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USGIF

MONOGRAPH SERIES

VOLUME 1

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# HUMAN GEOGRAPHY

Socio-Cultural Dynamics and  
Challenges to Global Security

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**and**

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# FOREWORD

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When the concept of a Monograph series was first introduced to USGIF membership circa 2009, the idea struck a positive chord. Shortly thereafter, a Human Geography working session was planned and carried out during one of USGIF's annual GEOINT Community Week activities. The resulting work product is reflected within this volume. The Monograph Series, Volume 1: Human Geography combines knowledge and ideas from a variety of authors engaged in what has become an important part of the GEOINT discipline—Human Geography. The subsequent refinement and focus on Global Security came about after determining the interests and foci of submissions received. The end result is an organic product that combines the best of a participatory all-volunteer effort.

GEOINT is a team sport—a complicated team sport, but very much a team sport—requiring consistent communication and efforts from its various components. If we were to survey the breadth and depth of the GEOINT discipline (and, periodically, we at USGIF, attempt to do just that), the findings would be vast and compelling. In fact, to call the profession deeply breathtaking based on the sheer variety of activities being routinely performed would not be an overstatement. GEOINT, the discipline, encompasses image interpretation, geographic information systems, data management, incorporation of open-source information, all types of geospatially referenced data and, of course, the analysis of all of these data to answer basic questions about what is where and what happened and more challenging questions about what will or might happen in a geographic and temporal context. Human Geography allows the GEOINT analyst to understand deeper context and help predict outcomes for a given time based on knowledge of the human condition at a particular location on the globe.

This volume is the first in what will be an ongoing series of publications designed to engage thought leaders, students and practitioners on a variety of GEOINT-related topics. We at USGIF are continually recruiting USGIF members to take an active role in the next several volumes. I urge each of you to consider what you may have to offer our global community, whether as an author or co-author, editor, member of an editorial review board or simply as a passionate advocate with a point of view or topical idea to share. All are welcome to participate, regardless of affiliation.

USGIF strives to consistently provide the highest quality information products that benefit students, instructors, professors and practitioners. We also aspire to have our collective works used as required or ancillary reading for students studying particular disciplines. To that end, I encourage you to provide us with feedback about what you like, what you would like to see in subsequent volumes and your ideas on how we can improve both content and our method of getting the word out. Please be active and proactive. This is the only way we can all benefit and improve our profession. Get involved. Thanks for reading.

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# TABLE OF CONTENTS

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<b>INTRODUCTION</b> – Robert R. Tomes and Christopher K. Tucker .....	vii
---	-----

## **SECTION 1** – Understanding the Story: Thoughts from National Security Leaders

1.1 Is (Political) Geography Destiny? The Case for a New Human Geography <i>Parag Khanna</i> .....	3
1.2 The Human Landscape <i>Joseph F. Fontanella</i> .....	9
1.3 Human Geography: Back to the Future <i>Lee Schwartz</i> .....	13
1.4 A Fresh Approach to an Old Challenge <i>Patrick O'Neill</i> .....	17

## **SECTION 2** – Administratively Derived Socio-Cultural Data in Human Geography and GEOINT

2.1 Warring and Administratively Derived Socio-Cultural Data <i>Geoffrey Demarest</i> .....	27
2.2 Napoleonic Know-How in an Era of Persistent Engagement <i>Douglas Batson, Al Di Leonardo (USArmy, Ret.) and Christopher K. Tucker</i> .....	35
2.3 Openness and Privacy in Public Spatial Data <i>Richard Grover</i> .....	43
2.4 The Two-Edged Sword of Administratively Derived Data in Sub-Saharan Africa (SSA) <i>Karol C. Boudreaux</i> .....	53

## **SECTION 3** – Natural Resources, Human Dynamics and Security

3.1 Water Insecurity, Human Dynamics and COIN in the Sistan Basin <i>L.J. Palmer-Moloney and K.U. Duckenfield</i> .....	65
3.2 Relationship Between Freshwater Resources, Socio-Cultural Dynamics and Geopolitical Stability <i>Jennifer C. Veilleux, Matthew Zentner and Aaron T. Wolf</i> .....	81
3.3 Conflict Diamonds as an Example of Natural Resource Conflict <i>Peter Chirico and Katherine Malpeli</i> .....	89
3.4 Monitoring Growth in Informal Settlements—Anticipating Conflict and Risk for Insecurity <i>Karen Owen</i> .....	95

