbaugh suggested. "One of the things

BOX 4-1
Dialogue Between an Agricultural Extension Worker (AEW) and a Nepali Farmer (Ramaiah)

AEW: Hey Ramaiah (farmer). How are you?

Ramaiah: Salutations Sir! Pulling along with your grace.

AEW: What's up? What happened?

Ramaiah: I bought the fertilizer from the shop. It is very costly. I had to take a loan for this. However, the crop yield hasn't been to the expected level. What I now have is additional liability to my already existing woes.

AEW: In that case, why don't you go for organic fertilizer? . . .

Ramaiah: Yes, Sir. My elders used to use organic fertilizers and they used to get good yields. Even, I remember using that as a child.

AEW: See you know it. Why not give it a try? It only requires some effort. All you need to do is . . . You know it, why don't you explain the process?

Ramaiah: No, Sir. You tell. What does an illiterate fellow like me know? We only do things in an ad hoc way. You should tell. Educated and knowledgeable people like you know how to do things properly.

AEW: Why don't you tell what you know?

Ramaiah: No Sir. I am an ignorant fellow. You tell.

AEW: Ok. This is how you do it. The process is . . . The variations of this are . . . They also call this . . .

Ramaiah: Oh Sir. You are so knowledgeable. I will try that Sir. We need to heed to the advice of . . .

SOURCE: Created by Chavva, K., University of Massachusetts Amherst. Used with permission.

that the Nepali farmer knows is that, when interacting with outsiders, he needs to defer to them and their knowledge, as this is proper conduct in the farmer's view. Also, the farmer may understand he needs to treat the NGO worker respectfully if he is going to get the resources that they have to give," he explained. "What the NGO worker may not know is that the Nepali farmer has farmed these fields for decades, knows what works, has used organic fertilizers in the past, knows that they are expensive and he can't afford them, even with the help of this agency, and so on."

There is a whole system of subtexts underlying this conversation that "needs to be understood as a communicative dynamic that is active in that exchange between that farmer and that NGO worker," Carbaugh said. "If we don't understand that kind of dynamic, we are missing a lot of what is going on in these kinds of situations when we are trying to help and work with others."

The key is to understand the ways people declare form and meanings in their lives through communication practices; people do this differently. It is important to understand what someone from another culture is saying and how they are saying it. "What are they doing and what does that mean? We can always supply meanings from our view, given our habitual ways of seeing and thinking, but we don't always supply the meanings of the practices from the vantage point of those participants." To understand the communicative means and meanings from the vantage point of the other people requires also learning to see oneself from the perspective of others.

To do that, Carbaugh and his colleagues have developed a five-phased theory and methodology—cultural discourse analysis—to communicate about matters from multiple points of view. "I want to mention at the outset that this perspective is based upon data analysis and modeling together over an extended period of time," he said. "It is not something that an armchair theorist has just invented in order to come up with some flashy ideas."

The goal of cultural discourse analysis is to "unveil the deep beliefs and values in local actions," Carbaugh said. It is important not only to understand the ways in which people act but also to comprehend the meanings of those actions from the point of view of the people involved. It is also to be on the lookout for what Carbaugh called "slippages" or "miscommunication"—areas in which two different languages or two cultures do not match, creating the possibility of misunderstandings, misattribution of intent, and stereotypings.

Because cultural discourse is inherently an interactional concept—it arises from interactions among people rather than from individual actions—the data used in studying it must also be interactional. Researchers who study cultural discourse do so by observing interactional practices.

To illustrate how cultural discourse analysis can be used, Carbaugh described examples from two projects in which he has participated. "In every case," he said, "we have to discover what the local communication practices are that people act through, that people use to express what they are about and who they are." In discovering the local communicative means and their meanings, researchers must keep in mind that they—the researchers or helpers—also have their own local forms of cultural discourse in use. "Scientific and agency discourse is one member of this class," he said. "It doesn't stand outside or above the others."

The first project Carbaugh described involved a research team from the United Nations Institute for Disarmament Research (UNIDR) working in northern Ghana. Carbaugh was a member of its research advisory group.[3] Because the northern area of Ghana had seen a great deal of violence over the years, including the beheading of one chief, the research group was tasked to conduct a security needs assessment of the local area. Their research involved a good deal of team-based fieldwork in order to develop an understanding of the local cultural discourse.

"One of the things that we found is that in the Dagbani language in northern Ghana there is no term for security," Carbaugh said. So that created a difficulty they had to overcome if they were going to do a proper "security" needs assessment. Assessors address the questions "What are you doing? What indeed are you assessing? This is the kind of problem that demonstrates slippages that have to be addressed." Further research found that the Dagbani language does include the idea of "protection," so it was possible to use that concept instead of "security" when talking with the local people about what they needed (for a detailed report of the process, see Miller and Rudnick, 2008).

After working with the local people for a while, the research team heard from some of them that, although development and humanitarian workers had been in the area for decades, no one had ever asked the local people what they thought, and they were grateful that this group had actually thought to ask. "Thank you," they said. "We think you understand something." Talking to the local people and understanding their means of communication, through their eyes, is the only way to know how to help in ways that matter to them, Carbaugh said.

Carbaugh's second example arose from work done by Elena Vladimir (Khatskevich) Nuciforo, a doctoral candidate at the University of Massachusetts Amherst, who is working in her homeland of Russia to reduce

[3]The project was designed by Derek Miller and Lisa Rudnick (the latter a doctoral student of Carbaugh), both of UNIDR, and involved a team of members that includes such professors as Gerry Philipsen of the University of Washington and Kwesi Yankah of the University of Accra, and other community members in Africa.

alcohol use (Carbaugh and Khatskevich, 2008). Examining health programs developed for use in American communities, she found that they often did not work effectively in other communities, even in some American communities different from the original ones for which the programs were designed. Nuciforo set out to determine how a health program designed specifically for Russians might differ from ones designed for Americans.

"She observed," Carbaugh said, "that many of the questions and the campaigns were designed—through a popular American discourse—according to the idea that health is a matter of personal choice and personal behavior, that ultimately it is up to you what you do with your body, what you put in it. This is a very American thing to say. It is part of popular American discourse, centered as it is upon the self." She also found that health is thought of as a physical and a biological state. In the United States, health is often "medicalized."

"But this is not the way health is thought about elsewhere," Carbaugh said. He has done fieldwork in Native American communities, and that is not how they speak traditionally of health. It is also not how Russians express health issues, and presenting them in this way in Russia would be likely to alienate those one wants to help.

So what is the Russian discourse with regard to health? "Health is a matter of emotional well-being," Carbaugh said. "It is a matter of having positive social relationships. It is a matter of morality, doing what is proper and good with others to cultivate good social relationships with them." Thus, any efforts to convince Russians to change their health behaviors should be framed from this perspective—as an issue of positive social relations, of emotions, of morality, and not solely as an issue of personal choice and human biology. The American and Russian codes for thinking and talking about health are indeed quite different.

In order to deal with the problems presented by differences in cultural discourse, Carbaugh has developed an approach that involves "listening and understanding rather than entering a scene with judgments about it or with solutions that might be misplaced." His method, which is based on cultural and communication (including linguistic) research, relies on a dialogue between experts and local people who serve as part of the research team. "There is a two-way flow of information," Carbaugh said, with multiple data points based upon rigorous observations and interviews. "What this procedure produces is a map of the local discursive terrain, that is, the system of communication practices that people use and the meaningfulness of them to those people."

With an understanding of the local discourse, Carbaugh works with agency personnel in order to map out exactly what it is they are trying to do to better the lives of the local people. Then he looks for "potential

gaps" between the discourses of the agency and the local people and designs practices for the agency workers based on that analysis. "This is a different way of working," he said, "because it is focused on discourse and on intensive qualitative and interpretive analyses about practices and contexts and the meaningfulness of those to people."

"The outcomes that we target are enhanced effectiveness, better relations with people, local ownership of projects and programs that they help to create, that are their own and are therefore more sustainable. In this way, we were helping to build bridges between these different discourse communities."

5

Nation Building

Beyond its role in conflict and cooperative environments, the U.S. military is increasingly asked to play a role in nation building, acting as advisers and mentors to local militaries and security forces. This can occur in both peaceful and postconflict environments, and today American servicemen are advising, training, and equipping forces from Iraq to Mongolia in everything from combat operations to natural disaster relief.

Such roles can be particularly challenging for military personnel, accustomed as they are to working within the military chain of command. In these situations, advisers have no command authority over their local counterparts, so they must instead rely on building rapport, conveying trust, establishing credibility, and engaging in collaborative problem solving. This in turn requires the adviser to be prepared for cultural differences in emotional expression and cognitive style, so as not to misread counterparts or be misread by them.

As Michael Morris, the panel's moderator, noted in his opening remarks, this requires a somewhat different type of cultural awareness than that which matters most in other types of missions, discussed in the previous panels. "Whereas the cultural differences that we looked at yesterday afternoon had to do with dyadic interactions, discourse processes, and relationship scripts, the focus this morning is on individual-level processes—cultural differences in patterns of emotional expressions and recognition and cultural differences in the information processing strategies used to solve a problem." The panel's two presenters were Jeffrey

Sanchez-Burks, who conducts research on cultural and ethnic group differences in the patterns of workplace interactions and relationships, including the role of nonverbal emotional cues; and Shinobu Kitayama, who studies the greater social interdependence of people in East Asian compared with Western societies and its consequences for their emotions, relationships, and problem-solving styles, with Easterners relying more on holistic information processing than Westerners.

CROSS-CULTURAL BRIDGES

In the first presentation, Jeffrey Sanchez-Burks of the University of Michigan discussed two different characteristics that play a role in how well a person communicates and works with people from other cultures: relational attunement and emotional aperture.

Relational Attunement

The workplace can be thought of as having two dimensions, Sanchez-Burks said. "It's the paper and the people. You can call it the task and the social–emotional, or the task and the relational, and the way in which people deal with these two different dimensions varies greatly across cultures." Understanding these differences is one key to getting along with people from other cultures, he said, and it is a key that is particularly important for Americans.

Research shows that, in countries around the world, the usual pattern among people working together is to pay close attention—or, in sociocultural terms, to have a "heightened relationship attunement—to other people and to the task or, in situations when there is no task, just to the people." However, Sanchez-Burks said, there is one outlier, or anomaly, in the pattern that appears consistently in the research, and that is the United States. Compared with people in other countries, Americans are the most individualistic, the most independent, the most task-focused, and the least relationally attuned, and this has implications for how they go about their jobs relative to how people in other countries go about theirs (Sanchez-Burks, 2002, 2005).

Sanchez-Burks uncovered this pattern in a series of experiments that he summarized for the workshop. In some early work, for example, he would play a video or audio recording for people and later test their memories to determine what they had paid attention to. In one particular study looking at Anglo Americans and Latinos (i.e., Mexicans and Mexican-Americans), he found no cultural differences in memory for task-related items, such as the nature of the project, but there was a huge difference in memory for relational information, such as how people got

along, whether a particular person seemed rude, or if someone criticized another person's personality (Sanchez-Burks et al., 2000). "It was almost as if it [relational information] was falling on deaf ears for the Anglos in this study."

In a second study, conducted among employees of a Fortune 500 oil company [located in the southwestern United States], Sanchez-Burks tested how people reacted to the presence or absence of nonconscious mimicry in a person with whom they were speaking (Sanchez-Burks et al., 2009). Nonconscious mimicry is the tendency of people to mimic another when speaking or interacting. "One person leans to the right, the other person leans to the right. One person crosses the legs, the other person crosses the legs." It's not conscious, but it helps to create rapport, he explained, and "when people don't mirror us, we start to feel anxious." The subjects in the study talked with an interviewer who had been instructed either to mirror the subject or to not mirror the subject and just sit in a relaxed position that stayed mostly unchanged.

The question of interest was whether the subject's performance—measured in how quickly the subject responded to the interviewer—would be affected by whether the interviewer was mirroring his or her movements. The subjects were Anglos and Latinos, both from the United States. What the experiment found was that the Latinos responded much more slowly in the nonmirroring condition than in the mirroring condition, but the Anglos were unaffected by whether the other person was engaged in nonconscious mimicry (see Figure 5-1). On one hand, the Anglo subjects' response was probably a good thing, Sanchez-Burks commented. "When you don't pay attention to the interpersonal context, you're inoculated from some of the uncomfortable effects when dealing with somebody who's awkward." On the other hand, it was clear that the Anglos, as a group, were not encoding sociocultural information in the same way or to the same extent that the Latinos were.

