



THE U.S.-INDIA RELATIONSHIP: CROSS-SECTOR COLLABORATION TO PROMOTE SUSTAINABLE DEVELOPMENT

**Dr. Michael J. Fratantuono
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Editors**



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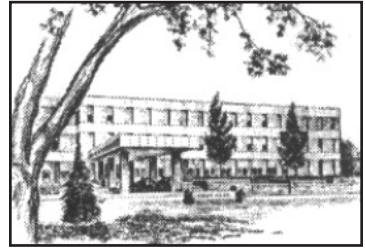


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**Strategic Studies Institute
and
U.S. Army War College Press**

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September 2014

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CONTENTS

Foreword	ix
Acknowledgements	xi
List of Participants	xix
1. Introduction. The U.S.-India Relationship: Cross-Sector Collaboration to Promote Sustainable Development – Rationale for the Workshop and Overview of the Volume	1
<i>Michael J. Fratantuono</i>	
PART I: WORKSHOP PAPERS AND DISCUSSANTS' COMMENTS	
25	
Section 1: Theoretical Framework and Key Concepts	27
2. Designing and Strategically Managing Cross-Sector Collaborations.....	31
<i>John M. Bryson, Barbara C. Crosby, and Melissa Middleton Stone</i>	
3. Seeking to Extend the Model: Cross-Sector Collaboration to Tackle Sustainable Development in Transnational and Global Settings with the Military as a Partner	89
<i>David M. Sarcone</i>	
4. Keynote Address: Sustainable Development and the U.S.-India Strategic Relationship	103
<i>Chandrashekhar Dasgupta</i>	

Section 2: Cross-Sector Collaboration: Implications for Strategic Leaders	113
5. Preparing for the Future: Brcko, Kabul, Baghdad, and Beyond	119
<i>Jeffrey D. McCausland</i>	
6. Strategic Cross-Sector Collaboration: The United States and India	149
<i>Vijay Kumar Singh</i>	
7. Discussant Comments	177
<i>Jack Clarke</i>	
Section 3: Environmental Security and Transnational Challenges in South Asia	185
8. Environment and Security: Transnational Challenges, Transnational Solutions	189
<i>Richard Matthew</i>	
9. How Sustainable is U.S.-India Cooperation in Central and South Asia?	203
<i>Stephen Blank</i>	
10. Discussant Comments	247
<i>Leif Rosenberger</i>	
Section 4: Prospects for Collaboration in the U.S.-India Strategic Relationship	267
11. From the <i>Nitisara</i> to the <i>Hitopadesha</i> : Ancient India's Impact on Modern India's Statecraft	271
<i>Andrew Salamone</i>	

12. Principle versus Pragmatism: The Evolving State of the U.S.-India Defense Trade Relationship	295
<i>Rahul S. Madhavan</i>	
13. The U.S.-India Strategic Partnership: Compelling Connections?	301
<i>Namrata Goswami</i>	
14. Discussant Comments	323
<i>Ivan Welch</i>	
Section 5: Sustainable Development as a National Security Concern in India	329
15. Breaking out of the Greenhouse: Indian Leadership in Times of Environmental Change	333
<i>Dhanasree Jayaram</i>	
16. Sustainable Development and National Security Strategy for India: 2020 and Beyond	351
<i>Krishnappa Venkatshamy</i>	
17. Discussant Comments	401
<i>Michael D. Beevers</i>	
PART II: CASE STUDIES OF CROSS- SECTOR COLLABORATION	417
18. Cross-Section Collaboration to Promote Sustainable Development	419
<i>David M. Sarcone</i>	

19. Case Study 1: Forging Collaborations to Nurture Enterprises: The Journey of Bharatiya Yuva Shakti Trust423
Rajesh Chakrabarti, Santosh Srinivas
20. Case Study 2: Collective Impact and the Global Alliance for Improved Nutrition459
Lalitha Vaidyanathan
21. Case Study 3: The ALLARM Approach: A Collaborative Process for Successful Community Based Environmental Monitoring 467
Julie Vastine
22. Case Study 4: The Hershey Company: Committed to Social Responsibility through Collaboration477
Todd Camp
23. Case Study 5: The Humanitarian Engineering and Social Entrepreneurship Program at Pennsylvania State University: An Academically Driven Model of Cross-Sector Collaboration to Create Sustainable Value for Developing Communities487
Khanjan Mehta
24. The U.S.-India Relationship: Cross-Sector Collaboration to Promote Sustainable Development – Insights from the Workshop; Possible Next Steps497
Michael J. Fratantuono

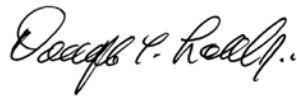
FOREWORD

Over the past 2 decades, the global system has been subject to a range of forces which have reconfigured relationships among individuals, organizations, and nation-states. As an aspect of that changing structure and rising interdependence, many security challenges which confront today's strategic leaders are grounded in concerns about economic, social, and environmental sustainability, and, in turn, about political stability. Furthermore, with increasing frequency, many observers are concluding that those types of challenges cannot be addressed by stakeholders from any single sector. That insight has prompted calls for collaborative efforts involving citizen groups; for-profit and not-for-profit companies; local, regional, and national governments; and intergovernmental organizations.

Nevertheless, initiating and managing a cross-sector collaborative initiative is a difficult undertaking. It requires a broad range of skill sets, including the ability to think in system terms; help various participants articulate their respective interests and find common ground; marshal resources; create processes and structures that will enable collaboration; establish baselines; and celebrate progress. Acquiring those types of skills is relevant to strategic leaders in all professions, including those in the defense and security communities.

This volume reflects the proceedings of a workshop held in Carlisle, PA, in March 2013, that brought together a diverse group of scholars and practitioners from India and the United States who were both deeply knowledgeable and highly experienced in their respective fields; who regarded sustainable development as a critical challenge for the future; and who, at

some level, had begun to experience the challenges of participating in cross-sector collaborations. The purpose of this volume is to summarize the ideas shared by those professionals, in hope they will serve as a stimulus to further conversation and research about an increasingly important set of matters.

A handwritten signature in black ink, reading "Douglas C. Lovelace, Jr." in a cursive script.

DOUGLAS C. LOVELACE, JR.
Director
Strategic Studies Institute and
U.S. Army War College Press

ACKNOWLEDGEMENTS

This volume reflects the insights that emerged during the 3-day workshop entitled “The U.S.-India Relationship: Cross-Sector Collaboration to Promote Sustainable Development,” which took place at Dickinson College on March 12-14, 2013. We are professors at Dickinson College, and had the privilege of organizing and co-directing the workshop in conjunction with members of the Strategic Studies Institute (SSI) of the United States Army War College (USAWC).

As one might imagine, an initiative that entailed collaboration between two organizations that are each dedicated to research and learning but nonetheless have somewhat different missions and clientele, and that brought together experienced and influential government officials, military officers, business people, and scholars from India and the United States was a complex undertaking that required the hard work and good will of many individuals and parties. We would like to take this opportunity to recognize those contributions.

In August 2011, Colonel (Retired) Dr. Jeff McCausland, former Dean of the USAWC and visiting Professor of Security Studies at Dickinson College, encouraged us to consider shaping a proposal for a competitive grant under the Academic Engagement Program of the SSI that might somehow focus on India. He had recently returned from a visit, and, while there, had sensed eagerness among members of the security community in that country to exchange ideas. He also noted that India was of increasing importance to U.S. strategic interests. We decided to explore such a possibility. Over the next 2 months, we shaped a proposal that did indeed focus on the U.S.-India re-

lationship, but—as reflected in the title of the workshop—also incorporated our professional interests in cross-sector collaboration and Dickinson College’s core competency in sustainability education.

As we prepared our proposal, we relied on the expert advice from Mr. Glenn Peterman, Director of Sponsored Projects and Research Compliance in Dickinson College’s Office of Corporate, Foundation, and Government Support. He helped us to think through the logistics that would be required and the costs that would have to be incurred to stage the workshop. Furthermore, Mr. Peterman shared our proposal with our Provost, Dr. Neil Weissman. In turn, Dr. Weissman won authorization from the President’s Discretionary Fund of Dickinson College to provide resources that helped support the project. That support included funds for administrative assistance, and for one course of released time from teaching, and for a modest but helpful stipend that we shared. Thus, we were able to build those contributions into our proposal, which signaled our College’s willingness to be an equally invested partner to the SSI.