## **SECTION 4** – The Socio-Technical Dimensions of Culture and the Modern Geography of Security

4.1 Social Media and the Emergence of Open-Source Geospatial Intelligence <i>Anthony Stefanidis, Andrew Crooks, Arie Croitoru, Jacek Radzikowski and Matt Rice</i> .....	109
4.2 Toward Cybersocial Geography: Meeting the Analytic Challenge of Social Media <i>John Kelly</i> .....	125

## **SECTION 5** – Names and Language in Human Geography

5.1 Perception and Identity in Geographical Names: The Potential for Cultural Misunderstanding <i>Paul Woodman</i> .....	135
5.2 Empire and Names: The Case of Nagorno Karabakh <i>Benjamin Foster</i> .....	139
5.3 Minority Languages and Geographical Names in the Caucasus <i>Catherine Cheetham</i> .....	151
5.4 Hidden in Plain Sight: Socio-Cultural Analysis of the Geospatial Distribution of Toponymic Tokens in the AF/PAK Region <i>James Sater</i> .....	163
5.5 The Endonym: Name from Within a Social Group <i>Peter Jordan</i> .....	181
5.6 Language, Culture and Human Geography: Decoding the Narrative on the Ground <i>Douglas E. Batson</i> .....	189

## **SECTION 6** – Policy and Governance in a World of Experts: Harnessing Socio-Cultural Dynamics for Global Security

6.1 Building and Using Socio-Cultural Dynamics Analysis Capability <i>Nathan Hamm</i> .....	199
6.2 Refining the Intelligence Process: Adapting to an Era of Population-Centric Security Challenges <i>Daniel T. Maxwell and Christopher K. Tucker</i> .....	207
6.3 A Brief Overview of Activity Based Intelligence and Human Domain Analytics <i>Mark Phillips</i> .....	219

<b>EPILOGUE</b> – Robert R. Tomes .....	225
Index .....	233

# INTRODUCTION

**Robert R. Tomes**  
**Christopher K. Tucker**

Since 9/11, increased demand for open, unclassified insights into global cultures, movements and peoples has once again focused attention on the need to integrate untapped resources available in the world's vast social science disciplines. Human dynamics research, analysis and reporting improve both the "baseline" data available to national security decision makers and the in-depth analysis used to inform defense, development and diplomacy missions.

Socio-cultural intelligence is a diverse area of intelligence collection, analysis and reporting that relies heavily on the work of social scientists and methodological approaches adapted from geography, computational mathematics, anthropology, psychology and other disciplines. "Socio-cultural dynamics" is a broader term we use to characterize the range of actions, behaviors and relationships across micro-, meso- and macro-levels of analysis. Social scientists employ many methods across different levels of analysis to provide information relevant to national security decision makers, from the micro- (individual actors to small groups) to the meso- (political parties, larger groups, some social movements) to the macro-level (larger tribal, religious or societal affiliations).

Included in our understanding of socio-cultural dynamics are myriad activities and methods that others might call the human geographic domain, including research done by anthropologists. All of these areas of research and analysis contribute to socio-cultural intelligence, patterns of life, and insights into aspects of human intent, behavior and perception. It is the application of this knowledge that improves our understanding of the events, trends, behaviors and conditions that shape international security affairs.

A dizzying array of terms have been used within the national security community over the past decade to label or define activities that collect data about humans, groups, activities, behavior and perceptions; that describe analysis of that data using methods, tools or techniques; and that report findings or conclusions focused on the actions or behaviors of specific individuals, groups (clans, tribes, sects), entire regions and seemingly non-geographic or global networks. These terms include human terrain,

socio-cultural intelligence, human socio-cultural behavioral modeling, social media monitoring, patterns of life analysis and, more recently, activity based intelligence.

All of these terms and associated analytic methods share common elements: when done well, the Geospatial Intelligence (GEOINT) professional focuses on mastering spatio-temporal representations of complex socio-cultural dynamics in a way that empowers analysts, operators and decision makers to effectively prosecute national security strategy. The associated explosion in spatio-temporal discourse across the national security policy community has often served to confuse more than inform audiences. We are sympathetic to arguments for adopting a re-energized and expanded application of the term "human geography" and find value in the coining of new terms like "activity based intelligence" that emphasize innovative approaches worthy of their own label. Our use of the term socio-cultural dynamics to describe this volume appeals to our belief that the community is in need of more synthesis and integration than antithesis and specialization. It also helps us remain above definitional quibbling and embrace as many perspectives as possible.