In another experiment, Sanchez-Burks used a technique developed by Shinobu Kitayama (the next workshop speaker) to measure how much attention people pay to what is being said versus how much attention they pay to how it is said and the emotional tone of voice (Sanchez-Burks, 2002). He put a group of U.S. subjects in a relaxed situation—talking and playing cards—and tested them for how attuned they were to messages conveyed by tone of voice. Then he put the same group of subjects in a work environment—giving them a task to solve—and performed the same test. The data showed that the subjects were far less attuned to emotional content in the work environment than in the nonwork environment, even though it was the same group of subjects (see Figure 5-2).

In related studies, Sanchez-Burks has tested people on how indirect their communication is in work and nonwork situations—how they

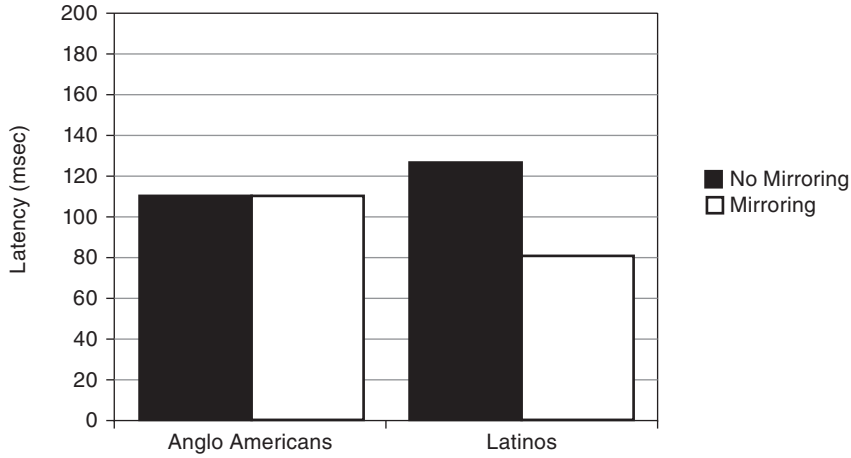


FIGURE 5-1 Delay in response to interviewer questions.
NOTE: Interaction: $F(1,84) = 2.30$, $p = 0.10$.
SOURCE: Adapted from Sanchez-Burks et al. (2009, p. 220). Copyright ©2009 by the American Psychological Association. Adapted with permission. The use of APA information does not imply endorsement by APA.

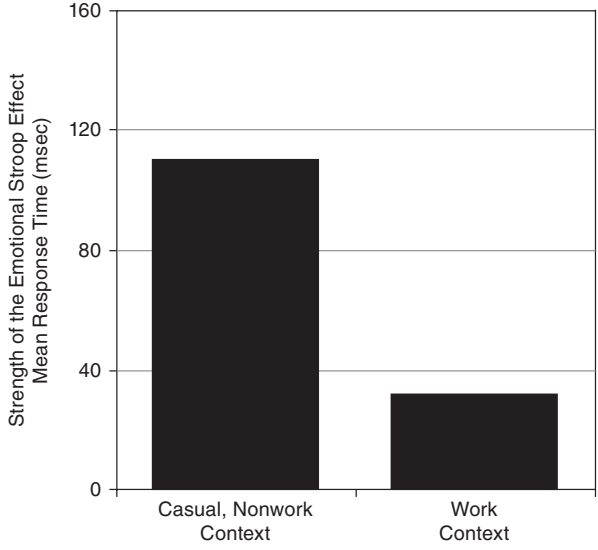


FIGURE 5-2 Attunement to how a message is conveyed via emotional tone of voice.
NOTE: Data drawn from U.S. participants raised as Protestants.
SOURCE: Adapted from Sanchez-Burks (2002, p. 923). Copyright ©2002 by the American Psychological Association. Adapted with permission. The use of APA information does not imply endorsement by APA.

would communicate with a coworker compared with how they would communicate with somebody outside the workplace (Sanchez-Burks et al., 2003). Americans are much more direct—or less indirect—in the workplace, being more likely to say exactly what they think to coworkers than to other people. Other cultures, however, are equally indirect in the workplace or else show a tendency to become more indirect. "In every culture I've ever compared to the United States, I can get this pattern," he said. "I'm sure there's another culture that looks just like the United States, but I haven't found it yet. There is this deep-seated assumption that in task situations you focus on the task, not on the people."

What this means, he said, is that while there may be very little cultural difference in communication outside the work environment, there are quite large differences between Americans and people in other cultures in the way that they communicate at work. "And when I say work, it's not just in an office building. It's any sort of situation in which there's a task at hand. You get this in the lab, and you get this with senior managers in large organizations."

This "American exceptionalism," Sanchez-Burks suggested, probably has its roots in the same Protestant work ethic that the sociologist Max Weber credited for the capitalistic spirit in the United States. A lesser known part of that work ethic, he said, was Calvin's belief that people should not display emotions or relational information while performing their calling.[1] "So you have this crazy cocktail in which not only do you feel like you're supposed to work, but you're supposed to be very task-focused while doing it." And so Americans, unlike most other people in the world, pay little attention to the emotional or relational signals of others while they are at work.

Interestingly enough, Sanchez-Burks said, a similar difference can also be seen in people's attitudes toward conflict at work. It is well known among organizational psychologists that relationship conflict on a team hurts a team's performance. So Sanchez-Burks surveyed people from different countries to see if their beliefs matched what scientific research has shown. In one study, he questioned people from the United States, Argentina, and Korea (Sanchez-Burks et al., 2003). When they were asked whether they agreed that conflicts or disagreements related to a team's task would harm the team's performance, there was no significant difference in opinions among the three countries. But when he asked the same question about relationship or interpersonal conflicts, Americans were far more skeptical than people from the other countries about whether

[1]The presenter refers to John Calvin, the French theologian and pastor during the Protestant Reformation and father of the theological system of Calvinism.

such conflicts would negatively affect a team's performance. The Americans were far less likely to worry about interpersonal conflicts hurting a team than task-related conflicts, whereas the Argentinians and Koreans were more likely to point to interpersonal conflicts as a problem for a team. "This shows up when you ask people, 'Should you try to resolve the conflict?' If it's a relationship conflict, Americans are less likely than other groups to say, 'Yes, this is something that we should try to resolve.' Instead, they opt for 'Let's just press on and get through this.' It's not as necessary to focus on it."

Similarly, when people are asked if they would join a group of "dream team" experts even if it is clear that the team members are not going to get along, Americans are far more likely than Chinese, Koreans, or Japanese to say that they would join (Sanchez-Burks et al., 2008).

Thus, Sanchez-Burks said, how people think about workplace relationships affects not only their communication styles and how much attention they pay to what other people are saying, but also how they think about conflict. Americans are far less likely to worry about interpersonal conflicts at work than are people from other cultures, and that has clear implications for teams consisting of people from different cultures.

"What we found," Sanchez-Burks said, "is that if a team differs in their beliefs about conflict and then conflict actually starts to occur, they have metaconflict, or conflict about conflict. One person will say, 'Let's just press on,' and the other says, 'No, we need to resolve this.' 'No, let's just press on.' 'No, I told you it doesn't matter.' And now they're fighting about fighting. We have data showing they don't even know what they were arguing about to begin with, but those differences in beliefs about conflict are leading to additional conflict."

Emotional Aperture

Switching gears, Sanchez-Burks then described a second characteristic that plays an important role in communication and conflict: emotional aperture (Sanchez-Burks and Huy, 2009).

To describe emotional aperture, he began with an incident captured by a journalist on film which involved Colonel Christopher Hughes of the 101st Airborne Division during the 2003 invasion of Iraq. Colonel Hughes commanded a battalion travelling to the Grand Mosque of Ali in the holy city of Najaf, in order to coordinate humanitarian aid distribution with a local cleric. In front of the mosque, the battalion encountered a crowd that Colonel Hughes sensed was on edge and close to turning hostile, and he felt that the wrong move on the part of the soldiers could lead to violence. His response was to order his soldiers to smile and point their weapons to the ground. Surveying the crowd, he could tell that the tension had been

defused somewhat, but not enough, and he had his men turn around and leave, to come back another day.

"He was able not just to read the emotions of a single person," Sanchez-Burks said, "but to read the distribution of emotions in a group, in real time," and to decide on actions based on that reading. This is what he refers to as emotional aperture: the ability to read the distribution of emotions in a group of people. Just as changing the aperture of a camera makes it possible to bring an entire group of people into focus rather than just a single person, emotional aperture makes it possible to quickly get a picture of an entire group's emotional state.

This is important for two reasons, Sanchez-Burks said. First, as was the case with Colonel Hughes, it can be important to interpret a situation and anticipate how a group might behave. Since the collective emotions of a group influence its collective action tendencies (e.g., Bartel and Saavedra, 2000), it is not enough to observe what one or two people are feeling. It is important to be able to judge the emotional state of the group as a whole.

Second, emotional aperture is an important skill for anyone who is leading a group. "You may be more effective as a leader if you're able to understand how the group is behaving," Sanchez-Burks said. For example, if people are reacting to what you've said in a variety of ways, it may be that you're being very confusing. If the group members are all contemptuous, they may be on the verge of revolt. If they're all patiently pleasant and listening to you, you may have established some trust. And these things can change from minute to minute, so it is important to be able to sense the mood of the group in real time.

Sanchez-Burks has developed tests for emotional aperture, and he has found that it is related to one's ability to read the emotions of a single individual, but only modestly. One's ability to capture information holistically is a more important component of emotional aperture.

He has also studied which types of mistakes in reading a crowd matter the most. "The most dangerous errors you can make when reading the room are to overestimate the positive or underestimate the negative," he said. "That is, you need to be sensitive to the prevalence of negative affect in the room."

The research on both relational attunement and emotional aperture has implications for what it takes to be successful in communicating and working with people from other cultures.

"High levels of relational attunement can be used to increase coordination and rapport," Sanchez-Burks said. Indeed, simply paying attention to others' emotional states and cues is enough to have these effects. Conversely, low levels of relational attunement can negatively affect the other person's performance, particularly with people from non-American cultures. This was the case, for example, in the experiments in which the

interviewer did not engage in nonconscious rapport with the subject. "They get nervous, they get anxious, and they perform worse, so if you're trying to work and collaborate with people from other cultures, your tendency to simply focus on the task could influence their performance, which can then lead to disappointment, and it can spiral downward."

At the same time, low levels of relational attunement can increase miscommunication. This is particularly likely for Americans when they are at work on a task. Ironically, Sanchez-Burks noted, Americans are less likely to have such problems outside work, when the stakes are lower.

Similarly, emotional aperture is an important skill to have when working with groups of people from other cultures. It allows a person to grasp how a group is reacting, and how a person reads a group will affect how the group sees that person. Someone with little emotional aperture is likely to find it much harder to be successful in dealing with groups, either from other cultures or even his or her own.

CULTURE AND ATTENTION

The next speaker, Shinobu Kitayama of the University of Michigan, continued with and expanded on the theme of the previous talk. Americans, he said, see the world differently than people from many other cultures, particularly Asian cultures, and the differences arise from physical differences in the wiring of the brain.

The difference that Kitayama focused on was the attitude, common in the United States and Western Europe, that people are mainly independent entities (Markus and Kitayama, 1991). According to this mindset, Kitayama said, a person is defined by such internal attributes as goals, preferences, attitudes, and personality traits. People have relationships with other people, of course, but these relationships are generally seen as secondary to the primary identity, which is the self.

In other parts of the world, including Asian cultures, the more prominent perspective is to see people as interdependent, with relationships being much more important to the definition of the self. A person tends to define himself or herself more in terms of family, friends, coworkers, and various others.

There is no black-and-white division between the cultures, of course. Asian cultures do include a conception of the self as an independent entity, although that model is much less salient than the interdependent-self model. And people in the United States and other Western cultures do recognize the importance of relationships and other people. But the dominant models differ from culture to culture.

This difference in attitudes about the self leads to a number of behavioral and cognitive differences. One of the best studied of these is the

phenomenon known as fundamental attribution error, which Kitayama defined as "a tendency to draw very strong inferences about the essence of the person when you are seeing the person behaving in one way or the other, even when there are obvious situational constraints" (e.g., see Choi and Nisbett, 1998; Miyamoto and Kitayama, 2002).