While we were drafting our proposal, we spoke with Professor Amy Gaudion, Assistant Dean for Academic Affairs of the Dickinson School of Law of the Pennsylvania State University, the third major educational institution located in Carlisle. Professor Gaudion expressed strong interest in the project, and indicated that if we won the grant from the SSI, she would be very willing to make available the facilities of the School of Law.

We submitted our application in autumn of 2011. In August of 2012, we learned that we had been awarded a grant from the SSI to stage the workshop in March of 2013.

Once we heard the good news, we met with Professor Douglas C. Lovelace, Jr., Director of the SSI, and with his colleague, Colonel Michael (Scott) S. Weaver, Director of Academic Engagement. They both expressed their pleasure about the initiative and pledged the general support of the SSI. We also met with Dr. Steven Blank, at the time the leading expert at the SSI in the area of South Asia, who indicated his willingness to write a paper, to participate in the workshop, and, based on his work in previous such initiatives, to provide general advice. As well, we met with Lieutenant Colonel John D. Colwell, Jr., Deputy Director of Academic Engagement of the SSI, who was designated as contract officer and our counterpart for the project.

As the months unfolded, we visited the SSI to deliver a few progress reports. But just as important, we developed a wonderful working relationship with Lieutenant Colonel Colwell – we met on several occasions to exchange ideas and coordinate activities. He was instrumental to the success of the project.

Meanwhile, during the autumn of 2012, we were able to gradually build the roster of workshop participants. We were delighted to find that, while our proposed topic was a step off the main path of what are traditional security-related matters, it had nevertheless sparked interest in several quarters. As part of our outreach, we drew upon some of our own professional contacts. But we certainly benefitted from the networks of others. We received important introductions to people who eventually joined the workshop from Dr. McCausland; Professor Gaudion; Ms. Connie Jeffrey, Director of Communications at Dickinson College; Dr. Neil Leary, Director of Dickinson's Center for Sustainability Education; and Dr. Michael Beavers,

Assistant Professor of Environmental Studies at Dickinson College. We also benefitted from the outstanding reputation of the SSI—once the SSI posted the workshop as a scheduled event on their website, we received important inquiries of interest from members of the U.S. security community.

We received important help from the Academic Technology Department of Dickinson College, including Ms. Pat Pehlman, Director of Academic Computing; Mr. Andy Petrus, Multimedia Specialist; and Ms. Brenda Landis, Multimedia Specialist. They met with us on a few occasions to provide advice about the approach we could take to record the workshop proceedings effectively. Mr. Ryan Burke, Web Development Specialist, helped us set up the workshop website that we used to share information and organize the papers that would be submitted by workshop participants. Following the workshop and once again in the summer of 2013, Mr. Thomas Smith, Technician for Academic Computing, provided expert assistance to us and to our research assistant, as we began to work with the digital recordings of the workshop proceedings.

We also note that we received financial support from Dickinson College's Department of Global Education and from Dickinson College's Committee on Research and Development, which enabled us to travel to India in January 2013, in order to engage in Dickinson-related business and to present a paper at an international conference in New Delhi. As an added benefit, while in India, we were able to meet in person for the first time a few of our Workshop participants. These included Air Commander Krishnappa Venkatshamy of the Institute for Defence Studies and Analyses; Ms. Dhanasree Jayaram and her superior,

General (Retired) Jasjit Singh of the Centre for Air Power Studies; Ambassador (Retired) Chandrashekar Dasgupta of The Energy Resource Institute (TERI); and Dr. Chakrabarti. In each instance, we were greeted with enthusiasm. Given those initial meetings, when the workshop started, we already had a bit of a working relationship with participants, which helped jump-start proceedings.

In autumn of 2012, we asked Ms. Tammy Haken to serve as administrative assistant on the project. Ms. Haken had already completed her J.D. from the Dickinson School of Law and, at that point, was in the final stages of earning a Master's Degree in International Affairs from Pennsylvania State University. She was wonderfully helpful, and took the lead in coordinating website creation with Ryan Burke and in posting the drafts of papers submitted by workshop participants. She was the point of contact for participants regarding their respective travel plans and accommodations while in Carlisle. She also helped us edit the workshop proceedings during the summer of 2013.

We should also note that during the workshop, Ms. Haken took the lead in supervising a team of five Dickinson College students, who served as our assistants. That is, with some of the in-kind funds that had been provided by Dickinson College, we asked Ms. Anna Leistikow, Ms. Rachel Williams, Mr. Hunter Smith, Ms. Carmen Mann, and Ms. Sitong Chen to perform tasks that ranged from driving participants to and from airports in the region, to helping those participants navigate the campus and town, to taking notes and digitally recording the workshop sessions, and to serving as goodwill representatives of our College during receptions, meals, and break-out sessions. We are very proud of the work they did and the positive impressions they made on our guests.

In virtually all respects, the Workshop unfolded without a hitch. That success was due in large part to the efforts of many people at Dickinson College. We offer thanks to Ms. Dottie Warner, Director of Event Planning and her team, especially Mr. William Trego, who arranged all the classroom and meeting spaces and provided audiovisual support for presentations made during receptions and meals.

We also offer thanks to Mr. Keith Martin, formerly Director of Dickinson College's Dining Services; Ms. Jenn Acuna, Catering Manager; and Mr. Jack O'Donnell, Executive Chef, for providing stellar meals at reasonable cost. We certainly express our deepest gratitude to the United States Army War College Foundation, which provided the funds to cover all the meal-related expenses associated with the 3-day workshop.

Throughout the many months of project planning and management, we also had wonderful help from Dickinson College's Office of Financial Operations, including Ms. Joanne Gingrich, Director of Global and Sponsored Programs Accounting; Ms. Kristy Holmes, Assistant Director of Global and Sponsored Programs Accounting; and Ms. Jenna Kinsler, Global and Sponsored Programs Accounting Associate.

As we noted previously, at an early stage of the initiative, Professor Gaudion had offered her support, and during the workshop, we greatly benefitted from the first-rate teleconference capabilities that are housed in the Carlisle campus of the Dickinson School of Law. On the afternoon of the second day of the workshop, participants were able to enjoy "face to face" conversations with Dr. Rajesh Chakrabarti and Mr. Santosh Srinivas, who spoke to us from the Mohali Campus of the India School of Business, and then immediately following, with Ms. Lalitha Vaidyanathan, Managing

Director of the consultancy FSG, who spoke to us from San Francisco. We thank Mr. Matt Gardner, Assistant Dean for Technology Policies; and Mr. Tom Dennis, Technical Services Coordinator, both of whom are affiliated with Pennsylvania State University and who made those conversations technically possible.

In spring of 2013, we were fortunate to win a grant from Dickinson College's Center for Sustainability Education to support the full-time efforts of a research assistant during 8 weeks of summer of 2013. We received applications from 15 very talented students. We chose Mr. Tim (Ted) Dressel (Dickinson class of 2014) to serve in that capacity. He read through all the papers that had been submitted, in order to help Ms. Haken and us with the editorial process. He also studied the 3 days of recorded proceedings, and then worked to "cut and paste" segments of the recorded proceedings into relatively short, annotated, manageable sections that would permit interested parties to hear and watch various participants share concepts relevant to a particular theme. He helped us create transcripts of the oral presentations and videoconference interviews for which there were no supporting written papers. Simply speaking, Mr. Dressel's work on our project was exceptional, in all respects.

In August of 2013, we submitted to John Colwell the final versions of the Section Introductions and Chapters 1 to 24 of the Manuscript. He then completed the prefatory items and navigated the book through the next steps in the process. In March of 2014, we learned that the manuscript had been approved for publication. From that time to this writing in August of 2014, we have benefitted from the expertise and fine work of Dr. James G. Pierce, Ms. Rita A. Rummel, and Ms. Jennifer E. Nevil, who shaped the book into its current format.

Finally, we thank all of the workshop participants. Individually, each and every one shared ideas in a forthright fashion and made serious-minded and meaningful contributions to the success of the initiative. Collectively, they brought an enormous amount of insight and expertise to the topic at hand. As is reflected in the papers that have been included in this volume, they also established a foundation for further research in what we believe is an important arena.

LIST OF PARTICIPANTS

Ms. Stephanie Balmer, Vice President of Enrollment and Communications and Dean of Admissions, Dickinson College.

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Dr. Rajesh Chakrabarti, Executive Director, Bharti Institute of Public Policy and Clinical Associate Professor, India School of Business.