We can all agree on the continued importance of socio-cultural dynamics and their relevance to national security. During the Cold War, social scientists worked intensely to help national security decision makers understand the human dimensions of that conflict, from understanding Soviet strategic culture and Politburo dynamics to examining the cultures of Warsaw Pact members to analyzing and countering socio-economic underpinnings of communist ideology.

U.S. Cold War socio-cultural intelligence programs supported all dimensions of Cold War grand strategy to contain and defeat the Soviet adversary. These included large-scale, regional influence operations to undermine the legitimacy of the occupation of Eastern Europe and bolster local alternatives like the Polish Solidarity movement and smaller, focused programs to understand the cultural background and ideological leanings of the leadership of each Soviet missile submarine.

Lamentably, we did not sustain the focus on socio-cultural intelligence during the transition to

a post-Cold War era. Socio-cultural intelligence collection, analysis and reporting capabilities subsequently atrophied during the 1990s. As documented in various commissions and reports, national security organizations over-emphasized technical collection disciplines after the Cold War and did not adapt analysis and reporting disciplines to address the nuances of many post-Cold War issues, trends and threats.

National security decision makers seeking to understand the human geography of the global war against terrorism in the aftermath of the 9/11 attacks found that the social science disciplines and traditional socio-cultural intelligence areas had been marginalized.

This volume synthesizes multi-disciplinary perspectives on socio-cultural dynamics to inform strategy and planning discussions by demonstrating the richness and diversity of social science contributions to national security decision making.

### **The power of place: human dynamics and national security decision making**

When America went to war in Afghanistan over a decade ago, troops quickly realized they lacked an understanding of the “human terrain” on the ground as they swept away the Taliban and transitioned to nation building. Meanwhile, the broader national security community struggled to grasp the human dimensions underlying the reasons why a small minority of Muslims had declared war on the West and how a gang of radicals hiding in the mountains of South Asia galvanized a larger global network of terrorist affiliates.

An important inflection point occurred in 2005. In November, the publication of Department of Defense Directive 3000.05, *Military Support for Stability, Security, Transition, and Reconstruction Operations* (often referred to as SSTRO), made stability operations a core military mission. The document codified in Departmental guidance what many strategists had already observed in programming, budgeting and training activities: stability and support operations should not be viewed as secondary activities from the perspective of readiness, doctrine, training and acquisition priorities. Security and stability operations were henceforth to be considered co-equal missions alongside traditional military missions.

In 2006 the U.S. Army published Field Manual (FM 3-24), *Counter-Insurgency*, and updated its foundational doctrine *Operations*, (FM 3-0) in February 2008, defining “full spectrum

operations” as the simultaneous application of offensive and defensive measures in concert with stability operations.

The emergence of a formal doctrine for Humanitarian Assistance Disaster Response (HADR) has also played a powerful role in elevating the importance of socio-cultural dynamics as they are arrayed across geography over time. HADR operations fundamentally require such data and analysis. The expansion of the human terrain team program and the September 2008 publication of a Human Terrain Team Handbook amplified the need for additional understanding about how to integrate socio-cultural dynamics research and methods into national security decision making.

By the end of the 2000s, strategists, planners and policy makers had identified a larger issue out of experiences in both Afghanistan and Iraq: the lack of an institutionalized process for understanding “socio-cultural intelligence” or what more recently has been termed “human factors” analysis or analysis of the human dimensions of conflict.

National security affairs have always been driven by and dominated by human issues and the interaction of regional, physical, environmental and other dynamics that are grounded in spatial and temporal realities, but are too often discussed and analyzed in isolation. These spatio-temporal factors, often loosely framed in “geospatial” and “geographic” terms, are increasingly central to our understanding of the complex socio-cultural phenomena, events, crises and policy dilemmas that shape international security, foreign policy and diplomatic strategy.

In highlighting national security challenges in a location-aware world, this volume aims to inform national security decision makers about the importance of understanding the complex and ever-changing geography of humanity and human behavior—in all of its forms and in much greater detail. Many decision makers are already asking for information that is spatially and temporally organized to both help shape decision making and to facilitate more efficient implementation of programs. Across the national security community, for example, there is increased emphasis on understanding patterns of life; influence channels for strategic communication; the local, regional and global factors influencing stability or instability; and the implications of environmental or other system-level change on people, groups, societies and nations.