To illustrate, he offered the example of a man giving up his seat on a crowded train to someone else. An observer might draw the conclusion that this is a very nice person, and that it was the person's fundamental niceness that led him to give up his seat. But that conclusion would be ignoring a variety of situational forces that might have played a role. Perhaps, for example, his boss was on the train and he wanted to impress the boss.

This sort of error has been examined in a large number of studies, Kitayama said, and the past two decades of research indicate that this fundamental attribution error is likely to be a cultural characteristic, one that is more common in Western cultures. The question, then, is why. Why is it widespread in the United States and relatively rare in Asian countries?

One possibility is that the likelihood to commit fundamental attribution errors is a product of the Western tendency to see a person as defined by his or her internal essence. If a person is an independent entity, then it makes sense to interpret his or her actions as the product of the person's internal traits rather than the product of externalities—that is, to commit a fundamental attribution error. Conversely, a person whose mental model sees people as interdependent is more likely to look for situational forces to explain their actions and less likely to assume that an action is a product of a person's inherent traits.

To test this possibility, Kitayama looked at a phenomenon called spontaneous trait inference. As an example, he described a test in which subjects consider a woman who has tested her smoke detectors before going to bed. If the subject concludes that the woman is cautious, that is a case of spontaneous trait inference. Psychologists have shown that this is a spontaneous phenomenon that happens automatically, even unconsciously. That is, the subject concludes that the woman is cautious without ever going through a conscious, logical thought process.

If the cultural difference in the tendency to make fundamental attribution errors is a product of the difference conceptions of the self, independent versus interdependent, then there should also be a cultural difference in spontaneous trait inference. People from cultures who see the self as independent will subconsciously interpret actions as a product of a person's fundamental traits, whereas those from cultures who see the self as interdependent will not be so likely to attribute actions to particular character traits.

Psychologists have developed a number of ways to test for spontaneous trait inference, Kitayama said, and he used some of these methods to

examine the phenomenon cross-culturally. In one experiment, he looked at subjects' brain responses with an electroencephalograph (EEG). In the first phase, the subjects were shown pictures of faces paired with behaviors—the face of the woman who had checked the smoke detectors before going to bed, for example. "In the second phase of the study, each of the stimulus faces was used as a prime, so it was presented very briefly as a fixation point, which was followed by one word." In some cases, that one word could describe the behavior of the woman: "cautious." In other cases, the word was not a match to her behavior: "careless." And in still other cases, the word wasn't a real word at all: "strusse." The subject was asked to say whether the string of letters was a word or not.

If there had been spontaneous trait inference when the subjects were first shown the photos of the faces and the behavior, it should have been easier to recognize the words that matched the behavior, Kitayama explained, and so there should be a difference in response to the words that matched and the ones that didn't. And this is exactly what happened with the European American subjects—there was a clear difference in EEG patterns between the responses to words that matched the photos and those that didn't. But there was no such difference among the Asian American subjects. There was no evidence of spontaneous trait inference in this group.

Kitayama also gave the subjects a questionnaire designed to test whether they saw the self as independent or interdependent. In general, as expected, the European Americans were more likely to be on the independent side of the spectrum, and the Asian Americans fell more on the interdependent side of the spectrum. Then Kitayama compared the subjects' places on the independent-interdependent spectrum with their responses in the EEG part of the experiment. There was a clear correlation between the two: no matter whether they were European Americans or Asian Americans, the subjects who saw the self as independent were most likely to exhibit spontaneous trait inference, and those who saw the self as interdependent were least likely to make unconscious assumptions about traits.

Kitayama suggested that these cultural differences are likely to be wired into the brain by the experience of growing up in a particular culture. "Recent work on brain plasticity and epigenetics—that is, gene expression—has suggested that some of such deep mechanisms of the mind can be influenced or even fostered by experience, and experience, of course, is patterned by culture in human societies. Accordingly, the human mind may be shaped by culture to some extent, and maybe to a far greater extent than has ever been imagined before."

"Jugglers juggle, and, as they juggle, their brains change. Humans are cultural animals, they act in a cultural world, and, as they act in accor-

dance with cultural scripts, their brains change as well. That's the basic message."

What are the implications for the Department of Defense missions? The main lesson, Kitayama said, is for Americans working with people from other cultures to keep in mind the fact that Americans tend to have a set of implicit assumptions about people and how the world works that are quite different from the implicit assumptions common around the rest of the globe. In particular, he said, Americans are WEIRD. "This is not my invention," he said. "This acronym really stands for Western educated industrialized rich democratic," and it was proposed in an article in the journal *Behavioral and Brain Sciences* (Henrich et al., 2010).

"Essentially, WEIRD people have a strong commitment to independent models of the self, which highlight, among other things, personal choice as opposed to communal choice, control efficacy and influence as opposed to adjustment and accommodation, self-promotion as opposed to self-improvement, self-esteem and self-actualization as opposed to honor and public affirmation, and pursuit of personal happiness as opposed to communal happiness."

An important first step in dealing with people in other parts of the world, Kitayama said, is to understand the existence of this mindset and to make allowances for it. This is easier said than done, however. "What makes the situation very, very hard is the fact that cultural models are not just cognitive, but they are ingrained and embodied and therefore they are extremely highly tacit and implicit." A person can recognize logically that he or she sees the self as an independent entity and is prone to making spontaneous trait inferences, but because these things happen subconsciously, they seem completely normal.

For these reasons, Kitayama said, it is particularly important for Americans to learn as much as possible about other cultures. "I am convinced multicultural competence is really, really important." It is also important to develop an openness to other cultures, and part of that openness would be the ability to suspend WEIRD habits of heart and mind. "It's not easy," he said. "That's such a natural, spontaneous habit that suspending them would require a lot of training." Ideally, everyone would be multicultural, multilingual, and able to think in multiple frames of mind, switching back and forth among them as necessary. With that capability, it would be possible to move beyond the WEIRD way of thinking and have a real meeting of the minds with people from foreign cultures.

6

Persuasion

Persuasive communication is a critical element in the success of a variety of missions before, during, and after combat operations. Even in a single culture, different people will respond differently to different persuasive techniques, and when people are from dissimilar cultures, the complications multiply. Although facts may be important, perceptions may be more important. Thus it is critical, not only for effective communications but also for building trust and respect among local populations and counterparts, to be aware of the ways that culture may influence both the approaches to and the perceptions of persuasive communications.

The guiding question for this panel was, How is the persuasive appeal of conversations, messages, and activities that are intended to foster social change affected by sociocultural factors? Offering their perspectives on this question were three presenters: Jeanne Brett, a researcher in the area of negotiation and dispute resolution, who discussed the differences among "face," "dignity," and "honor" cultures and offered insights into how and why the effectiveness of direct versus indirect confrontation for resolving disputes differs across these cultures; James Dillard, who described research on the power of narratives to influence across different cultures and how narrative influence may often be effective on a subconscious level; and Brant Burleson, who focused on the cultural similarities and differences in the types of behavioral strategies that people use to seek support from and demonstrate support to others.

DIRECT AND INDIRECT CONFRONTATION

Jeanne Brett of Northwestern University discussed how confrontations are handled differently in different types of cultures. First, however, she noted that in her work she speaks about cultural prototypes, not cultural stereotypes. "The idea of a cultural prototype," she explained, "is that there is a central tendency that describes the culture, but by no means are we expecting everyone—every group, every organization, every institution in that culture—to be exactly alike." In other words, understanding a culture does not make it possible to predict the actions of all individuals in that culture, but it does make it possible to predict how people in that culture will behave on average.

With that preface, Brett introduced the three particular types of cultures that she studies in her research—(1) face cultures, (2) dignity cultures, and (3) honor cultures—and explained the attributes of each type (for an example of her research, see Brett, 2007; Brett et al., 2007).

Asian cultures tend to be face cultures, she said. "This means that Asians' sense of self-worth is in large part extrinsically defined by what others think. A person's face is the respectability or the deference that a person can claim by virtue of his or her relative position in the social hierarchy and through proper fulfillment of his/her social role in that culture." Thus, she said, face cultures tend to develop in societies that have stable hierarchies and in societies that have clearly defined and reliably imposed social norms. Such cultures, in which behavioral expectations are enforced through monitoring and sanctions, are referred to as tight cultures, and they leave little room for individual interpretation or improvisation.

As an example of how expectations are enforced in a tight society, she told the story of an American graduate student who was visiting Tokyo with his wife and started to cross the street against a red light. He felt a tug at his sleeve and looked down to see a little Japanese boy pulling him back onto the curb. "Here's this obvious foreigner who does not understand the tight culture rules, and so it's up to all members of the society to monitor, enforce, and reinforce them."

The second type of culture, the dignity culture, is exemplified by the culture in the United States. In a dignity culture, a person's sense of self-worth tends to be intrinsic; it is determined by the person's own beliefs about his or her worth and not by what others think. Furthermore, people in dignity cultures tend to believe that they are, at least theoretically, socially equal to one another. "Dignity cultures tend to be loose cultures in which social norms are relatively flexible and informal," Brett said, "and in loose cultures, social expectations permit individuals to define the range of tolerable behavior within which they exercise their own

preferences." In a loose culture, a person can decide for himself or herself whether to cross against the red light if there is no traffic.

The third type of culture, the honor culture, may be dominant in Middle Eastern countries. In such cultures, a person's sense of self-worth depends both on the person's own intrinsic estimation and on the recognition of that worth by society. "Honor cultures tend to develop in competitive environments of rough equals," Brett added, "and as a result, honor is always in flux, lost and gained through cycles of competition." An honor culture will generally have a combination of tight and loose cultural characteristics, with the social norms being clearly defined and strictly imposed within the family and the clan but being relatively flexible and informal between families and clans.

Of course, Brett added, each of these three culture types is an idealization, and in reality a country's culture will exhibit characteristics of each. Americans, for example, will take face and honor into account, as well as dignity. "The difference between cultures is a matter of emphasis and a matter of the context in which you find yourself."

Next Brett discussed the difference between direct and indirect confrontation. When conflicts arise, people have the choice of dealing with them directly, making their concerns very clear and explicit, or indirectly, indicating in a subtle way that there is a problem and using more implicit communication to get the message across.

As an example of indirect confrontation, she repeated a story told to her by one of her students.[1] The American student, Jim, was living in Hong Kong and had contracted with a Chinese manufacturer to produce a number of bicycles that he was selling to a German buyer. When he visited the Chinese factory, Jim took one of the bikes on a test ride and discovered that it rattled—something that would be unacceptable to the buyer. "Never mentioning the rattles, Jim talked generally to the factory manager about the German buyer's expectation of quality," Brett said, "and at the end of the day, Jim went back to Hong Kong and waited to hear from the German buyer. A month later the German buyer contacted Jim to let him know that they were delighted with the bicycles and wanted to reorder."

If Jim had chosen a direct confrontation, he would have pointed out the rattling problem to the manager, told him it was unacceptable, and directed him to fix it. Instead, Jim left it up to the manager to decide what had to be done, relying on his comment about the buyer's expectation of quality to make it clear what he wanted. In this way he "gave face," signaling his respect for the factory manager, whereas a direct confrontation

[1]The story is printed, with permission, in Brett, 2007.

would have been interpreted as a sign of disrespect. "The success of Jim's indirect strategy," Brett said, "was in giving face to the factory manager, signaling that he respected the factory manager's expertise and trusted his integrity to make the repairs."

The story illustrates an important point, Brett said: that indirect confrontations are often the most effective way of resolving a dispute, as they do not threaten the face of any of the participants. Empirical research has shown that face giving is generally effective in resolving conflicts in both China and the United States, whereas face attacks are generally not. "Giving face in negotiation cues reciprocity, leading to problem solving and agreement," she explained. "Face attacks in negotiations, such as claims, threats, and other aggressive verbal strategies, generate retaliation, counterthreats, deception, and impasses."

There are various forms of indirect confrontation that can be used to avoid attacking face. One can, for example, ask questions or tell a story as a way of pointing out a problem without having to state it explicitly. And using a third party is an approach to managing conflict that is frequently used in face cultures. This may be because face cultures are typically hierarchical, so there is usually a third party with the hierarchical authority to resolve the conflict. The key is that when such a third party decides, neither of the original parties loses face because neither has confronted the other directly, so neither has backed down to the other directly.

Third parties are also used to resolve conflicts in dignity cultures like the United States, Brett noted, but the purpose of using the third party is quite different: it is to expedite the resolution of the conflict, not to save face. Still, she commented, "face saving is exactly what effective mediators in dignity cultures do."