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John Colwell, Jr., was the Deputy Director of Academic Engagement at the Strategic Studies Institute, U.S. Army War College, from 2012 to 2014. He recently retired from active service as a U.S. Army lieutenant colonel in July 2014. His prior assignments include U.S. Forces-Afghanistan J-5 Plans, U.S. Army-Pacific G-5 Plans, and Assistant Professor, Department of Defense and Strategic Studies, United States Military Academy. He is currently pursuing a career in the energy and industrial automation sectors. Lieutenant Colonel Colwell holds a B.S. degree in history from West Point, NY; and a M.A. in diplomacy and military studies from Hawaii Pacific University.

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and research interests include: the changing structure of the global economic and political system; the rising interdependence among state and nonstate agents in the global system; and the strategies being pursued by strategic leaders from various sectors as they navigate those changing circumstances. Dr. Fratantuono has published a range of case studies and journal articles, and served as a consultant to both for-profit and non-profit organizations. Dr. Fratantuono holds a Ph.D. in international economics from the University of Washington.

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Mr. Andrew Salamone, Research Fellow at the Center for Strategic Intelligence, National Intelligence University.

Dr. David Sarcone, Associate Professor, Department of International Business and Management, Director Health Studies Program, Dickinson College. He is a co-editor of this volume. Prior to joining the Dickinson faculty in 2001, he held senior management roles in several leading regional health care systems and specialty provider organizations over a health care career spanning 25 years. He was instrumental in the design and development of a collaborative, multi-disciplinary health studies certificate program at Dickinson College and has served as the program's coordinator. He also served as the Chair of the International Business and Management Department. His research interests broadly include interorganizational relationship theory topics as they relate to sustainability and health care management issues. His current projects include the analysis of a failed cross-sector community sustainability initiative and the development of a community cross-sector health partnership. Dr. Sarcone holds a master's in business administration from the University of Pittsburgh and a Ph.D. from the School of Public Affairs, Pennsylvania State University.

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General (Retired) Vijay Kumar Singh, former Chief of Staff of the India Army.

Mr. Santosh Srinivas, Associate Director, the Wadhvani Centre, India School of Business.

Ms. Lalitha Vaidyanathan, Managing Director of the consultancy FSG.

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CHAPTER 1

INTRODUCTION. THE U.S.-INDIA RELATIONSHIP: CROSS-SECTOR COLLABORATION TO PROMOTE SUSTAINABLE DEVELOPMENT – RATIONALE FOR THE WORKSHOP AND OVERVIEW OF THE VOLUME

Michael J. Fratantuono

In August 2012, my colleague, David Sarcone, and I learned that a proposal for a workshop entitled, “The U.S.-India Relationship: Cross-Sector Collaboration to Promote Sustainable Development,” that we had submitted to the Strategic Studies Institute (SSI) of the U.S. Army War College (USAWC) had been selected for funding under the Academic Engagement Program of SSI. The workshop, which we coordinated and directed in conjunction with SSI, was held at our home institution, Dickinson College, from March 12-14, 2013. The roster of participants was diverse and impressive: It included leading scholars, military officers, government officials, and representatives from the for-profit and not-for-profit sectors from India and the United States. The purpose of this volume is to share formal contributions made to the workshop by participants, and to convey some of the insights that surfaced during workshop sessions.

FOCUS AND RATIONALE FOR THE WORKSHOP

The Workshop participants were asked to address the following overarching questions. Within the context of the U.S.-India strategic relationship and in light

of the vital national interests shared by both countries, what factors will contribute to the success of cross-sector collaborative initiatives intended to address challenges associated with sustainable development? What implications do those insights have for strategic leaders in different sectors?

Those questions were motivated by a set of six high-level global developments.

1. Over the past 2 decades, the global system has been characterized by rising interdependence and changing structure, which in turn has led to increasing attention in many quarters to sustainability-related dimensions of national security.

For the past 2 decades, the U.S. *National Security Strategy* has been based on four overarching national interests: defense of the homeland; economic prosperity; promotion of U.S. values; and a favorable world order. While U.S. national interests have not changed, in the current era strategic leaders in government, the military, business, and civil society are confronted by complex challenges that have multiple causes and often lie at the intersection of matters related to globalization, sustainability, and security, and by forces that will shape the intermediate-term future of the global system. Developments of that sort have influenced thinking about national security issues in a range of arenas, such as featured essays in influential journals;¹ the content of university courses about international relations and security studies;² and the focus of high-profile conferences.³

Perhaps most important, they have been included in government assessments. In particular, the changing features of that external environment are provocatively described by the U.S. National Intelligence Council (NIC) in its fourth and most recent analysis of key trends and factors in the global system.⁴ Relative

certainties identified by the NIC include but are not limited to: the relative rise of new state powers, such as China and India, and increasing relative power of nonstate organizations; a shift in wealth and economic power from West to East; increasing demand for food, water, and energy resources; rapid population growth in so-called youth bulge states; and increasingly dangerous capabilities in the hands of terrorists. Key uncertainties include, among others, the extent of an energy transition away from oil and gas; the speed of climate change; the possibility that Russia and China will advance toward democracy; whether nuclear arms in Iran will trigger a regional arms race; whether the Middle East will become more stable; and whether nation states continue to engage in multilateral initiatives to meet challenges and shape change.

The relative certainties and key uncertainties described in the NIC analysis lead one to think about the notions of “sustainability” and “sustainable development.” For some authors, sustainability remains a “contested concept,” as are other powerful ideas such as “liberty, social justice, and democracy.”⁵ Nevertheless, for the Workshop, we defined “sustainability” as “the capacity to improve the human condition in this and future generations without degrading the natural world,” a definition which is currently being used in various discussion groups at Dickinson College. In turn, we defined “sustainable development” as “development which meets the needs of the present without compromising the ability of future generations to meet their own needs,” the definition expressed in the 1987 report of the United Nations (UN) Brundtland Commission. Those simple yet broad definitions are consistent with the types of certainties and uncertainties included in the most recent report of the NIC, as described earlier.

New, system-level challenges have also helped shape the most recent articulation of U.S. national strategy issued in May 2010 by the administration of President Barack Obama.⁶ In the opening paragraph of his cover letter to *National Security Strategy*, President Obama says:

Time and again in our Nation's history, Americans have risen to meet—and to shape—moments of transition. This must be one of those moments. We live in a time of sweeping change. The success of free nations, open markets, and social progress in recent decades has accelerated globalization on an unprecedented scale. This has opened the doors of opportunity around the globe, extended democracy to hundreds of millions of people, and made peace possible among the major powers. Yet globalization has also intensified the dangers we face—from international terrorism and the spread of deadly technologies, to economic upheaval and climate change.

2. A range of factors have contributed to the rise of India, the geopolitical and geostrategic importance of India, the challenges still confronting the leaders of India, and India's national security objectives.

The Ministry of Defense of the Government of India makes the following observations on its web site.⁷

India's national security objectives have evolved against a backdrop of India's core values; namely, democracy, secularism and peaceful co-existence and the national goal of social and economic development. These are: defending the country's borders as defined by law and enshrined in the Constitution; protecting the lives and property of its citizens against war, terrorism, nuclear threats and militant activities; protecting the country from instability and religious and other forms of radicalism and extremism emanating

from neighboring states; securing the country against the use or the threat of use of weapons of mass destruction; development of material, equipment and technologies that have a bearing on India's security, particularly its defense preparedness through indigenous research, development and production, inter-alia to overcome restrictions on the transfer of such items; promoting further co-operation and understanding with neighboring countries and implementing mutually agreed confidence-building measures; and pursuing security and strategic dialogues with major powers and key partners.

To complement that statement of objectives, there has been much active research and sometimes intense debate about India as a rising power, the internal stresses and strains confronting the country's leadership, the external challenges confronting the country, the possible role India will play in shaping the evolving global system, and the purpose of India's national strategy and foreign policy. For example, Pratap Bhanu Mehta recently argued that India lacks an overarching national strategy.⁸

As observed by Rohan Mukherjee and David M. Malone, there is general consensus that over time, India's foreign policy orientation has passed through a series of stages; that is, periods of idealism and non-alignment in the 1950s and 1960s; of hard realism and alignment with the Soviet Union in the 1970s and 1980s; and a period of economically motivated pragmatism from 1991 forward.⁹ The third stage commands interest. In 1991, India was faced with difficulties in its external financial obligations. As a quid pro quo for multilateral concession, under the coordination of then Finance Minister Manmohan Singh, India pursued a series of externally-oriented liberalization

measures, such as reductions in tariff rates.