As the Defense Department pivots to the

Pacific to address Asian security challenges, and as the national security community continues to promote democracy, open markets and Internet freedom across the globe, the national security community will need additional sources, methods and research to address the human underpinnings of security, governance and economic integration. It is increasingly important to understand how local politics and communal relations are refracted through cultural lenses that endure the pressures of globalization as well as new dynamics that are reactions to globalization. Even if the focus on stability operations and counterinsurgency missions wanes in the coming years, the demand for spatially and temporally organized socio-cultural information to support decision making will continue to grow.

The 2010s are bringing the national security community full circle back to the dilemma faced by post-Cold War planners and strategists. As was the case 20 years ago, as budget reductions force cuts across defense and intelligence community programs, it may be that open source and social cultural intelligence programs are disproportionately reduced. Ongoing strategy and planning efforts, including preparations for the 2014 Quadrennial Defense Review (QDR), must reduce spending across defense and intelligence community programs while sustaining programs and activities crucial to understanding and preparing for an era of persistent conflict. Increasing our understanding of human dynamics in terms of spatio-temporal change over time must remain a priority.

When Director Letitia Long took the helm of the National Geospatial-Intelligence Agency (NGA) and articulated her vision for the National System for Geospatial Intelligence (NSG) at the 2011 GEOINT Symposium, organized by USGIF, her explicit focus on “human geography” in achieving better analytic depth underscored the need for additional resources to educate the broader national security community about the breadth of the human geography community. Her remarks bolstered the decision to produce this volume and remain relevant today.

We believe that, as the 2014 QDR and other planning efforts proceed, strategists and planners seeking measures to preserve efficiency and effectiveness will be well-served to remember the critical importance of geospatially and temporally referenced socio-cultural intelligence.

## **Volume background and objectives**

The idea for this volume emerged from a series of meetings facilitated by the United States Geospatial Intelligence Foundation (USGIF) that began in 2008 and continued after the volume went to print in 2013. Participants in these meetings have included U.S. government and military professionals from over a dozen departments or agencies, scholars representing a diverse range of academic disciplines, and industry practitioners from across the defense, intelligence, diplomatic, homeland security and international development markets.

Since then, USGIF has steadily cultivated a community of interest sharing the following concerns: the need to raise awareness of how the social and behavioral sciences were contributing to national security decision making; reinforcing the development of standards and best practices as analytic methods proliferated across the intelligence and broader national security policy community; and ensuring that solutions and practices developed since the 9/11 attacks continued to mature as troops departed Iraq and Afghanistan and as funding for programs designed to provide “patterns of life” and other “population-centric” information and analysis started to decline.

USGIF recognized the need for a monograph on socio-cultural dynamics from a geospatial perspective written by and for national security professionals, one that canvassed both the formal discipline of human geography and the many related disciplines that focus on the so-called “human terrain.” Responding to this request, our contributors put aside academic differences and quibbles about the definition of specific fields of geography or other social science disciplines; they generally accepted that a volume on Socio-Cultural Dynamics and Global Security was necessary to capture what the community had learned during the 2000s about the human dimensions of conflict.

The volume has three objectives. First, it provides a cross-section of proliferating interdisciplinary writings that provide examples of using increasingly sophisticated techniques in which spatial and temporal variables are aggregated and analyzed to understand the socio-cultural, political, economic and regional dynamics at the core of national security studies. Our sampling of interdisciplinary approaches embraces the diverse lexicon and often doctrinaire approaches to defining and describing human dynamics. Some authors are

eager to apply the term “human geography” to all of these dynamics, a term we are happy to promote to capture both the diversity of perspectives as well as the near-universal recognition that human behavior and activity as it is arrayed across the global landscape remains at the core of national security studies. The range of interdisciplinary articles and practitioner experience represented in this volume travels far beyond the traditional definition of human geography that dominates the larger profession of geography in mainstream academic writings. And, while some will note that the appreciation of space and time exhibited in all of these essays demonstrates the primacy of geography and the human element, we have designed this volume to let all disciplines express their viewpoints and methodological approaches.