Finally, Brett asked, will indirect confrontation work as a means of resolving conflict in an honor culture, such as those in the Middle East? The research she described looks only at face and dignity cultures, but in theory, she said, indirect confrontation should also be effective in honor cultures. "In honor cultures, self-worth is a function of both the person's own estimation of self-worth and the recognition of that worth by society. This suggests that in honor cultures, just as in face cultures, social respectability is extremely important. So conflict management that signals social respectability should be more effective than conflict management that does not." Furthermore, although honor cultures also have an element of self-worth that is viewed as intrinsic, this should not make indirect confrontation any less useful, as research has shown that face giving is important even in dignity cultures. Thus, she concluded, indirect confrontation should prove to be a useful approach to resolving conflicts in Middle Eastern cultures, just as it is in Asian and Western countries.

THE POWER OF STORIES

As James Dillard of Pennsylvania State University, the next speaker, noted, most people think of persuasion in terms of situations in which a person makes it clear up front what his or her position is and then sets out to make a case for that position—through an opinion piece on the editorial page, a face-to-face discussion, or some other formal communication. Dillard focused on a different type of persuasion, what he called "persuasion absent intent to persuade," and how research in that area might be applied to helping the U.S. military in their overseas missions. In particular, he focused on the persuasive power of stories.

The telling of stories has a number of functions, Dillard said. First, stories tell people what to expect in various situations so that the listener can benefit from the experience without having to go through it personally. Stories also illustrate and impart values, indicating to the listeners the right way and the wrong way to do something.

They also create and maintain shared identities, Dillard said. "Whether you're entering a military organization and your identity is to become a warrior, whether you're entering citizenship into a country and you're going to incorporate this idea of a citizen, or whether you're being recruited into a terrorist group and the story is one of how your sibling or your friend has been abused by the oppressing power, these are all stories that help us create our identities, that tell us who we are, and that maintain those identities throughout our lives, or as long we connect with that group of people."

Although the particular stories told vary from culture to culture and group to group, the functions of the stories are very much the same everywhere, Dillard said.

There has been a great deal of research on how stories—or narratives, as they are usually referred to in the literature—affect people's beliefs. At least 60 quantitative empirical studies have been conducted, he said. Some have been experimental, others correlational. The experimental studies generally ask the participants to read something and then measure the effects of that reading. "There's a study, done about 10 years ago now, in which people were asked to read a story about a woman whose sister was killed at a shopping mall by a psychopath. They were then asked to make judgments about how frequently violence occurs at malls across the United States and how likely they were to be attacked if they would be shopping at a mall." The studies found, Dillard said, that the more people were engaged in the story—the more that they themselves became a part of the story—the more likely they were to believe that such violence was likely to happen to them and to others at a mall. Generally speaking, the research has found that such stories can change people's perceptions of the probabilities of how likely various things are to happen.

Another type of research, correlational studies, often focuses on people's reactions to television or some other visual entertainment. One study found, for example, that watching the television show *Desperate Housewives* changed people's beliefs about breast cancer. Other research has focused on people who have watched *Lie to Me*, a television show roughly based on the work of psychologist Paul Ekman, who has studied how to detect whether a person is lying from their facial expressions and body movements. "People who watch a lot of that tend to believe that other people are trying to deceive them more often, and they tend to believe that they're better at detecting deception," Dillard said.

One of the reasons that stories are so effective in changing people's beliefs and opinions, Dillard said, is that they do not appear to the listener or reader to have any persuasive intent. When people recognize that they are being persuaded, they often resist, particularly if they are being asked to change their minds. But when the intention to persuade is removed, people's natural defenses against persuasion are reduced. Furthermore, stories have the ability to engage people, both cognitively and emotionally, so that they get lost in the narrative. Once they are engaged in this way, they are more open to accepting new ideas.

Dillard described research done at Pennsylvania State University with his colleagues Mary Beth Oliver, Daniel Tamul, and Ken Bae that looked specifically at the effectiveness of narratives compared with public policy news articles. Participants were asked to read newspaper-style items that were in one of two formats. Either they were narratives told from the point of view of a particular person, or they were written as policy news articles. The two formats were of the same length—about 500 words, so that they took about 100 seconds to read—and had the same information.

Each of the items was written about a person in one of three stigmatized groups—immigrants, elderly persons, or prisoners. The people who read about a prisoner heard, for example, that he had contracted cancer and hadn't been able to get health care. In the narrative version, the prisoner spoke directly, saying something to the effect of, "The judge gave me 25 years, but God gave me life." Then the story went on to show how the prisoner had only about six months to live. In the policy article, the same information was provided to readers, but it was written in the third person.

The goal of the study, Dillard said, was to see how people's attitudes toward and opinions of these stigmatized groups were affected by reading the two types of items.

"We asked people how these stories made them feel: happy, sad, if they experienced compassion, did they experience anger. We asked them about their attitudes toward helping these groups, how important

it would be to help immigrants, how important it would be to help the elderly, how important it would be to help prisoners. We asked them about their intentions to discuss these particular groups with their friends and family, whether they were likely to seek more information about the group, whether they would sign a petition favoring societal action that would help the group or donate money to the group."

The results are shown in Figure 6-1. In the figure, the height of each bar indicates how favorable the subjects' intentions were toward the members of a particular stigmatized group. As the figure shows, the subjects generally had more favorable intentions toward the elderly—they were more likely to try to help them, to seek more information about them, and so forth—than toward immigrants, and they had more favorable intentions toward immigrants than toward prisoners. For the purposes of the experiment, however, the important comparisons are between the groups of subjects who read the narrative and the groups of subjects who read the policy news article. In each case, the subjects who read the narrative had significantly more favorable intentions toward members of the stigmatized group than did subjects who read the policy news article. "I emphasize," Dillard said, "that these are really brief news stories, the kind that you're likely to encounter over breakfast."

What had caused the difference in the subjects, the researchers found, seemed to be differing levels of compassion. The subjects who had read the

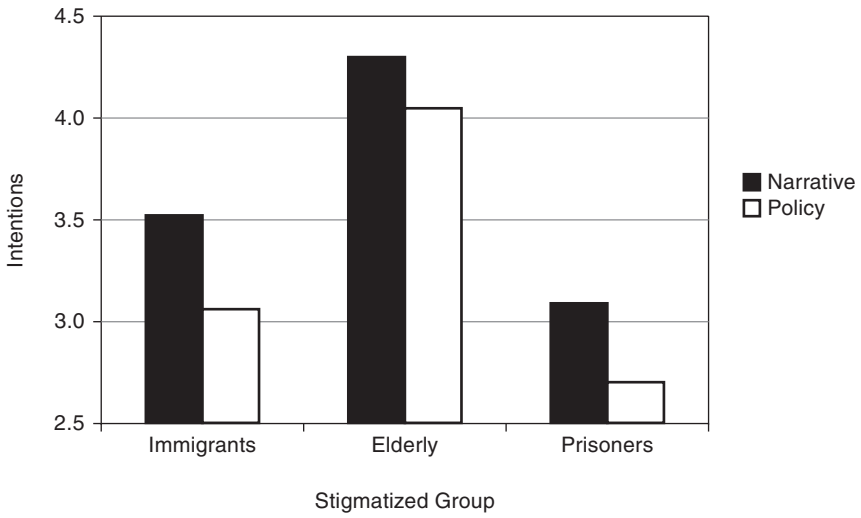


FIGURE 6-1 Attitudes based on narrative compared with policy news formats.

narratives felt more compassion toward the people in the stories than did the subjects who read the policy news article. Furthermore, the researchers also had a behavioral measure in the experiment—how much information the subjects sought out on the stigmatized groups they had read about—and they found that the behavioral measure showed a difference as well. In short, the subjects were not simply reporting different levels of interest in the stigmatized groups; their behaviors differed as well.

In other situations, it might be an emotion other than compassion that is engaged, Dillard said. The narratives in this experiment were designed to trigger compassion, with such details as a prisoner dying of cancer who was unable to get medical care; other narratives would engage different emotions. "But I want to make the broader point that it's emotion and engagement and immersion that are brought about by stories, and, once you're in the story, things change, attitudes change, intentions change, and, ultimately, behaviors can change."

How might the Department of Defense put these insights to work? Dillard suggested a three-step approach: (1) identify the important narratives supporting an enemy, (2) disrupt the narratives or portions of them, and (3) create counternarratives. For example, he said, one of the stories that Al Qaeda is promoting is "a view of history in which the East has to struggle against the Western oppressor, and bin Laden is a sort of mythic character on the order of Odysseus or other heroes that battle against big odds." To counteract this, one might "try to take a part of that narrative away and make it dysfunctional, or create counternarratives."

As an example of how this might work, Dillard spoke of the narratives that terrorists are promoting of themselves as "selfless, pious persons who are devoted to a larger cause. Why else would you give up your life? And that's a very positive identity that you would do this thing for your group, make such a sacrifice." Terrorists are also representing themselves as sophisticated experts with nerves of steel, the sort of people who can plan and carry out operations like the 9/11 attacks on the United States with tremendous success. "These are great recruiting stories," Dillard said.

So how can they be neutralized? By offering a different and equally compelling narrative about the terrorists. "We heard yesterday [at the workshop] that the Taliban has basically become a drug organization," Dillard said. "Now there's a counternarrative—these people are not pious experts, they are engaged in criminal activity." Another counternarrative would be the notion of terrorists as bunglers: "the bomb that didn't go off in Times Square, or the jockstrap jihad guy who stuck the bombs in his underwear and they didn't go off." Indeed, Dillard said, to judge from the reports in the popular press, "about half the time, these guys don't blow up anybody but themselves."

Telling such stories can neutralize the power of the other side's narratives, Dillard said. More generally, it is important to understand the narratives of the other side, whether they are from newspapers, websites, children's fables, or whatever, and understand how they see themselves. With that understanding, it becomes possible to offer another point of view, one that is more favorable to one's own side.

SUPPORTIVE COMMUNICATION

In the final panel presentation, Brant Burleson of Purdue University discussed supportive communication and how responses to such communication vary by culture. Supportive communication could be important to the military, he suggested, as a way of "winning hearts and minds."

Supportive communication is a form of social support, which Burleson defined as the provision of emotional, informational, or instrumental resources in response to the perception that others are in need of that aid. Social support includes both tangible and intangible forms of assistance, so providing food, money, transportation, or health care in a time of need would be a form of social support. "In contrast," Burleson said, "supportive communication deals with the intangibles, providing emotional support, informational support, or motivational support" (for more information on the definition of social support, see Cohen et al., 2000).

Burleson's research group has identified six different types of supportive communication: (1) comforting, (2) grief management, (3) esteem support, (4) informational support, (5) motivational support, and (6) celebratory support. Comforting is making people feel better about everyday hurts and disappointments, in contrast with grief management, which deals with situations of bereavement or other kinds of major loss. Esteem support is aimed at lessening the blow when a person has experienced some failure or social rejection or committed some kind of transgression for which the person feels guilt, embarrassment, or shame. Informational support is advice intended to help a person struggling with a problem or decision. Motivational support occurs when one is encouraging some change in behavior. And celebratory support includes things like celebrating peoples' achievements or transitions, their good luck, and their relief about certain kinds of outcomes.

One of the main reasons why people are interested in studying social support, Burleson said, is that is has been found to increase well-being, both psychological and physical. But of more interest for the purposes of the workshop, he said, is that social support and, in particular, supportive communication are known to enhance relationship well-being. "That is, it can become a major vehicle for winning hearts and minds," he said, "Relationships can be initiated, intensified, and maintained through the exchange of

supportive communication." This has been found to be true in essentially all cultures that have been examined, he said. "There may be some cultures out there where support doesn't work, but I don't know of any."

Conversely, the wrong sort of "support" can be harmful. As an example, Burleson told a story about a woman who had lost her daughter 17 years earlier. That daughter's older sister had recently gotten married and had a child of her own, which made the woman very happy but also brought back sad memories of losing the younger daughter years before. When she confided to a coworker these mixed feelings, the coworker's response was, "Seventeen years ago? Get over it. Come on, that's ancient history. Forget about it!"

While the coworker may have thought that she was trying to help by telling the woman she'd be better off just forgetting about the past, it wasn't helpful. It had hurt the woman and made her feel somewhat estranged from her coworker.

There is a great deal of research, Burleson said, that shows that when support misfires, it can be hurtful and damaging. "Efforts to provide support that go awry can exacerbate unpleasant affect states, inhibit effective problem solving, foster unhealthy dependencies, heighten stress levels, deepen depression, undermine relationship satisfaction, and damage physical health."