As noted by Gurcharan Das, those measures helped stimulate forces that had been set in play during the early-1980s, and collectively have contributed to the rapid growth that India has enjoyed for nearly 20 years. That is, from 1980 to 2002, the economy grew at an average annual rate of more than 6 percent, and from 2002 to the present, has grown at roughly a rate of 8 percent. That growth implied that, in the 25 years leading to 2005, India rose to be the fourth largest economy in the world; the size of the middle class quadrupled; and, when coupled with a reduction in birth rates from 2.2 percent to 1.7 percent per year, resulted in a rise in per capita income, based on purchasing power parity, from roughly \$1,200 to \$3,000.¹⁰ Despite that success, progress on the economic front will continue to be a policy priority. For example, Lavanya Rajamani indicates that "India currently ranks 128th on the Human Development Index, 34.3 percent of its population lives on less than U.S.\$1 a day, and an estimated 44 percent does not have access to electricity."¹¹

Meanwhile, Das points to a range of other economic concerns that have resulted in widespread discontent with the central bureaucracy and a movement in India for an active civil society to work around government to find solutions to social ills. To elaborate, Das argues that India has progressed along an un-trodden path of economic development, in that it has relied on "its domestic market more than exports, consumption more than investment, services more than industry, and hi-tech more than low-skilled manufacturing." As a result of those features, gains in employment have not been widely dispersed throughout the country, and there is pervasive poverty in rural areas. Success has

been based on the efforts of entrepreneurs. Furthermore, “rather than rising with the help of the state, India is in many ways rising despite the state.” Many complain that the central bureaucracy has impeded the efforts of small business, has for too long maintained rigid labor laws that benefit small segments of the workforce and has failed to deliver good performance in critical areas such as public education or health care.

Mukherjee and Malone elaborate a range of other internal and external national security concerns for India. The country is faced with political fragmentation, which makes consensus more difficult and slows the process of policy formation. Far more serious, India is coping with domestic insurgencies and secessionist movements that are prompted by uneven economic development and by the tensions between the central government and regionally based ethnic and religious groups, and are often manifested in politically motivated violence. India has regional security challenges: based on one measure, India counts as neighbors six of the “top 25 dysfunctional states in the world.” It is engaged in tricky bilateral relationships with Pakistan, China, Afghanistan, Bangladesh, Sri Lanka, and Nepal. At a global level, India is threatened by international terrorism, as vividly illustrated by the 2008 incidents in Mumbai; it is currently a concerned participant in debate about the nuclear proliferation regime; and, is in the process of redefining its relationship with the United States.

3. Over the past few years, the relationship between India and the United States has become both deeper and broader.

Stimulated by rising interdependence and changing structure in the global system and by what have been perceived as “common interests” and “common values,” there has been bipartisan support in the United States and India for a closer bilateral relationship. Ties have indeed grown stronger. For example, the administrations of U.S. President George W. Bush and India Prime Minister Manmohan Singh took a large step forward in 2008 by finalizing an agreement between the two countries regarding India’s access to civilian-use nuclear power technology.

From the outset, President Obama and his team have continued to build on that foundation, and within the past 2 years, the two countries have announced a range of initiatives to address shared national security concerns. Some of those initiatives call for state-to-state or military-to-military cooperation to address what one might regard as traditional security challenges. Other initiatives call for cross-sector collaboration—i.e., collaboration involving some combination of representatives from the state, military, private (for-profit) business, and civil (nonprofit) sectors—to address newly emerging security challenges, including those that are sustainability-related—i.e., those that contribute to social, economic, and environmental outcomes that are favorable, equitable, and widespread in the current period and in the future.

- In July of 2009, Secretary of State Hillary Clinton travelled to India, and at the conclusion of her visit, she and External Minister Somanahalli Mallaiah Krishna committed themselves and

their respective offices to strengthening the bilateral relationships between the two countries, and indicated that they would co-chair a U.S.-India Strategic Dialogue that would meet on an annual basis.

- In November of 2009, President Obama hosted Prime Minister Manmohan Singh at the White House, the first state visit during his term in office.
- In the National Security Strategy of May 2010, President Obama notes that the relationship between the United States and India is “underpinned by our shared interests, our shared values as the world’s two largest democracies, and close connections among our people.”
- In June 2010, Secretary Clinton and Minister Krishna successfully concluded the first round of the U.S.-India Strategic Dialogue.
- In November of 2010, President Obama visited India, and during an address to Parliament, he asserted, “it is my firm belief that the relationship between the United States and India . . . will be one of the defining partnerships of the 21st century.” He also endorsed India’s call for a permanent seat on the U.N. Security Council.
- In July of 2011, Secretary Clinton and Minister Krishna successfully concluded the second round of the U.S-India Strategic Dialogue. In official comments, they restated or announced a number of cooperative initiatives between the two countries that fell under four major headings.
 - Security Partnership for the 21st Century: includes efforts to address counterterrorism, maritime security, cyber security, peace-keeping, and defense cooperation.¹²

- Shared Interests in Asia: includes efforts by both countries to engage countries of East Asia in dialogue and institution building; to advance prosperity in Afghanistan; to develop a shared vision for regional integration; and to develop a global strategic partnership.¹³
- Cooperation in Science, Technology and Innovation: includes efforts by both countries to jointly promote science and technology research; to exchange insights about innovation; to develop an open source platform that will provide citizens of each country with access to e-government capacities, and to then share that platform with other countries; and to establish capacities to engage in space exploration and earth observation.¹⁴
- Prosperity: includes efforts to promote bilateral investment flows between the two countries; to cooperate on aviation safety; to enhance productivity in the agriculture sector and efficiency in water utilization; and to promote conditions leading to general health.¹⁵

Looking beyond those recently launched initiatives, in September 2011, the Council on Foreign Relations and the Aspen Institute India released the document, *The United States and India: A Shared Strategic Future*.¹⁶ It was the product of a Joint Study Group which the two organizations had cosponsored. The Joint Study Group consisted of 17 highly influential and knowledgeable individuals from the national security communities of the United States and India.

At the outset, the Report of the Joint Study Group asserted that “an ever more powerful and influential

India” is in the interests of the United States, “a United States that maintains its power and influence in the international arena, especially in Asia,” is in India’s national interest; and that close:

policy collaboration between India and the United States . . . is increasingly important to both nations, helps sustain a favorable balance of power in Asia and beyond, and promotes international peace and stability beginning in Asia writ large.

The Report went on to enumerate six vital national interests that are common to both countries: (1) Slow the spread of weapons of mass destruction and ensure the safe and responsible stewardship of nuclear weapons and fissile material; (2) Reduce threats from international terrorism; (3) Maintain a balance of power in Asia and in Europe that promotes peace and stability; (4) Promote the security of the global energy supply; (5) Cooperate in the management of the global economy; and (6) Effectively address climate change.

4. Cross-sector collaboration has in the past few years become an increasingly more relevant way to tackle complex issues.

Cross-sector collaboration is becoming an increasingly important theme in the business literature. The academic literature in the field of organizational theory from the 1980s and 1990s tended to concentrate on relationships between organizations in the same sector. As described by James E. Austin at the turn of the century, the focus had shifted toward cross-sector collaboration, such as that between nonprofit organizations (nonprofits) and for-profit companies (businesses).¹⁷ By mid-decade, the focus had broadened further. For example, John Selsky and Barbara Parker explore a large range of literature, categorized accord-

ing to whether partnerships are either between the Business and Nonprofit, Government and Business, Government and Nonprofit sectors, or exist among all three sectors together.¹⁸

In that context, John M. Bryson, Barbara C. Crosby, and Melissa Middleton Stone define cross-sector collaboration as:

[T]he linking or sharing of information, resources, activities, and capabilities by organizations in two or more sectors to achieve jointly an outcome that could not be achieved by organizations in one sector separately.¹⁹

In similar fashion, Mark Gerencser and colleagues from the consultancy Booz Allen Hamilton assert that in the contemporary age, complex problems will require the collaborative efforts of “megacommunities”; that is, “communities of organizations whose leaders and members have deliberately come together across national, organizational, and sectoral boundaries to reach the goals they cannot achieve alone.” In their view, megacommunities take on:

goals that are ongoing and mutable over time. *Most importantly, megacommunities demand a change in orientation from the leaders of the various organizations involved* [italics included by Gerencser *et al.*].²⁰

5. President Obama has called for meaningful cross-sector collaboration in addressing challenges to U.S. national interests.