Second, the volume highlights the new challenges faced by national security analysts, operators and decision makers within an increasingly “location aware” global society. It is not just that human society can only be properly understood in terms of its evolving geospatial and temporal dynamics. It is that the explosion in widely available low-cost commercial imagery, the ubiquity of GPS-enabled devices and applications, the widespread adoption of capabilities like Google Earth, the increasing geo-referencing of media and social media content, and other such phenomena are fundamentally reshaping how humans behave and interact. This includes reshaping how location-aware societies perceive and respond to the actions of our national security enterprise and to the actions, inactions and policies of individual nations and international organizations.

The third objective of the volume is to provide a reference for students of national security affairs. After nearly a decade of sustained focus among national security practitioners on the requirement to understand patterns of life, to enable security and stabilization operations, to address human security challenges, and to understand root causes of communal and other identity-related violence, there remains a critical lack of core texts written by and for students of national security policy making. This volume combines perspectives from academics, senior government leaders and practitioners from both government and industry to provide a new resource for educating students of national security affairs.

We are optimistic that the national security

community will agree that successfully managing the challenges of the next half century and beyond requires sustained investment in understanding socio-cultural dynamics within a spatial and temporal framework. Without a commitment to constantly renew our understand of these dynamics and adjust our framework accordingly, we will repeatedly find ourselves facing population-centric security challenges in strange geographies where we have inadequate understanding of how these security challenges have evolved. And, if anything changes continually, it is humanity. A one-time investment in building knowledge resources will never work—this activity must always be ongoing.

### Section overviews

This volume is an ambitious attempt at several “firsts.” It is the first attempt to integrate into one volume different, and sometimes competing, perspectives on the current state of Human Geography research and methods as they might be applied to inform national security challenges. It is also the first volume to synthesize academic, practitioner, and policy-maker perspectives. Finally, it is the first attempt to connect traditional approaches to Human Geography with practitioners who rely on or draw from these approaches, often without knowing it.

The volume includes 23 articles organized into 6 thematic sections:

- Understanding the Story: Thoughts from National Security Leaders
- Administratively Derived Socio-Cultural Data in Human Geography and GEOINT
- Natural Resources, Human Dynamics and Security
- The Socio-Technical Dimensions of Culture and the Modern Geography of Security
- Names and Language in Human Geography
- Policy and Governance in a World of Experts: Harnessing Socio-Cultural Dynamics for Global Security

By no means do these sections illuminate the entirety of the challenge we face in understanding socio-cultural dynamics both spatially and temporally. Yet the articles in each section do provide a representative sample of the socio-cultural dynamics that are too often neglected within the national security decision making community. Accordingly, we have organized the articles from the perspective of how the different sections are intended to come together.

The volume begins with a series of articles

by senior national security leaders and thought leaders framing issues and challenges as they see them. Dr. Lee Schwartz, Dr. Parag Khanna, Dr. Joseph Fontanella, and Patrick O'Neill all highlight the criticality of a geospatial lens on challenging socio-cultural dynamics. Coming from very different backgrounds and experiences, the first section authors paint a collective landscape and offer unique individual perspectives that frame the subsequent sections.

Section Two focuses on administratively derived socio-cultural data—the kind provided by indigenous governmental administrative capacities such as a census, cadastre, the resulting addressing scheme, and a system of identification cards that link identity to individual addresses. This is a far too often overlooked form of geospatial data that simultaneously serves as the key to decrypting a society while also serving as the glue that holds a stable society together.

Excluded from this discussion was a piece about polling and surveying. Polling and surveying are not normally capabilities conducted by government agencies, but are often contracted by them. As polls and surveys have shown utility within the national security space, and have received more funding, they have become focused on much more fine-grained geographies, providing senior national security leaders with a lens on how socio-cultural dynamics have evolved spatially and temporally. Even though this volume did not have the time or space to address polls and surveys properly, we see them as crucial in the effort to showcase many of the novel polling and survey approaches that are bringing power to geospatial analysis of human dynamics. In particular, how these strategies can be used in concert with social-media monitoring strategies and other modes of spatio-temporally enabled analysis must be further explored.