The implication is that it is important to know what works and what doesn't. Which types of messages reliably provide the various kinds of support—emotional support, grief management, and so on—and which types of messages will generally prove unsuccessful and even counterproductive?

These questions underlie the research agenda that Burleson's group has been pursuing for the past several years. In particular, he said, they are attempting to answer six questions about supportive communication:

1. What are the features of more versus less effective supportive message strategies?
2. When does the quality of message really matter?
3. Why do messages work, and what are the mechanisms by which they work?
4. How much cultural variation is there in what works?
5. Why is there cultural variation?
6 What are the implications for cross-cultural communication practice and communication skills training?

Research has found a variety of properties that increase the effectiveness of a supportive message, including such things as using politeness to mitigate the face threats inherent in providing support (Goldsmith,

1994), matching the type of support offered to the situation (Cutrona, 1990), and conveying empathy, genuineness, and warmth (Rogers, 1957). Much of Burleson's research has focused on another property, the degree to which a supportive message is person-centered, that is, the extent to which the feelings and perspective of the recipient of the message are acknowledged, elaborated, explored, and legitimized (Burleson, 1994).

In general, Burleson said, research has shown that highly person-centered messages are experienced as more sensitive, helpful, and effective than low person-centered messages. This is not always true, however, as there are some circumstances in which the quality of the message doesn't seem to matter much. In the case of a fairly mild upset, simply receiving some kind of supportive message from a friend is what is important, and the characteristics and quality of that message make little difference. At the other extreme, in the case of extreme emotional upset, it is also the case that the quality of the message is not particularly important because the person is not able to pay much attention to its contents.

In every culture, Burleson said, highly person-centered messages are evaluated more positively and produce better outcomes than low person-centered messages, but within this broad pattern, there are cultural differences. Figure 6-2 shows the results of one study of such differences. Groups of Chinese and American subjects were asked to rate the helpfulness of supportive messages that were low person-centered, moderately person-centered, or highly person-centered (Burleson and Mortenson,

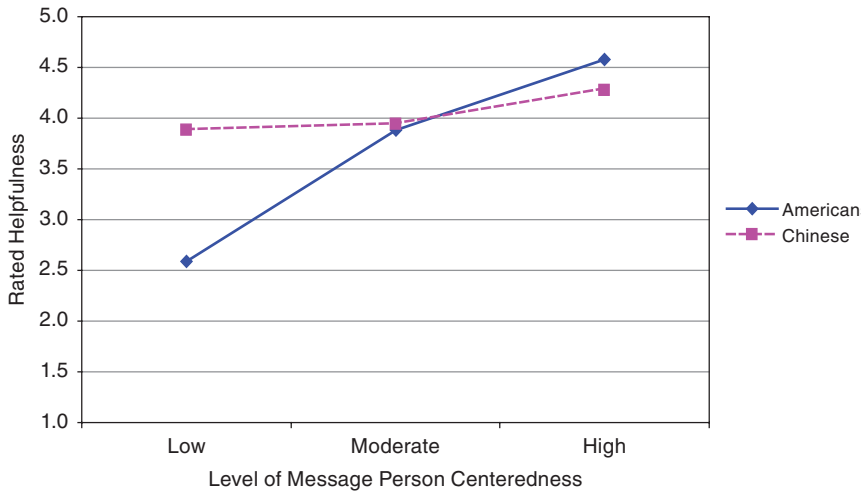


FIGURE 6-2 Perceived helpfulness of comforting messages.
SOURCE: Figure created from data contained in Burleson and Mortenson (2003). Data used with permission conveyed through Copyright Clearance Center, Inc.

2003). The Chinese and American subjects were very similar in their ratings of messages that were person-centered to a moderate or high degree, but the Americans did not find low person-centered messages to be particularly helpful, whereas the Chinese found them almost as helpful as highly person-centered messages.

Why should that be the case? "Our hypothesis," Burleson said, "is that Americans focus more on the content of the message, which is why they discriminate more between low person-centered and high person-centered messages. In contrast, Asians focus more on the source of the message, the helper, and the relationship they have with that helper and give less attention to the actual content of the message." The technical terms for the two types of cultures are high-context cultures for Asian and other cultures in which people pay more attention to the context and less attention to the content of the message, and low-context cultures, which do the opposite (Hall, 1976).

More specifically, Burleson's group has developed what they refer to as a "dual-process model of supportive communication outcomes" to explain why comforting communication has different effects for different people and different cultures (Bodie and Burleson, 2008; Burleson, 2009, 2010). In essence, the model predicts that the effectiveness of a supportive communication will depend not only on the features of the message—both its content and its context—but also on how thoroughly those features are processed by the recipient of the message. Thus the content of a message will have the strongest effect when it is processed extensively, as happens in low-context cultures, and will have less effect when processed superficially, as happens in high-context cultures. Conversely, the external features of the message—who sent it, what the relationship is between the sender and the recipient, and so on—will be most important when the content of the message is processed less extensively and least important when the content receives a great deal of attention.

The model is still mostly speculative, Burleson said, and needs to be tested experimentally, particularly the idea that the cultural differences are essentially a product of differences in the processing of messages. His group is hoping to perform some of these tests, and it would also like to manipulate processing motivation to see if that could attenuate the differences between cultures. Theoretically, if people in the studies could be induced to focus more on processing the content of the messages, it should diminish the cultural differences in how helpful comforting messages are perceived to be.

"Pretty clearly," Burleson concluded, "we would like to think that this work ultimately has some deliverables for the Department of Defense, particularly in terms of communication skill training and training those who are on the ground in how to be supportive to those that they encounter."

7

Modeling Sociocultural Behavior

The workshop's fifth panel was devoted to a discussion of various methods and tools used to apply sociocultural knowledge and understanding to real-world situations and, in particular, to the issue of computational modeling of human behavior. As the panel's moderator, Robert Albro of American University, noted, modeling phenomena from the human, sociocultural, and behavioral sciences is quite different from modeling phenomena from the physical sciences, and these differences lead to a variety of questions and issues that need to be addressed in order to develop useful models of human behavior.

This final panel had a different format from the four earlier ones. Each of the four panelists prepared a paper that was available online[1] to the workshop attendees in advance (see Appendix B for an abstract of each paper). During the panel discussion, each paper author—Laura McNamara, Mark Bevir, Robert Sargent, and Jessica Glicken Turnley—gave a short overview of his or her paper; Albro, who had prepared a response paper in advance, then commented on the papers, summarizing and synthesizing their main points; and, finally, the workshop participants were given the opportunity to ask questions and to make comments.

As Albro noted in his response, one overarching theme to emerge from the papers and the presentations is that the most effective way to

[1]The complete papers are available on the workshop web page http://www7.nationalacademies.org/dbasse/Committee%20on%20Unifying%20Social%20Frameworks.html [October 2010].

use models of sociocultural knowledge and behavior is not as "stand-alone problem-solving technologies" but rather as part of a broader effort to understand human behavior, in which the models are used to offer insights, trigger ideas, and generate new stories as a way of aiding decisions and judgments made by humans. The panelists offered a wide range of ideas and approaches to thinking about models, which, for the purposes of this chapter, are grouped into four broad categories: interpreting the outputs of modeling, how to make sense of data, meaning in models, and the limits of models.

INTERPRETING THE OUTPUTS OF MODELING

The first broad issue can be roughly described as how to interpret the outputs of models of sociocultural knowledge and behavior. In her paper, "Why Models Don't Forecast," Laura McNamara of Sandia National Laboratories noted that some people think of models and simulations as predictive technologies. "I'm not joshing when I say this: I've actually heard people talk about the importance of developing some kind of a computational crystal ball." But models don't forecast; people do. And the reason is that any sort of modeling is always going to involve human judgment in various areas, from the types of questions to address and what to include in the model to how to deal with data and how to interpret the output of the model.

Robert Sargent of Syracuse University noted that there are two major types of models: causal models and empirical models. Causal models require sufficient knowledge about the system being modeled, including how the system works, the relationships among the various components of the system, theories about the functioning of different components, and so on. Empirical models, by contrast, are constructed from data and do not depend on any knowledge of the system; the system is a "black box." First, sufficient amounts of system data are collected, next the data are researched to find relationships among the data, and then an empirical model is constructed using these relationships. Sargent said that causal models are preferred over empirical models for a variety of reasons, including that they use causal relationships instead of data relationships.

One of the major challenges in building models, McNamara said, is their verification and validation. Verification refers to ensuring that the model is internally consistent, that is, that the software code is actually doing what it is supposed to be doing. The validation, or ensuring that a model actually corresponds to some external reality, is trickier. One problem is the issue of referents: What aspects of the natural world is the model going to be checked against? The number of choices is prac-

tically unlimited, and the best choices are not always clear. A second problem is conceptual model validation. As McNamara explained, "In the social sciences, different people from different perspectives can bring complementary, but still quite different, perspectives to the same problem, and there is no independent arbiter to assess which one is 'right,' so the issue of conceptual model validation is always a matter of negotiation. A final problem facing the validation of a model is how one deals with uncertainty." None of these issues is well understood, McNamara said.

One of the clear themes that emerged from this panel was the difficulty—or impossibility—of separating a model of sociocultural knowledge and behavior from the people and organizations that have developed it. For example, Jessica Glicken Turnley of the Galisteo Consulting Group, Inc., and the Joint Special Operations University noted, in discussing her paper, "The Dangers of Rushing to Data: Constraints on Data Types and Targets in Computational Social Modeling and Simulation," that a model is not a representation of the entire world. It is a selection of parts of the real world, and that selection will reflect the judgments, the goals, and the biases of the people making it.

One way to think about this process of selection is that it is much like choosing an analogy or metaphor when one wishes to explain something or capture the essence of something. "One of the interesting things about analogies," Turnley said, "is that they allow you to see part of the world, but not another part of the world. They actually help constrain—or construct, depending on if you're positive or negative—which part of the world you see." As an example she offered the idea of the "human terrain," which is an analogy with geographic terrain.

"We're saying these two things are like each other in some way, and so you think of the human or the social dimension in the same way you think of geographic dimensions." In particular, geographic terrain is an artifact—it exists independently of any human interactions, and it is pretty much unchanged by most contact with humans. Generally, she noted, people tend to think of human culture in terms of interactions between people, who respond to each other and together create the culture: "It exists in the production, or the interaction, of people. It sort of exists in the moment." But if one thinks of human culture as "human terrain," as in an analogy with geographic terrain, one arrives at a very different view of culture, one that is more like a fixed landscape. Turnley said: "I can sort of float above it [culture] and touch it and not change it, and it doesn't change me."

The implication, she said, is that whoever determines that logic of selection for a model plays a major role in determining what the model user will see about the world. "My bottom line here is that creating and

developing and building a model is itself a creative process that then constrains what the model users subsequently see about the world."

"It's a sense-making exercise, and so we need to think about it in very different kinds of ways than we think about more analytic types of exercise—more as a creative product than an analytic product."

Given this view of models, Albro observed that the models should not be seen as technological black boxes "into which data are plugged and out of which meaningful results are self-evidently generated." This is particularly important, he continued, because of the way that modeling and simulation are often talked about in the context of decision making: "A given model's potential value is evaluated in terms of how useful it is [in] facilitating high-consequence decision making. In fact, models are given a primary role in moving 'from data to decision.' A danger here is that computational models acquire too large a role in decision making, rather than being understood as merely one feature among many of complex interpretive environments."

A better way to think about models of sociocultural knowledge and behavior, he said, is as part of a larger process in which models, modelers, and users interact. In particular, one should recognize that the key stakeholders in modeling are "meaning makers." Models should not be thought of as "approximations of poorly understood sociocultural realities but as theory-driven, partial and selective representations" that can help decision makers "generate new scenarios and new stories, to become parts of the encompassing and dialogically interpretive scene of decision making. Understood this way, models contribute to fluid frameworks for discussion rather than forecasting any particular sociocultural result."

HOW TO MAKE SENSE OF DATA

In modeling physical phenomena, data are generally straightforward and concrete: place and time, mass, velocity, temperature, pressure, and so on. By contrast, Albro said, "sociocultural information is better understood as interpreted and interpretable 'meanings' rather than as objective data that matches in clear-cut fashion with some aspect of the world." Thus in modeling sociocultural phenomena, the question of exactly how to define and interpret data is open to discussion and debate, and the four presenters offered different viewpoints and described a variety of difficulties that arise in dealing with sociocultural data.