In the May 2010 *National Security Strategy* released by his Office, President Obama turns time and again to the notion of cross-sector collaboration, both within the United States and across national boundaries,

as a means of responding to different dangers and challenges.

. . . we will pursue engagement among peoples—not just governments—around the world. The United States Government will make a sustained effort to engage civil society and citizens and facilitate increased connections among the American people and people around the world—through effort ranging from public service and educational exchanges, to increased commerce and private sector partnerships. In many instances, these modes of engagement have a powerful and enduring impact beyond our borders, and are a cost-effective way of projecting a positive vision of American leadership (p. 12).

. . . our international order must recognize the increasing influence of individuals in today’s world. There must be opportunities for civil society to thrive within nations and to forge connections among them. And there must be opportunities for individuals and the private sector to play a major role in addressing common challenges—whether supporting a nuclear fuel bank, promoting global health, fostering entrepreneurship, or exposing violations of universal rights. In the 21st century, the ability of individuals and non-governmental actors to play a positive role in shaping the international environment presents a distinct opportunity for the United States (p. 13).

New skills are needed to foster effective interaction to convene, connect, and mobilize not only other governments and international organizations, but also non-state actors such as corporations, foundations, non-governmental organizations, universities, think tanks, and faith-based organizations, all of whom increasingly have a distinct role to play on both diplomatic and development issues (p. 14, emphasis added).

6. In the near future, strategic leaders from various sectors will need the skill sets to engage in high-level cross-sector collaboration.

As explained by Peter G. Northouse, people who serve as principal decisionmakers in organizations are confronted with the need to perform two distinct yet related sets of activities: management and leadership. Management produces order and consistency by planning and budgeting, organizing and staffing, and controlling and problem solving. Leadership produces change and movement by establishing direction, aligning people, and motivating and inspiring.²¹

In recent years, decisionmakers have found it increasingly difficult to perform those two critical activities. In 2010, the IBM Institute for Business Value and IBM Strategy & Change reported the results of their fourth biennial survey of more than 1,500 chief executive officers (CEOs), general managers, and senior public sector leaders around the world.²² In the executive summary, the authors observed the following.

In our past three global CEO studies, CEOs consistently said that coping with change was their most pressing challenge. In 2010, our conversations identified a new primary challenge: complexity. CEOs told us they operate in a world that is substantially more volatile, uncertain and complex. Many shared the view that incremental changes are no longer sufficient in a world that is operating in fundamentally different ways.

The authors reported four major findings:

Today's complexity is only expected to rise, and more than half of CEOs doubt their ability to manage it; Creativity is the most important leadership quality, according to CEOs; The most successful organizations co-create products and services with customers, and integrate customers into core processes; and Bet-

ter performers manage complexity on behalf of their organizations, customers and partners.

The survey results suggest the need for collaboration to creatively carry out the tasks of leadership and management in a complex environment.

When the idea of cross-sector collaboration is added to the entire set of ideas identified here – those ranging from the increasing interdependence and changing structure of the global system, including the rise to prominence of India; to the key certainties and uncertainties envisioned in the NIC Report; to the notion that sustainability-related matters are critical to national interest of both the United States and India; to proposed collaborative initiative in the U.S.-India strategic relationship – one cannot avoid the idea that strategic leaders must become comfortable with participating in and managing networks, with the notion of co-evolution of organizations within networks, and with systems-level frameworks of analysis.²³

ORGANIZATION OF THIS VOLUME

This book consists of two major parts. Part I includes the theoretical papers and transcribed comments of workshop participants. It consists of five sections, each of which reflects an important theme from the workshop.

Section 1, “Theoretical Framework and Key Concepts,” begins with a very important paper written by Drs. John Bryson, Barbara Crosby, and Melissa Middleton Stone, three of the leading experts on cross-sector collaboration. Their paper establishes the theoretical framework for the entire workshop. Chapter 3, a response paper by Sarcone, provides com-

mentary on some of the key propositions of the lead paper, and then poses some initial questions in order to suggest ways to apply the concepts developed by Bryson, Crosby, and Stone in a new setting; that is, in collaborations that are intended to promote sustainable development and involve the military along with stakeholders from other sectors. Chapter 4 concludes the section with the keynote address by Ambassador (Retired) Chandrashekar Dasgupta discussing the relevance of sustainable development as a critical aspect of national security and a central component of the U.S.-India relationship.

Chapters 2 through 4 explore a range of theory papers and opinion pieces. Sarcone provides a brief summary that links the important themes, ideas, and recommendations of the various authors to relevant aspects of the model presented by Bryson, Crosby, and Stone in Chapter 2. This is an important contribution to the volume, since it helps the reader better appreciate the subtleties, complexity, and power of cross-sector collaborations.

In Section 2, Chapter 5, "Preparing for the Future: Brcko, Kabul, Baghdad, and Beyond," Dr. Jeff McCausland describes the evolution of the strategic environment and the missions undertaken by the U.S. Army over the past 20 years, the growing relevance of collaboration within that context, and the corresponding challenges those developments have for the Army with respect to formal education, individual development, and organizational change. In Chapter 6, General (Retired) V. K. Singh first describes the dynamics of relations among the United States, India, and China, and then turns to the relevance of cross-sector collaboration to those relationships. In a rather bold way, he offers his own insight as to the role a strategic leader

might play in a top-down initiated collaboration, provides a Strengths-Weaknesses-Opportunities-Threats (SWOT) analysis of the ability of South Asia to influence China, and then proposes areas in which cross-sector collaboration might be employed as part of an Ends-Ways-Means approach to managing relationships. In Chapter 7, the conclusion for Section 2, Dr. Jack Clarke speaks to the necessity for clear communication across cultures, professional development, and innovation in processes and structures as keys to successful cross-sector collaboration.

In Section 3, Chapter 8, “Environment and Security: Transnational Challenges, Transnational Solutions,” Dr. Richard Matthew discusses the increasingly strong links between environmental forces and national security concerns. Dr. Stephen Blank then offers a provocative, sweeping, and essentially critical analysis of the New Silk Road Strategy being pursued by the Obama administration in South Asia in Chapter 9. In his commentary in Chapter 10, Dr. Leif Rosenberger elaborates on the analysis provided by Dr. Matthew by focusing on the prospects of innovation for overcoming Malthusian concerns regarding food and water. He also offers a direct rebuttal to the opinions of Dr. Blank.

Section 4, “Prospects for Collaboration in the U.S.-India Strategic Relationship,” includes three contributions. In Chapter 11, Mr. Andrew Salamone assesses the unique strategic culture of India, which differs from that of the United States, and therefore implies the need for greater cross-cultural awareness among parties in a collaborative initiative. He illustrates his points by providing insights from classic Hindu texts, which he then links to comments by contemporary Indian leaders. In Chapter 12, Mr. Rahul Madhavan

offers insights about trade in defense assets and technologies between the two countries, an important aspect of the U.S.-India relationship. Dr. Namrata Goswami follows with Chapter 13, a condensed history of the U.S.-India relationship from the end of World War II to the present, providing essential background for those studying recent trends in the improving U.S.-India strategic relationship. In his commentary in Chapter 14, Dr. Ivan Welch weaves insights from these papers together and points to the implications for cross-sector collaboration.

In Section 5, “Sustainable Development as a National Security Concern in India,” in Chapter 15, Ms. Dhanasree Jayaram traces the growing awareness in the international community of the transnational threats posed by climate change, offers implications for India’s national interests, and recommends reforms in the formation and conduct of economic and environmental policy in India to address these issues. Group Captain Krishnappa Venkatshamy provides a far-ranging discussion about the central role of sustainable development in India’s comprehensive national security strategy in Chapter 16. In his response in Chapter 17, Dr. Michael D. Beevers provides additional insight on sustainable development and security and suggestions on how the different works comprising Section 5 may serve as a point of departure for additional research.

Part II of this volume includes five case studies of cross-sector collaborations that were presented during the workshop by researchers and practitioners. As with all case studies, we believe they provide a bit of “data” for those interested in better understanding theoretical constructs, which in this instance is that of cross-sector collaboration. At the outset of the section,

Sarcone provides an overall summary of the various case studies and identifies aspects of the model provided by Bryson, Crosby, and Stone relevant to each.