Section Three could have comprised its own volume, or series of volumes, as there are no bounds to the variety of ways in which natural resources and their relationship with the human geography shape the dynamics of global security. No matter how well you understand societies in terms of the data accrued by polls and surveys, one must understand the impact of natural resources on human dynamics—particularly those that sustain life and livelihoods in particular regions. But rather than a section that covers the kitchen sink (e.g., climate change, ecosystem collapse, invasive species,

fossil fuels, fisheries, etc.), we chose to be sparing and provocative, illustrating this critical dynamic through water and diamonds. Water is critical to humanity everywhere on Earth, but in some places, its abundance makes it less of a critical driver for security. Yet, where it is scarce, understanding water is key to understanding human security. Diamonds, and specifically “conflict diamonds,” provide a very different set of insights into the ways that natural resources can shape human security. Both are profoundly tied to geography, and shape the narrative in different societies in different ways.

It would take a much larger volume to provide an exhaustive accounting of the security challenges, geographic conflicts and suffering that occur due to the scarcity or even an abundance of particular natural resources. But, it is important that readers at least understand this dynamic in tension with the sovereignty, property rights and the continuous flow of peoples across geographies in conflict.

Density, conflict and hazards loom increasingly large in the future of human security. Just recently, the majority of the world's population found themselves living in urban areas. This new balance, of course, was in the context of a rapidly increasing world population. This pattern of urban development is too often very different from what Westerners might associate with city living. A dense fabric of informal settlements unmapped by the kinds of administrative capabilities described previously offer an interesting challenge to national security professionals seeking to prevent conflicts from breaking out in these population centers. We regret that we could not do more in this section, particularly as it relates to the recent emergence of the use of spatial data within the development community to better understand how societal risks can be understood, mitigated and responded to when we have a thorough understanding of the geographic exposure of societies to natural hazards. But, for the reader, it is important to note that this topic is often difficult to separate from the issues raised in the two prior sections. This is fertile ground for a future volume.

Taking a somewhat different tack into the realm of the technical, Section Four, entitled “The Socio-Technical Dimensions of Culture and the Modern Geography of Security,” lets the reader explore how many of today's hot topics collide when we think of them spatially and temporally. While social media, volunteered geographic information, and activity based



intelligence are terms often discussed by very different communities within the national security enterprise, it is clear that the domains that these terms represent are quickly crashing into each other. With everything electronic becoming location-enabled and location-aware, analysts, operators and decision makers are demanding that analysis of these data types provide a geographic “lay-down” of the complex socio-cultural phenomena being observed. With every consumer innovation, and the proliferation of commercial sensors within the inevitable emergence of a global location-aware Internet of Things (IoT), it seems clear that complex socio-cultural phenomena, as they are unfolding across complex urban geographies in real-time, will be laid bare by such technologies. Our national security community must become facile in their use. This is not to say that the administratively derived forms of spatially enabled socio-cultural data outlined previously will be any less useful. Instead, they will become a fundamental backdrop for understanding this explosion in socio-technical data.

In Section Five, entitled “Names and Language in Human Geography,” we explore the world of toponymy—the study of geographic names, and how such knowledge shapes our ability to understand what is going on in a society. Ignorance of such issues too often leaves the national security professional flat-footed, ill-equipped to navigate both the

geography and the society at large. Whether the deluge of such socio-technical data, the steady accumulation of administrative data, or the endless evolution of less well documented vernaculars that identify places of cultural significance, we are always faced with the challenge of language and culture.

Lastly, we offer a brief sixth section entitled “Policy and Governance in a World of Experts: Harnessing Socio-Cultural Dynamics for Global Security” to provide some insights into the policy and governance challenges that leaders will face as they try to help the national security enterprise better deal with the kinds of socio-cultural phenomena discussed in the previous sections. We intentionally steered away from being prescriptive, and sought instead to highlight a few key areas that seemed obvious, uncontroversial, yet chronically overlooked.

Edited volumes are fundamentally about making hard choices on content and focus. We have taken on a broad topic about which there are many competing perspectives. In the end, we hope that it serves as the beginning of a conversation that goes on steadily as this century unfolds. To encourage and provide a voice for continued debate and discussion about terms, approaches, and avenues to connect scholars to the national security community, USGIF will provide a discussion forum on its website at [usgif.org](http://usgif.org) following the publication of this book.

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**Dr. Christopher K. Tucker** thinks and works at the intersection of technology, strategy, geography and national security. Tucker manages a portfolio of social ventures and technology companies across the domains of international affairs, defense/intelligence and academe. He serves on a variety of government, private sector and non-profit boards.

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