Discussing his paper, "The Importance of Interpretation," Mark Bevir of the University of California, Berkeley, described data about sociocultural phenomena as "data about the webs of meaning that inform peoples' actions." And, since meanings are always forming webs—interacting with

other meanings and actions—they can never be properly isolated as individual qualities. This has various implications, he said.

"The first is that all data is inherently actually debatable, and any attempt to say that some data isn't debatable is merely a human position: 'We'll accept it if, say, the correlation is above this level, but not if it's below that level.' So when you hear something about wanting to have a fixed amount of data, that's quite problematic, because there's no point where you've got enough data or not got enough data. It's always us who decides what that point is; there's no absolute decision that makes that right."

Similarly, he said, there is no such thing as the right data or the wrong data. "We should grab all that we can. We should recognize we're never going to have a sufficient amount to be absolutely certain. We should just get what we can."

Robert Sargent, whose specialty is operations research, has a very different view of data. In the paper he prepared for the workshop, "A Perspective on Modeling, Data, and Knowledge," he wrote, "Data generally refer to some collection of numbers, characters, images, or audios that are unprocessed. Knowledge is obtained from data by interpreting the data or through processing the data." Structured data are used to build models. Unstructured data, such as videos, web pages, and texts of e-mail messages, must be converted into structured data by being processed in some way—counted, classified, compared, etc.—to become structured data prior to being used for building models.

In short, Albro commented, the presenters straddled an "epistemological divide" in their conceptualizations of data. "At issue across the panelists is whether, when referring to 'data,' we are referring to empirical sociocultural facts of some sort—as unstructured, raw, and connected to the world—or referring to always already interpreted meanings. This is not a trivial difference."

That difference has implications for how the data are affected by the modeling process. If data are, as Sargent sees them, empirical facts about the world, then processing those data does not necessarily cause them to lose any content and may actually add value by discerning various patterns. But if the data are the more rich sociocultural data discussed by McNamara and Bevir, inserting them into a model may strip them of some or much of their meaningful content.

Turnley specifically addressed this issue in her paper, writing: "Computational models require quantitative data, or (to put it another way), data that can be manipulated quantitatively. Much of the data collected about sociocultural phenomena are in narrative form. Furthermore, many of the targets of interest are abstract phenomena, such as beliefs, motivations, and the affective dimensions of behavior. . . . What has happened

in practice with these computational models is that context-sensitive ethnographic data is being converted into computationally manipulable data through the use of surrogates which strip it of context."

Albro commented that this poses a challenge for those who design and operate models of sociocultural knowledge and behavior, "how computational models can address the problem of richness, not just as a matter of adding layers of complexity, but, more importantly, so as not to efface meaningful context."

MEANING IN MODELS

Assuming that interpretative meanings are the basic unit in sociocultural knowledge, Albro said in his response, then an important question for modeling is where these meanings are to be found and what their relationship is with the data. That is, are data—particularly the sorts of raw, objective, and unstructured data that Robert Sargent described—prior to and distinct from meanings, or are meanings the only sort of data that will or should appear in models of sociocultural knowledge and behavior? Albro illustrated this question by comparing the divergent perspectives of Bevir and Sargent concerning what constitutes a meaningful unit of analysis.

Bevir's point of view is that any concept or proposition—as a datum—does not have "intrinsic properties and objective boundaries" and that explanations of sociocultural phenomena arise from tracing out and understanding the conceptual connections in "webs of belief." This, Albro commented, makes the conceptual boundary between data and meaning hard to locate, which in turn "poses a challenge to any effort to organize information into comparable units or sets, as available for standardized measure, or as subject to some kind of operation or manipulation."

Turnley, whose concept of sociocultural knowledge has a great deal of overlap with Bevir's, spoke of analogies as ways in which people interpret the world and thus create meaning, rather than as bits of preexisting knowledge waiting to be discovered. "In such accounts," Albro said, "we are invited to understand computational models as actively producing sociocultural knowledge rather than simply representing it." Meaning is created by people and their models.

"Sargent, however, describes data much differently," Albro continued. "He explains, for example, that quantitative variables are also qualitative, since they also contain all necessary qualitative information. In this scenario, variables are mutually exclusive and discrete vehicles from which information can be extracted. This sets up a very different state of affairs from that of Bevir and Turnley." In Sargent's view, data are understood as "vehicles of meaning" and "promise access to an objective reality divisible into standardized parts that already contain

their significance and which it is the purpose of the modeling process to simply extract and represent."

It is this view of data and meaning that is being implicitly accepted when people speak of applying data mining and data extraction as part of modeling work. In such efforts, Albro said, data are judged to be "good" or "complete" or "reliable" according to how easy it is to standardize them for comparison and to extract them uniformly. Similar goals are in play when people are interested in increasing the interoperability of models and making data fungible, so that one user's model can easily become another user's data.

For qualitative data, Albro observed, such an approach to dealing with the data—particularly the way in which meaningful contexts are stripped away—has major consequences. "Hard-to-classify 'field notes' must quickly take the form of more standardized 'field reports,' which need to rely upon a commonly used 'code book' of some sort, like the popular ASCOPE [Area, Structures, Capabilities, Organizations, Peoples, and Events] system for the classification of field data. Relatively 'thin' and more easily extractable data sources are given priority, such as journalism, national opinion surveys, or polling data." When data are seen in this way, the job of models becomes to generate "significant information about a patchwork world of data points as checked-off cultural boxes representing quantifiable variables of cultural difference."

But the results generated from such an approach to modeling the world could well be meaningless, Albro suggested. "There are, in short, epistemological consequences in assuming that cultures can be divided up into vehicles of extractable meaning."

It is important that people using models of sociocultural knowledge and behavior grapple with these issues concerning the data used in the models, Albro said, and in particular to think about "the relative compatibility of such different epistemological departure points for data."

Judging from some of the earlier presentations at the workshop, Albro said, it seems as though in practice the data used in sociocultural models end up being those data that are easier and most convenient to collect and to put into the models. The "ground truth" ends up being replaced by data collected by web mining and data extraction programs, from online forums, blogs, and YouTube and other websites, which are convenient because the information is already formatted as HTML files, Word documents, PDF files, or PowerPoint slides, or is in the form of downloadable video, image, or audio files. "Too often the differences between virtual and nonvirtual realities get lost in the shuffle," Albro said. "While social media web content has its values, we should not confuse this with in-theater collection of data on the ground [in military operating environments], which is rarely done with regard to computational social science applications."

In the workshop's keynote address, MG Flynn said that the number of District Narrative Assessments will be increasing in the future, which will provide a great deal of additional data that can be used in models. However, Albro noted, modelers—including some in the workshop—complain that "unstructured" qualitative data cannot be used by their models. If the District Narrative Assessments are to be of use to the modelers, they will have to be created in a standard format with interchangeable categories. But fitting everything into standard formats and defined categories makes it unlikely that "information outside of established expectations would find its way into the data sets of such models," Albro said.

THE LIMITS OF MODELING

Much of the panel's discussion, particularly during the roundtable section, focused on the question of what models can and cannot do and what is reasonable to expect from them.

A key comment came when Turnley observed that sociocultural models will probably never be good at making exact predictions of what will happen. They can, however, be expected to provide information on the probabilities of various things happening—what she referred to as "possibility spaces." Thus computational social models can be used at the strategic level and possibly at the operational levels, but they are never likely to be useful at a tactical level, she said. "Somebody brought it up sort of facetiously the other day: Do I attack the village kinetically, or do I give them soccer balls? I don't believe we will ever get a model to say, if you attack it kinetically then this will happen, but the model can say that there's a possibility space that encompasses a range of futures."

In response to a question about whether sociocultural models can be used to generate knowledge, Turnley answered that they absolutely can. Studies have shown, for example, that using the creative power of models allows people to see the world in a new way, to see things that they might otherwise not have seen. "Think about the kind of knowledge that's generated, for example, by reading literature or history." In general, because of the difficulties in validating these models, it is not possible to use them for the same sort of theory exploration and testing that is possible in the physical and biological sciences, but they can be used to expand the horizons of one's thinking.

McNamara offered a second example of using the models to generate knowledge. A model of brain activity and memory formation was developed specifically for use in research. Its purpose was to serve as a test bed so that researchers could "begin to generate ideas about hypotheses and do sensitivity analyses in a virtual environment before they actually brought in human subjects." It helped the researchers hone their hypoth-

eses and get a sense of what data they were going to collect before the real experiments started. McNamara noted, however, that this use was not the type that the military is most interested in—high-consequence decision making that affects other human lives.

Sargent noted that an alternative to using only models to understand a situation is to use domain experts, with or without the models. They can be experts on the system, on the problem being addressed, or on other relevant aspects. As an example of this approach, Sargent pointed to David Kennedy's work on reducing homicide rates. In this case the experts were local police officers who were able to give Kennedy the insights he needed to attack the problem.

Generally, Bevir said, he doesn't expect models to do much, but he did have one suggestion for how they might be useful. "What they might help us to do is to come up with stories . . . to transform the beliefs, desires, and intentionality of local actors. We do that through spreading narratives."

Coming up with such narratives can be a difficult task, he noted. In the case of Afghanistan, for example, Americans are facing the presence of narratives that already exist because of the American presence in that country. "We're trying to spread narratives when most people's day-to-day experience of the American presence is going to challenge the narratives we want to spread. And the narratives are not going to spread unless they're plausible to the people we want them to spread among, which means they have to map onto their day-to-day experience of the American presence." It is a phenomenally difficult problem, he said, but models are one tool that may help to figure out how to solve it.

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Implications

To wrap up the workshop, planning committee member David Laitin of Stanford University described what he saw as the four main themes, or focuses, that had emerged during the two days of presentations and then offered several "lessons learned."

WORKSHOP THEMES

To introduce the four themes, Laitin offered a thought experiment. Suppose that the U.S. military is planning a major occupation of Somalia in order to fight the insurgency led by the Islamist group al-Shabaab, which is increasingly linked to Al Qaeda. The goal of the occupation is to provide support to the transitional federal government of Somalia. At the moment the transitional government is in control of only a small section of the entire country—part of Mogadishu, the country's capital, and nothing else—with help from troops from the African Union, mainly from Uganda and Burundi. It is a situation, like the one in Iraq and Afghanistan, that will require more than military firepower to succeed.

With this in mind, General James Mattis, U.S. Marine Corps, commander of the U.S. Joint Forces Command,[1] poses the question, What cultural knowledge do we need in order to maximize our chances of success?

[1]General Mattis was commander of the U.S. Joint Forces Command 2007-2010, after which he became commander of U.S. Central Command.

And that is the approach Laitin said he used to identify the key messages from the workshop: "What have I learned in the past two days that will help me give General Mattis a state-of-the-art answer?"

The Value of Stories

Continuing with his hypothetical scenario, Laitin said the first part of the answer is that "the new commander of the International Security Assistance Force–Somalia should hear some stories." Stories are a good starting point for understanding a situation and for generating ideas about how best to deal with it. They also serve as a basic source for the analytical hierarchy process and the Delphi method that domain experts can use in solving various sorts of problems, as Robert Sargent described in his workshop paper, "A Perspective on Modeling, Data, and Knowledge."

What sorts of stories? Some of them should be from people experienced in past campaigns, Laitin said. Robert Oakley, the special envoy for Somalia under President George H.W. Bush, could describe his successful management of Operation Restore Hope from 1992 to 1994. "He saved ten thousand lives getting food out to Baidoa and other cities," Laitin said. Another story worth hearing would be that of Mahmoud Sahnoun, a United Nations special envoy who worked with the various warring factions in an effort that might have stopped Somalia's civil war if he had received support from some of the world's powerful countries. Then there was Colonel Kenneth Allard, U.S. Army (retired) who wrote *Somalia Operations: Lessons Learned* (2002), a book that described how the UNOSOM II mission to Somalia collapsed, which led to the disastrous Blackhawk Down battle.

There are also a variety of local stories to be told, Laitin said. One would describe how the Hawiye clan broke up, which was the root of the collapse of Somalia and the resulting 20-year war. Another would be the tale of how the Isaaqs in Hargeisa were able to negotiate a settlement with the Warsangeli and Dhulbanhante Daarood, an act that has allowed Somaliland, an autonomous region of Somalia, to have maintained a long-standing peace amidst the chaos that reigns in the rest of Somalia. And what were U.S. policy makers thinking when they encouraged Ethiopian troops to invade Somalia in an attempt to overthrow the Islamic Courts Union regime? A story could illuminate the reasoning behind that decision.