With respect to the case studies, in Chapter 19, Dr. Rajesh Chakrabarti and Mr. Santosh Srinivas provide a full-bodied, retrospective description of the efforts of Lakshmi Venkatesan, a social entrepreneur who started the Bharatiya Yuva Shakti Trust (BYST) to help support entrepreneurship among disadvantaged youth in India. In Chapter 20, Ms. Lalitha Vaidyanathan employs the Collective Impact Framework used at the consultancy FSG to describe reasons for success of the Global Alliance for Improved Nutrition (GAIN). Ms. Julie Vastine details the efforts of the Alliance for Aquatic Resource Monitoring (ALLARM) in helping teach members of local communities in Pennsylvania to monitor, gather, and analyze water supply data in order to develop a more powerful voice in political arenas in Chapter 21. Mr. Todd Camp describes the “Learn to Grow” initiative launched by the Hershey Corporation in Ghana that strives to improve basic educational opportunities for children in that country, and in the process, to develop infrastructure that could help disseminate information about agricultural techniques to local farmers engaged in growing coca in Chapter 22. Finally, in Chapter 23, Dr. Khanjan Mehta highlights a range of initiatives launched by the Humanitarian Engineering and Social Entrepreneurship (HESE) Program at Pennsylvania State University. These initiatives have successfully introduced technologies to improve efficiencies in the agricultural chain, or in the delivery of health care, in communities all over East Africa.

Following Part II, in Chapter 24, I offer some concluding comments about the key insights from the Workshop. First, the participants did offer some characterizations about cross-sector collaborations. They were quite mindful of the complexity of such initiatives and tended to regard them as a subset of a larger construct—that of crossing boundaries. In order to make a collaborative initiative successful, they recognized the necessity of investing time and effort to understanding the partner. With respect to cross-sector collaborations and national security, they described the **means** that might be needed in order to use cross-sector collaboration as a **way** of achieving a strategic **end**. Second, the participants identified some possible areas for follow-on activities and for future research about the factors which might contribute to the success of cross-sector collaborations that include the military and are intended to promote sustainable development.

ENDNOTES - CHAPTER 1

1. For example, *Foreign Affairs*, the widely circulated publication of the U.S. Council on Foreign Relations, has in the past few years featured a number of essays dedicated to such matters. A few items illustrate the point. Citing the growing range of non-state agents with the capacity to influence nation states, Richard N. Haass characterizes the current system as nonpolar, a structure much different from previous multipolar, bipolar, and unipolar configurations. “The Age of Nonpolarity: What Will Follow U.S. Dominance?” *Foreign Affairs*, May-June 2008. Motivated by the opinion that the role a nation state will play in the global system of the future will be in large part determined by its economic capacity and vitality, Leslie H. Gelb argues that in pursuit of national interests, the United States has placed too much emphasis on military instruments of power and insufficient emphasis on economic instruments of power. “GDP Now Matters More Than Force: A U.S. Foreign Policy for the Age of Economic Power,”

Foreign Affairs, November-December 2010. Fresh from his post in the Obama Administration, Peter R. Orszag links the structural issues associated with the U.S. healthcare system to U.S. national interests. "How Health Care Can Save or Sink America: The Case for Reform and Fiscal Sustainability," *Foreign Affairs*, July-August 2011.

2. In a well-written textbook, Roland Dannreuther suggests that new areas of emphasis should include environmental security; access to resources such as water, food, and energy; migration; the call for intervention by the international community in civil and intra-state wars to end atrocities; and the dynamics of asymmetric power and asymmetric threats (including terrorism and the proliferation of weapons of mass destruction). *International Security and the Contemporary Agenda*, Cambridge, UK: Polity Press, 2007.

3. To illustrate, a large number of researchers and practitioners recently gathered at National Defense University in Washington, DC, to talk about economic security, albeit from a predominantly U.S. centric perspective. Major themes included the economic element of power; the voices of industry and government; and the fundamental importance of energy security, research and development, science and technology, and human capital formation to national security. Institute for National Strategic Studies, "Economic Security: Neglected Dimension of National Security?" Washington, DC: National Defense University, Fort Lesley J. McNair, August 24-25, 2010.

4. See National Intelligence Council, *Global Trends 2025: A Transformed World*, Washington, DC: U.S. Government Printing Office, 2008.

5. See Simon Dresner, *The Principles of Sustainability*, 2nd Ed., London, UK: Earthscan, 2008.

6. Office of the President of the United States, *National Security Strategy*, Washington, DC: The White House, May 2010.

7. Ministry of Defense, "Security Environment: An Overview," New Delhi, India: Government of India.

8. See Pratap Bhanu Mehta, "Still Under Nehru's Shadow? The Absence of Foreign Policy Frameworks in India," *India Review*, Vol. 8, No. 3, July-September 2009, pp. 209-233.

9. Rohan Mukherjee and David M. Malone, "Indian Foreign Policy and Contemporary Security Challenges," *International Affairs*, Vol. 87, No. 1, 2011, pp. 87-104.

10. See Gurcharan Das, "The India Model," *Foreign Affairs*, Vol. 85, Issue 4, July-August 2006, pp. 2-14.

11. Lavanya Rajamani, "India and Climate Change: What India Wants, Needs, and Needs to Do," *India Review*, Vol. 8, No. 3, July-September 2009, pp. 340-374.

12. "Security Partnership for the 21st Century," Fact Sheet, Washington, DC: U.S. Department of State, July 19, 2011, available from www.state.gov/r/pa/prs/ps/2011/07/168744.htm.

13. "Advancing our Shared Interests in Asia," Fact Sheet, Washington, DC: U.S. Department of State, July 19, 2011, available from www.state.gov/r/pa/prs/ps/2011/07/168739.htm.

14. "U.S.-India Science and Technology Cooperation," Fact Sheet, Washington, DC: U.S. Department of State, July 19, 2011, available from translations.state.gov/st/english/texttrans/2011/07/20110719153242enaj4.087466e-02.html.

15. "Prosperity," Fact Sheet, Washington, DC: U.S. Department of State, July 19, 2011, available from www.state.gov/r/pa/prs/ps/2011/07/168741.htm.

16. *Joint Study Group Report September 2011: The United States and India: A Shared Strategic Future*, Washington DC: Council on Foreign Relations and Aspen Institute of India, September 19, 2011, available from www.cfr.org/india/united-states-india-shared-strategic-future/p25740.

17. See James E. Austin, "Strategic Collaboration Between Nonprofits and Business," *Nonprofit and Voluntary Sector Quarterly* 2000, Sage Publications, 2000, pp. 69-97.

18. See John W. Selsky and Barbara Parker, "Cross-Sector Partnerships to Address Social Issues: Challenges to Theory and Practice," *Journal of Management*, Vol. 31, No. 6, December 2005, pp. 849-873.

19. See John M. Bryson, Barbara C. Crosby, and Melissa Middleton Stone, "The Design and Implementation of Cross-Sector Collaborations: Propositions from the Literature," *Public Administrative Review*, Special Issue, December 2006, pp. 44-55.

20. Mark Gerencser, Reginald Van Lee, Fernando Napolitano, and Christopher Kelly of Booz Allen Hamilton, Inc., *Mega-communities: How Leaders of Government, Business, and Non-Profits Can Tackle Today's Global Challenges Together*, New York: Palgrave, MacMillan, 2008.

21. See Peter G. Northouse, *Leadership: Theory and Practice*, Thousand Oaks, CA: Sage Publications, 2007, Figure 1.2, p. 10. In turn, Northouse indicates that his figure was adapted from J. P. Kotter, *A Force for Change: How Leadership Differs from Management*, New York: Free Press, 1990, pp. 3-8.

22. IBM Institute for Business Value and IBM Strategy & Change, "Capitalizing on Complexity," 2010.

23. Toward that end, Michael Fratantuono believes that the insights of computer scientist John H. Holland, who in the late-1980s described the global economy as a complex adaptive system, translate very nicely to the full range of politically, socially, and economically motivated entities that he would include in a simple model of the global system, especially if one replaces the word "units" in Holland's original statement with the word "agent." That is, Holland makes the following observations.

The overall direction of the economy is determined by the interaction of many dispersed units acting in parallel. The action of any given unit depends upon the state and actions of a limited number of other units.

There are rarely any global controls on interactions—controls are provided by mechanisms of competition and cooperation between units, mediated by *standard operating procedures* (SOPs), assigned roles, and shifting associations.

The economy has many levels of organization and interaction. Units at any given level typically serve as “building blocks” for constructing units at the next higher level. The overall organization is more than hierarchical, with all sorts of tangling interactions (associations, channels of communication) across levels.

The building blocks are recombined and revised continually as the system accumulates experience—the system adapts.

The arena in which the economy operates is typified by many *niches* that can be exploited by particular adaptations; there is no universal *super*-competitor that can fill all niches (any more than would be the case in a complex ecology such as a tropical forest.)

Niches are continually created by new technologies and the very act of filling a niche provides new niches . . . Perpetual novelty results.

Because the niches are various, and new niches are continually created, the economy operates far from an optimum (or global attractor). Said in another way, improvements are always possible, and, indeed, occur regularly.

See John H. Holland, “The Global Economy as an Adaptive Process,” in Philip W. Anderson, Kenneth J. Arrow, and David Pines, eds., *The Economy As An Evolving Complex System: A Proceedings Volume in The Santa Fe Institute Studies in the Sciences of Complexity*, Boston, MA: Addison Wesley Publishing Company, 1988, pp. 117-124.

PART I:

**WORKSHOP PAPERS AND
DISCUSSANTS' COMMENTS**

SECTION 1

THEORETICAL FRAMEWORK AND KEY CONCEPTS

Moderator: Dr. Michael Fratantuono, Associate Professor, Department of International Business and Management, Department of International Studies, Dickinson College.

Authors: Dr. John Bryson, McKnight Presidential Professor of Planning and Public Affairs, Hubert H. Humphrey Institute of Public Affairs, University of Minnesota.

Dr. Barbara C. Crosby, Associate Professor, Hubert H. Humphrey Institute of Public Affairs, University of Minnesota.

Discussant: David Sarcone, Associate Professor, Department of International Business and Management, Director Health Studies Program, Dickinson College.

Convener: Dr. Neil Leary, Director, Dickinson Center for Sustainability Education, Dickinson College.

Keynote Speaker: Ambassador (Retired) Chandrashekhara Dasgupta, Distinguished Fellow, The Energy Resources Institute (TERI) New Dehli; Prime Minister's Council on Climate Change; Member of the UN Committee on Economic, Social and Cultural Rights; and Co-Chair of the India-EU Round Table.

In the paper they co-authored with Dr. Melissa Middleton Stone, Drs. Bryson and Crosby provide a theoretical framework for the Workshop. They first define the concept of cross-sector collaboration. They then describe what they term as a design science approach to initiating and strategically managing cross-sector collaborations. Their comprehensive model provides a template that can be applied to wide range of collaborative initiatives. It includes six high-level interrelated activity areas. The authors also state 26 propositions: each is informed by the academic literature, suggests ways to more effectively complete tasks in one of the six activity areas, and thus increases the chances of reaching the intended outcomes of the collaborative initiative.

Despite the power of the model they describe, Drs. Bryson, Crosby, and Stone acknowledge that they have not engaged in research either about initiating and managing cross-sector collaborations that are dedicated to promoting sustainability in developing countries or involving the military as a participant. Nevertheless, in his response paper, Dr. Sarcone concentrates on seven of the 26 propositions. For each, he offers commentary and also proposes discussion questions, in order to promote further reflection about how the model might inform thinking about this relatively unexplored terrain.

In his Keynote Address to the Workshop participants, Ambassador Dasgupta emphasizes two overarching themes. First, he describes the growing importance of the strategic relationship between India and the United States, especially in light of the need to create a balance of power in East and South Asia that can accommodate the peaceful rise of China on the global stage. Second, he dismisses the notion that

there must be a tradeoff between economic growth and sustainable development; acknowledges that in coming decades, energy security will be critical to all countries; and advocates that, in light of the shale-gas revolution – and for reasons that reflect both developmental and geopolitical considerations – U.S. policymakers should liberalize controls on exports of natural gas to various countries that are now in place.

CHAPTER 2

DESIGNING AND STRATEGICALLY MANAGING CROSS-SECTOR COLLABORATIONS

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This chapter is a condensed version of the paper, "Designing and Strategically Managing Cross-Sector Collaborations: Propositions from the Literature and Three Longitudinal Studies," which was written for the Workshop, "The U.S.-India Strategic Relationship in the 21st Century: Challenges for Strategic Leaders;

Opportunities for Cross-Sector Collaboration To Promote Sustainable Development,” Dickinson College, Carlisle, PA, March 12-14, 2013. This paper updates Bryson, Crosby, and Stone’s 2006 propositional inventory based on a more recent literature review and an extensive, multiyear investigations of three cross-sector collaborations. The condensed version of this paper focuses on the theoretical insights and the systems design approach of the longer paper, but does not explicitly include the evidence from the longitudinal studies. Since its publication in 2006, the paper by Bryson, Crosby, and Stone has had a significant effect on subsequent cross-sector collaboration scholarship; it is one of the most-cited articles in *Public Administration Review*.

Note that this paper does not mention social mechanisms (Mayntz, 2004) as the likely causal connection between elements of a design, the design as realized (or not) in practice, and desired outcomes. When studies do not identify causal mechanisms, one is unlikely to know what actually explains the outcomes of specific practices. For design science and practice-focused approaches to be really useful, they should focus on revealing research-based design principles or rules (Simon, 1996; Romme, 2003) that might be used to guide future action in order to produce desirable outcomes, and also must explore the social mechanisms (Mayntz, 2004) that are the likely causal connection between elements of at least partially designed processes and desired outcomes. Unfortunately, a specification of likely mechanisms that would serve as causal connections between elements of our framework is beyond the scope of this paper.

INTRODUCTION

Cross-sector collaboration is increasingly assumed to be both necessary and desirable as a strategy for addressing many of society's most difficult public challenges (Kickert, Klijn, and Koppenjan, 1997; Agranoff and McGuire, 2003; Goldsmith and Eggers, 2004; Agranoff, 2007; O'Leary and Bingham, 2009; Emerson, Nabatchi, and Balogh 2012). Indeed, it is difficult to imagine successfully addressing major international problems, such as the AIDS pandemic, overfishing, widespread drought, terrorism, or domestic issues, such as the educational achievement gap between income classes and races, without some sort of cross-sector understandings, agreements, and collaboration. By cross-sector collaborations, we mean those involving government, business, nonprofits, and/or communities and the public or citizenry as a whole. Often media of various sorts, philanthropies, and higher education are involved as well, and represent specialized versions of broader sector categories, such as business or nonprofits.

While collaboration may be necessary or desirable, the research evidence indicates that it is hardly easy, nor does it always work well (Huxham and Vangen, 2005). Based on an updated literature review and extensive research on three cross-sector collaborations in three different fields, this paper refines our previous work (Bryson, Crosby, and Stone, 2006) and places it in an explicit design science and strategic management framework in order to guide the design and implementation of cross-sector collaborations. We assert that collaboration occurs in the mid-range of how organizations work on public problems (Crosby and Bryson, 2005a, pp. 17-18). At one end of the continuum

are organizations that hardly relate to each other, or are adversaries when it comes to dealing with a public problem that extends beyond their capabilities. At the other end are organizations merged into a new entity that can handle the problem through merged authority and capabilities. In the mid-range are organizations that share information, undertake coordinated initiatives, or develop shared-power arrangements such as collaborations (which may be a distinct organizational form) to pool their capabilities to address the problem or challenge. We thus define **cross-sector collaboration as the linking or sharing of information, resources, activities, and capabilities by organizations in two or more sectors to achieve jointly what could not be achieved by organizations in one sector separately**. Building on Himmelman (2002), we distinguish among: (1) mandated, top-down collaborations (what Himmelman calls “community betterment” collaborations”); (2) bottom-up collaborations (what Himmelman calls “community empowerment” collaborations); and (3) those that are in between, or what we call “tweeners,” which have aspects of both.