"Stories are a basic source for analytic hierarchy process of domain experts, and I think these stories are essential and comprehensible," Laitin said, "and that is what makes them essential for any commander." They

are also, however, necessarily incomplete, no matter how compelling they may be and any military officer should keep that in mind.

Data-Driven Target Identification

The second theme to emerge from the workshop that might be of use in a hypothetical mission to Somalia, Laitin said, was the idea of "data-driven target identification," or accumulating information to identify enemies (e.g., terrorists, violent extremists, criminals). The presentation by David Kennedy described one approach to such identification. His group finds core offenders by interviewing both the local police and gang members and then, once those most likely to be violent have been identified, uses proactive community policing to deter them from killing others. Hsinchun Chen offered a very different approach, employing computers to analyze close to five billion pages, files, and messages from the Dark Web in order to find terrorists and potential terrorists and determine their relationships with one another.

The two approaches, while different, have a number of commonalities. In both situations, the core offenders are relatively few but are the cause of most of the violence. At the same time, however, violence is generally a product of groups of individuals rather than the individuals themselves. The groups are fluid and dynamic, so Laitin indicated that it is necessary to follow them carefully as they develop and change. Finally, Kennedy indicated that the key to controlling the violence is to gather local information on both the targets of the violence and on the people who can sanction those committing the violence. That is, the best way to control the violence is to change the social dynamic at a local level rather than exerting outside pressure via the police and the court system.

Are there any insights from this approach that might aid the theoretical commander of the International Security Assistance Force–Somalia? Laitin suggested that there are. The standard approach to understanding Somali group structure, going back to the work of social anthropologist E.E. Evans-Pritchard in the mid-20th century, is to focus on segmented lineages, and this is the approach taken by the National Counterterrorism Center operation in Djibouti, which borders Somalia, Ethiopia, and Eritrea. "However," Laitin, said, "these segmented lineages have in many ways collapsed, and other groups have formed." That is not clear from reading the standard anthropology literature, he continued, but "we would know it from either Chen's or Kennedy's work, which would force local people to ask, Where are the groups, how are they formed, and how do they interact?"

He noted that, although the Chen and Kennedy approach of identifying the core offenders and studying group relationships would offer insights into where the violence is coming from, they do not provide much guidance on how to keep the violence in check. "Policing in Afghanistan or Somalia is not like policing in Cincinnati," Laitin noted. Cincinnati is part of a larger, well-ordered nation in which gangs are not a risk to hide out in the bush and become insurgencies, and so the violence remains local. As Robert Albro noted in an earlier discussion, the U.S. military is handed a much bigger job than simply finding and controlling problematic individuals. Thus while Kennedy's community policing approach may be effective in lowering the murder rate in an American city, it may not offer much of a blueprint for creating a state that will be able to contain its own violent offenders once the Americans leave.

Cultural Models

The third theme that might be of use in a hypothetical mission to Somalia is the use of cultural models. It is important to keep in mind what such models can do, Laitin said. "Can cultural theory predict individual behavior? [Robert] Rubinstein is right when he says no, but that's an unfair question, because predicting individual behavior is an absurd requirement of any theory." What cultural models can do, however, is to point to tendencies or probabilities, and that should be the standard by which they are judged.

The weakness of all of the cultural models described at the workshop, Laitin said, was that they offered no "engineering," that is, no specific recommendations for how to train soldiers to win the hearts and minds of the civilian population. "The Michigan team on psychological orientation of the WEIRDos [Western, educated, industrialized, rich, and democratic cultures] versus the rest is really world-class research, but there's no direct implication other than making people culturally aware that Asians are different from us WEIRDos (Henrich et al., 2010). Similarly applying Jeanne Brett's distinction between honor and face cultures—those distinctions are clear and meaningful, but the implications for what you do in a training program and how they'll make soldiers better soldiers is completely unspecified." So it would make no sense, Laitin said, to offer these cultural models in military training as if they had operational significance.

Indeed, he noted, when the speakers who presented the cultural models were asked about how they might be applied in military training to help troops headed to Afghanistan or Somalia, the presenters tended to fall back on traditional ethnography: "Well they've got to learn the language, and they've got to learn the basic social structure and all this—disconnected, as it were, from the models they just presented." Sugges-

tions that soldiers should be familiar with local customs or learn the local language are nothing new, Laitin commented.

Still, he continued, understanding the local culture can be useful in a number of ways, such as offering insights into political maneuvering. Latin offered as an example an episode from recent Somali history. "The dictator Siad Barrée was in power from 1969 to 1990, and after he lost the war against Ethiopia in 1978, most of the tribes other than his own clan turned against him. He was fighting three insurgencies, and he had to worry about internal coups of people trying to overthrow him from within." So he chose to appoint General Mohamed Ali Samantar as his second in command. Samantar was a clever choice, Laitin explained, because he was an outcast in the Somali clan structure, a man who would have faced country-wide rebellion if he ever took over Barrée's job. "Samantar understood this as well, which meant he had no incentive to overthrow the dictator, and so the dictator got free protection from someone who liked being No. 2, but could never be No. 1."

Understanding a local culture can be thought of as a way of tapping into what is common knowledge in that area—such as the knowledge that Samantar would never be a threat to Barrée's power. In particular, Laitin said, cultural knowledge helps one understand coalition dynamics, which is a very powerful tool. It is the sort of tool that Kerry Patton was talking about in his presentation calling for a new discipline of sociocultural intelligence, or SOCINT. Such a discipline might help interpret practical politics in foreign countries by bringing to bear an understanding of social relationships and how the local population interprets coalitions and other political phenomena. This might be particularly useful in Iraq, Laitin said, as it is "a country that hasn't had a government in a few months, because they can't form a coalition."

Laitin also addressed two questions from the audience having to do with cultural theory and how to train military ethnographers. One questioner pointed out that there is a great deal of sociocultural data available, but they are not organized in such a way to be easily findable and usable. Would it make more sense to work to organize these data or to collect new data each time information on a culture is needed? Laitin suggested that it's not practical to prepare for every culture in the world in a place that might become important to the military. Instead, it makes more sense to have a corps of specialists trained in ethnography who can quickly collect and interpret data on places once they have become important.

The second audience question asked was how much time it would take to train soldiers to the point that they are adept in another culture. It would be a long-term process, the questioner observed, maybe years long. Laitin responded that one way to deal with this reality would be to develop an ethnographic specialty in Army training so that an elite group

of soldiers knows how to collect useful cultural information and to train others in data collection.

Finally, Laitin pointed to the flattening of the command structure described by MG Flynn as an important way of spreading ethnographic understanding through the military force in an area. Lower level officers and the noncommissioned officers are already contributing to a Wiki knowledge base with information on what works and what doesn't work in dealing with the local population, details about the local power structures and social structures, and other sociocultural information that may be useful. This is very similar to the approach that Kennedy described of using police as local experts on what is happening on the streets of Cincinnati, and it could well prove to be equally effective.

Systems Models

The final theme that Laitin discussed was the idea of systems models. Can systems models provide the unifying answer that the military would like? "Captain Schmorrow wants products that are not specific to a single decision, but something more general," Laitin said. At the same time, however, Captain Schmorrow said the use of models could not be practically limited to general theorizing and situational understanding and should be able to make decisions in specific cases. Decision makers will use whatever information is available to make decisions, especially when working within extremely short timelines. Captain Schmorrow said, referring to a hypothetical situation, "most decision makers have about 30 seconds or three minutes to say, 'Did the model say to dig a well or to give them soccer balls?'" He explained that the unifying answer the military is looking for is to deliver messages that accurately reflect the U.S. position and resonate with the way that other groups or societies understand the world.

It is certainly the case that some systems models, such as agent-based models or systems dynamics, are unifying, Laitin said, so the real question is whether these models can deliver answers to the sorts of specific questions that the military faces in the field. "It's hard to answer that," he said, "since none of them was described or defended. We got only critiques of them and suggestions of what they might do, but we actually didn't have any examples presented of them."

More specifically, he said, a number of questions surrounding these models have not yet been answered. First, there is no evidence, for example, that the models can make predictions at the success rates that some claim are possible. Some of the claims made for them are "beyond belief," he said, and are unsupported by any evidence.

Second, there is no evidence that the models can demonstrate emergence—that is, the appearance of phenomena that have not already

been programmed into them. The example described by Laura McNamara (whereby agent-based modeling is used to look at emergent behaviors in water sharing and resource management in Bali—Lansing, 1994) might be an exception, Laitin said, but it is important to show not only that a model generates lots of information but also that one is actually getting more out of the model than was put into it. "If the information that you're feeding your agents is more or less what you're getting out of it, we would say there's no emergence and we're not doing much."

Third, there is no evidence that models can aggregate local knowledge, at least not in a way that makes it more understandable or comprehensible to decision makers or to operations people in the field. Not only that, but as planning committee member Catherine Tinsley pointed out, the models may actually have slippage, that is, lose information rather than generate new information.

Fourth, there is no evidence that systems models are any better at demonstrating causes than empirical models. One possible exception is work done over the past 15 years in econometrics. "There's a whole range of econometric tools that get at causes in new ways," Laitin said. However, although a number of economists were invited to speak at the workshop, none of them was able to attend.

Finally, and most importantly, there is as yet no evidence that these models can address the sorts of questions that a commander in the field would have. Indeed, it is not even clear that they can provide the "possibility space" for the sorts of problems a commander would like to address. If models cannot answer pointed questions, Laitin said, or if they are not designed to answer these sorts of questions, then it is reasonable to ask if it makes sense to continue developing them.

LESSONS LEARNED

To finish his presentation, Laitin offered a series of lessons learned. These lessons represented his personal opinions rather than a summary of what he heard from the workshop presenters.

The first lesson, he said, is that "counterterrorism, as I've been convinced over the past couple of days, requires careful police work." Furthermore, Laitin said, comments from Andrew Imada and David Kennedy lead to the conclusion that since the culture and the training of the U.S. military are designed for missions in which a known enemy is located and neutralized, "the military may not be the correct organization culturally to be able to do the kinds of things necessary" in missions like the one in Afghanistan.

The second lesson, Laitin said, is that basic science seems to get short shrift in this area. In particular, there are few serious field evaluations of

new proposals, programs, or models. Not even the Human Terrain Teams or the various cultural training programs, which are already in the field, are being subjected to any kind of field test. "We do no scientific evaluation that I can see of our own initiatives."

A related issue is how to involve cultural anthropologists in this area in a way that does not violate their professional ethics or norms. In World War II, Laitin noted, the British historian George Taylor assembled a group of top anthropologists to answer specific questions about fighting the Japanese, such as why their surrender rates were so low. "One of the things that Taylor understood was that you can't bring anthropologists to help choose targets," Laitin said. He believes the United States has not fully applied Taylor's lessons in harnessing the best scientific evidence for the fulfillment of its field objectives.

A third lesson is the importance of the group as a fundamental unit of cultural understanding. This was apparent in a number of presentations, Laitin noted, including those of Chen and Kennedy as well as Brant Burleson's talk on social support. "Understanding radical group dynamics, what makes them efficient, what makes them resistant to negotiations, what makes them murderous," to Laitin, seems like "areas of research that may benefit the U.S. military."

Finally, Laitin repeated the words of Robert Rubinstein in his presentation on culture in cooperative relationships that trying to create some sort of general predictive model of social and cultural influence on behavior is likely to be a "fool's errand." Laitin echoed the general sentiment of several of the workshop presenters: attempts to create broad, integrated approaches to social science issues or to base practical applications on such integrated theoretical foundations are not likely to be successful. The more valuable approach, he said, would be to work to extract local information on targets, the authorities and informal leaders, and cultural practices—what MG Flynn referred to as "the environment"—in order to address specific field questions. Throughout the workshop, participants seemed to have at least one position in common: although models are not the single answer to the sociocultural challenges faced by the U.S. military, they may have utility in strategic-level sense-making and providing a "probability space" to assist commanders in making better informed decisions.

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A

Workshop Agenda and Participants

AGENDA

Unifying Social Frameworks
Sociocultural Data to Accomplish Department of Defense Missions

Monday, August 16, 2010

9:00 am **Workshop Opening and Logistics**

Welcome from National Research Council
Dr. Barbara Wanchisen, Director, Board on Human-Systems Integration (BOHSI)
Dr. William Marras (NAE), Chair, BOHSI

9:30 **Workshop Objectives and Planning Committee Introductions**
Dr. Judee Burgoon, Planning Committee Chair and University of Arizona

9:50 **Sponsor Perspective: The Human Social Culture Behavior Mission and Defense Functional Domains in Complex Operations**
Captain Dylan Schmorrow, Medical Service Corps, U.S. Navy, PhD, Acting Director: Human Performance, Training, and BioSystems Directorate, Research Directorate, Office of the Director, Defense Research and Engineering, Office of the Secretary of Defense

10:30 **Break**

10:45 **Panel I—Conflict Is Local: Mapping the Sociocultural Terrain**
Moderator: Dr. George Tita, Planning Committee and University of California, Irvine

Guiding Question: What sociocultural factors must be understood to achieve military success in conflict environments?

10:50 Sociocultural Intelligence (SOCINT)
Mr. Kerry Patton, Henley Putnam University

11:10 From Dark Web to Geopolitical Web: Collection and Analysis
Dr. Hsinchun Chen, University of Arizona

11:30 Addressing Concentrations of Core Offenders
Mr. David Kennedy, John Jay College of Criminal Justice

11:50 Implications and Q&A*

12:45 pm **Working Lunch**
Dr. Judee Burgoon
Participants are invited to use computers in meeting room to submit questions for the committee and panelists to address.

1:45 **Panel II—Bridging Sociocultural Gaps in Cooperative Relationships**
Moderator: Dr. Andrew Imada, Planning Committee and A.S. Imada & Associates

Guiding Question: What sociocultural knowledge will enable Department of Defense personnel to work with cooperative partners (international and indigenous) to make local populations feel safe?

1:50 The Specificity of Culture and Context
Dr. Robert Rubinstein, The Maxwell School of Syracuse University

2:10 The Four Elementary Forms of Social Relations—and Their Cultural Implementations
Dr. Alan Fiske, University of California, Los Angeles

2:30 Crossing Bridges Through Cultural Discourses: Integrative Theory and Practices
Dr. Donal Carbaugh, University of Massachusetts at Amherst

2:50 Implications and Q&A*

3:45 Break

4:00 Audience-Committee Dialogue
Moderator: Dr. Randy Borum, Planning Committee and University of South Florida
The committee will address questions and comments from workshop audience that have been submitted digitally throughout the day.

4:30 Committee Observations
Dr. Judee Burgoon

5:00 Adjourn

Tuesday, August 17, 2010

8:30 am Welcome, Committee Introductions and Day One Recap
Dr. Judee Burgoon, Planning Committee Chair and University of Arizona

8:40 Panel III—Building Partner Capacity with Sociocultural Awareness

Moderator: Dr. Michael Morris, Planning Committee and Columbia University

Guiding Question: What sociocultural knowledge will enable Department of Defense personnel to be more effective advisors and mentors to indigenous security forces?

8:45 Relational Attunement and Emotional Aperture as Cross-Cultural Bridges
Dr. Jeffrey Sanchez-Burks, University of Michigan

9:05 Culture and Attention: Are People Seeing the World Differently?
Dr. Shinobu Kitayama, University of Michigan

9:25 Implications and Q&A*

9:50 Break

10:00 **Keynote Address: Making a Difference in Afghanistan: Technology, Knowledge, and Intelligence in a Dynamic Sociocultural Environment**
Major General Michael T. Flynn, U.S. Army, Deputy Chief of Staff, Intelligence (CJ2), International Security Assistance Force in Afghanistan (via teleconference)

10:45 **Panel IV—The Art of Sociocultural Persuasion**
Moderator: Dr. Catherine H. Tinsley, Planning Committee and Georgetown University

Guiding Question: How is the persuasive appeal of conversations, messages, and activities that are intended to foster social change affected by sociocultural factors?

10:50 Indirect Confrontation
Dr. Jeanne Brett, Northwestern University

11:10 Persuasion Absent Intent to Persuade
Dr. James Dillard, Pennsylvania State University

11:30 Explaining Cultural Variation in Responses to Social Support and Social Influence
Dr. Brant R. Burleson, Purdue University

11:50 Implications and Q&A*

12:30 pm **Working Lunch**
Dr. Judee Burgoon
Participants are invited to use computers in meeting room to submit questions for the committee and panelists to address.

1:30 **Panel V—Methods, Tools, Frameworks, and Models**

Moderator: Dr. Robert Albro, Planning Committee and American University

Guiding Question: What are the strengths and weaknesses of different methods for acquiring and utilizing relevant data and knowledge?
Panel discussion papers are available online, in advance of workshop.

Dr. Mark Bevir, University of California, Berkeley
Paper title: *The Importance of Interpretation*

Dr. Laura A. McNamara, Sandia National Laboratories
Paper title: *Why Models Don't Forecast*

Dr. Robert G. Sargent, Syracuse University
Paper title: *A Perspective on Modeling, Data, and Knowledge*

Dr. Jessica Glicken Turnley, Galisteo Consulting Group, Inc. and Joint Special Operations University, U.S. Special Operations Command
Paper title: *The Dangers of Rushing to Data: Constraints on Data Types and Targets in Computational Social Modeling and Simulation*

2:30 **Audience-Committee Dialogue**
Moderator: Dr. Randy Borum, Planning Committee and University of South Florida
The committee will address questions and comments from workshop participants that have been submitted throughout the day.

3:00 **Workshop Implications Summary**
Dr. David Laitin (NAS), Planning Committee and Stanford University

3:45 **Sponsor and Committee Reactions**
Dr. Ivy Estabrooke, Program Officer, Human Social Cultural and Behavioral Sciences, Office of Naval Research and Assistant Director, Human Social, Culture, Behavior Technologies Human Performance, Training, and BioSystems Directorate, Office of the Director, Defense Research and Engineering, Office of the Secretary of Defense

Dr. Judee Burgoon, Chair, Planning Committee and University of Arizona

4:15 **Adjourn**

*To capture the input of the entire audience, participants were invited to submit questions, comments, and ideas through an online forum, ThinkTank (a product of GroupSystems; see http://www.groupsystems.com [December, 2010]). Submissions were anonymous by default, but participants were invited to voluntarily self-acknowledge their submissions as individuals or representatives of an organization: some were so attributed, but most were anonymous. Many of the comments were summarized by panel moderators or planning committee members and posed to the panelists as questions. They are thus part of this workshop summary.

PARTICIPANTS

Planning Committee Members
Robert Albro, American University
Randy Borum, University of Florida
Judee Burgoon, University of Arizona
Andrew S. Imada, A.S. Imada & Associates
David Laitin, Stanford University
Michael Morris, Columbia University
Catherine Tinsley, McDonough School of Business, Georgetown University
George Tita, University of California, Irvine

Workshop Panel Members
Mark Bevir, University of California, Berkeley
Jeanne Brett, Northwestern University
Brant Burleson, Purdue University
Donal Carbaugh, University of Massachusetts at Amherst
Hsinchun Chen, University of Arizona
James P. Dillard, Pennsylvania State University
Alan Fiske, University of California, Los Angeles
David Kennedy, John Jay College of Criminal Justice
Shinobu Kitayama, University of Michigan
Laura McNamara, Sandia National Laboratories
Kerry E. Patton, Henley Putnam University
Robert Rubinstein, The Maxwell School of Syracuse University
Jeffrey Sanchez-Burks, University of Michigan
Robert G. Sargent, Syracuse University
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Ivy Estabrooke, Office of Naval Research
David Honey, Office of Naval Research
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George Solhan, Office of Naval Research

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Mireille Aprahamian, Center for Advanced Operational Culture Learning
Zunair Ashfaq, University of Pennsylvania School of Medicine
Marwan Atoui, Human Terrain System
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Alan Campana, Booz Allen Hamilton
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Patricia Higgins, James Madison University
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B

Abstracts of Background Papers

THE IMPORTANCE OF INTERPRETATION

Mark Bevir

This briefing paper describes a broad consensus in current philosophy of social science and then considers the implications of this consensus for the ways one might think about data, knowledge, and policy making.

Since the late 20th century, philosophy has been dominated by meaning holism. Holists believe that the meaning of a sentence or belief depends on the wider language game or web of beliefs of which it is a part. This holism has given rise to comparative epistemology, constructivist ontology, and contextualizing historical explanations. Current philosophy thus supports a view of the social sciences as an attempt to interpret other people's interpretations of the world.

Interpretive social science encourages certain views of data and knowledge. First, all kinds of techniques generate valid data, and ethnographic and historical studies are important supplements to other data. Second, models, frameworks, and correlations are reifications, so one should consider if they need to be disaggregated. Third, correlations, models, and frameworks are just more data, not explanations, and—to explain such data—one has to tell stories. An interpretive social science suggests lessons for policy makers. First, practitioners should take an eclectic approach to data and remember that all data are partial and provisional. Second, practitioners should remain aware of the diversity of beliefs and actions as well as the historical and cultural contexts that influence them.

Finally, practitioners should consider multiple stories that reveal new aspects of situations.

WHY MODELS DON'T FORECAST

Laura A. McNamara

The title of this paper, "Why Models Don't Forecast," has a deceptively simple answer: models don't forecast because people forecast. Yet this statement has significant implications for computational social modeling and simulation in national security decision making. Specifically, it points to the need for robust approaches to the problem of how people and organizations develop, deploy, and use computational modeling and simulation technologies.

I argue that the challenge of evaluating computational social modeling and simulation technologies extends far beyond verification and validation and includes the relationship between a simulation technology and the people and organizations using it. This challenge of evaluation is not just one of usability and usefulness for technologies but extends to the assessment of how new modeling and simulation technologies shape human and organizational judgment. The robust and systematic evaluation of organizational decision-making processes, and the role of computational modeling and simulation technologies therein, are a critical problem for the organizations that promote, fund, develop, and seek to use computational social science tools, methods, and techniques in high-consequence decision making.

A PERSPECTIVE ON MODELING, DATA, AND KNOWLEDGE

Robert G. Sargent

This paper presents and discusses the problem-solving methodology used in operations research. The advantages presented using this methodology include (1) the development of a problem statement, (2) the construction and use of a causal mathematical model based on system knowledge, and (3) the data requirements determined from the steps of the methodology. Also discussed is how this methodology differs from the method of first collecting significant amounts of data and then attempting to develop models from that data.

Two major types of models, causal and empirical, are compared and discussed; this includes the strengths and weaknesses of each type. This paper also discusses why causal models are preferred, the importance of understanding that causal models contain system relationships and empirical models contain data relationships, and the different kinds of graphical and mathematical models for each model type. Different

kinds of data and measurement scales for data are also described. System knowledge, needed for developing causal models, is discussed and depicted in a table containing different levels of system knowledge and types of system knowledge.

The modeling process and obstacles that may arise during this process are described. The importance of validation of models, model solutions, and model theories is stressed. Finally, the use of domain experts in problem solving is discussed, including why it is an important approach for solving social system problems.

THE DANGERS OF RUSHING TO DATA: CONSTRAINTS ON DATA TYPES AND TARGETS IN COMPUTATIONAL SOCIAL MODELING AND SIMULATION

Jessica Glicken Turnley

By the time most modeling projects address data, the project team has made significant decisions in the course of the project that determine the type of data they need and constrain which part of a comprehensive picture they will provide. I argue that it is not possible to create, a priori with data, a comprehensive picture of some area of interest.

A model is not all things and all relations in the target domain but a selection from them. That selection is made by the modeling team which constructs the model. By exercising this selection process, the team acts as sort of a prism, controlling which part of the target domain one sees and how one sees it. The model as artifact, once it is constructed, embodies this prism.

This gives great power to the people involved in the modeling process. I have parsed that process into different social roles, each of which contributes differently: the questioner, who poses the question that initiates the process and establishes the model's purpose; the user, who exercises the model in a particular sociotechnical environment; a disciplinary or theoretical expert who identifies the elements to include in the model and the relationships among them; the data provider; and the model builder, who captures relevant theory and data in the chosen medium.

A model is much more than an artifact or bucket into which data can be dumped. It actually is a process of creating a particular way of looking at the world. It is like Karl Weick's sense making, a process that "structures the unknown," using theory to choose elements of the target domain that are relevant to a particular problem. Rushing too quickly to the data question is likely to lead the team to the dangerous and impossible request to collect everything or to collect the wrong things. And finally, by definition, no model will provide a comprehensive picture of anything. In fact, the creative power of models may actually cause people to revise the picture through the very act of constructing the analytic tool.