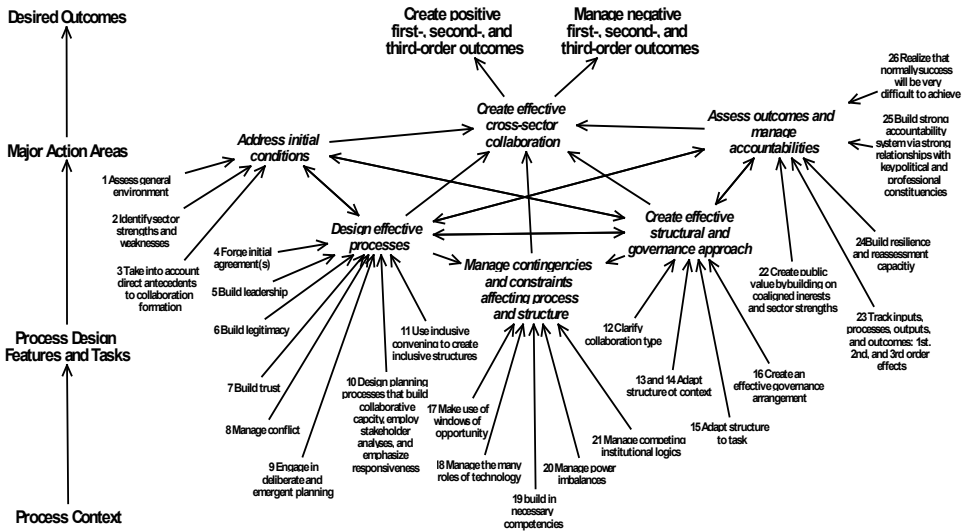
The chapter has several sections. Following this introduction, the second section discusses what we mean by a design science and strategic management framework. The following five sections cover: addressing initial conditions, designing effective processes, creating an effective structural and governance approach, managing contingencies and constraints affecting process and structure, and assessing outcomes and managing accountabilities. Propositions drawn from the literature and our research are offered throughout. The final section summarizes our argument and outlines a brief agenda for future research and practice.

Before proceeding, we must start with a caveat: Our work and virtually all of the literature we review is from **developed** nations and, for the most part, does **not** involve the military in any way. We therefore do not know the extent to which our observations apply to developing countries, nor do we know much about the effects of military involvement in cross-sector collaborations.

DESIGN SCIENCE AND STRATEGIC MANAGEMENT

We believe that approaching the task of designing and strategically managing cross-sector collaborations from a **design science** perspective has much to recommend it. A number of authors recently have emphasized the importance of design approaches to management in general (e.g., Romme, 2003; Liedtka and Oglivie, 2011) and to public management in particular (e.g., Bryson, 2010; Bryson, Berry, and Yang, 2010; Barzelay and Thompson, 2010). In some ways, there is nothing new about this call or design approaches in general. As Nobel Prize winner Herbert Simon (1996, p. 111) said some years ago, “Everyone designs who devises a course of action aimed at changing existing situations into preferred ones.” What is new is the increased urgency and frequency with which the call is being made. The argument is that for public management research to be more helpful to practitioners and the publics they serve, it must adopt a design science approach as a complement to more traditional social science approaches (Romme, 2003; Romme and Endenburg, 2006), and it must incorporate more direct attention to public management as a practice, where practice is seen as a response to explicit or implicit designs (Wenger, 1998; Sandberg and Tsoukas, 2011).

A design science approach indicates how aspects of **context** suggest cross-sector collaboration **design features and tasks** that shape and guide **actions and practices** that are likely to produce various **outcomes** (see Figure 2-1). Note that the logic involved in Figure 2-1 works **backward** down the chain of arrows (cf. Bryson, 2011, pp. 66–68). In other words, the idea is to start with desired outcomes, then to imagine what a cross-sector collaboration would look like that would achieve those outcomes; then to pursue the major interconnected activity areas to create the collaboration by appropriately incorporating appropriate process design features and tasks tailored to the specific context.



Source: Adapted from Bryson, 2011, p. 188.

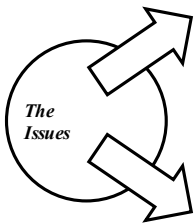
Figure 2-1. A Design Science Approach to Strategically Managing Cross-Sector Collaborations.

Strategic management has been variously defined by different authors (e.g., Joyce, 2000; Poister and Streib, 2005; Mulgan, 2009). For our purposes, we define it as:

the appropriate and reasonable integration of strategic planning and implementation across an organization (or other entity) in an ongoing way to enhance the fulfillment of mission, meeting of mandates, continuous learning, and sustained creation of public value (Bryson, 2010, p. S256).

Strategically managing a cross-sector collaboration involves having a design for effectively addressing the strategic (which includes governance) and operational issues that arise as a consequence of collaborating (see Figure 2-2). Useful designs will help collaborators sort the issues into strategic, operational, and in-between categories; choose the right response from the available repertoire; and involve the appropriate people in the process. Figure 2-2 shows key differences among strategic issues, operational issues, and those that are a mix of the two (Crossan, Lane, and White, 1999; Heifetz, Grashow, and Linsky, 2009; Scharmer, 2009). Strategic issues are likely to involve knowledge exploration, changes in basic stakeholders or stakeholder relationships, and perhaps radical new technologies. Responses different from the status quo are likely to be required from the system level (e.g., changes in basic rules or institutional redesign) or cross-sector collaboration organizational level (e.g., changes in mission, vision, and goals). Decisionmakers involved are likely to be top-level decisionmakers and decisionmaking bodies at the system, collaboration, and organizational level. Operational issues, in contrast, are more technical in nature and are likely to involve knowledge exploitation, strategy refinement,

and process improvement. Line managers, operations groups and personnel, and service co-producers or recipients will be required to respond. Issues that are partly strategic and partly operational are in between. New strategies are likely to be needed, and the collaboration's steering committee (or policy board acting as a steering committee) will be a key focal point for helping formulate new strategies or codifying effective emergent strategies. Each issue's strategic aspects should be examined and resolved first before operational concerns can be settled, although it does not always work that way.



What Type of Issue is It?	What Type of Response Is Possibly Required	Who Possibly May Have to Respond
Strategic (adaptive, developmental, complex) issues, where there is typically a need for: <ul style="list-style-type: none"> • More knowledge exploration • New Concepts • Changes in basic stakeholders and/or radical new technologies 	From the system <ul style="list-style-type: none"> • Constitutive governance • Rules for making rules • Institutional re-design From the cross-sector collaboration: <ul style="list-style-type: none"> • Mission • Vision • Goals 	At the system level: <ul style="list-style-type: none"> • Institutional level decision-making bodies (e.g., law makers, policy makers, rule and regulation makers) • Other top-level key decision makers At the collaboration and organization level: <ul style="list-style-type: none"> • Governing or policy board • Senior staff • Key stakeholders
Issues that are partly strategic and partly operational (both adaptive and technical, complicated)	Strategies for fulfilling mission, realizing the vision, and/or achieving the goals Strategies for <ul style="list-style-type: none"> • Developing strategies • Controlling strategy delivery in the present • Producing program, products, projects, services • Developing future capabilities • Maintaining and enhancing stakeholder relations • 	Steering committee (or policy board acting as a steering committee) as locus for helping formulate new strategies and/or compiling and codifying emergent strategies
Operational (technical, non-developmental, difficult) issues, where there is more of a need for: <ul style="list-style-type: none"> • Knowledge exploration • Strategic refinement • Process management • Use of existing technologies • Good relationships with existing stakeholders 	<ul style="list-style-type: none"> • Strategy implementation and fine-tuning • Improvements in ongoing operations • Action planning 	<ul style="list-style-type: none"> • Line managers • Operations groups and teams • Program, product, project, or service co-producers and/or recipients

Source: Adapted from Bryson (2011, p. 188).

Figure 2-2. Strategically Managing Cross-Sector Collaboration.

The following sections cover the five major activity areas in Figure 2-1: addressing initial conditions, designing effective processes, creating an effective structural and governance approach, managing contingencies and constraints affecting process and structure, and assessing outcomes and managing accountabilities. Propositions drawn from the literature and our research are offered throughout (see Table 2-1).

Original Propositions	Revised Propositions
Address Initial Conditions	
<p>Proposition 1: Similar to all interorganizational relationships, cross-sector collaborations are more likely to form in turbulent environments. In particular, the formation and sustainability of cross-sector collaborations will be affected by driving and constraining forces in their competitive and institutional environments.</p>	<p>Proposition 1: Similar to all interorganizational relationships, cross-sector collaborations are more likely to form in turbulent environments. In particular, the formation and sustainability of cross-sector collaborations will be affected by driving and constraining forces in their competitive and institutional environments, including political forces and the availability of relevant technology.</p>
<p>Proposition 2: Public policy makers are most likely to try cross-sector collaboration if they believe that separate efforts by several sectors to address a public problem have failed, or are likely to fail, and the actual or anticipated failures cannot be fixed by the separate sectors alone.</p>	<p>Proposition 2: Public policy makers are most likely to try cross-sector collaboration if they believe that separate efforts by several sectors to address a public problem have failed, or are likely to fail, and the actual failures cannot be fixed by a separate sector alone; or less dramatically, that no sector can address the presenting problem effectively on its own.</p>
<p>Proposition 3: Cross-sector collaborations are more likely to succeed when one or more linking mechanisms, such as powerful sponsors, general agreement on the problem or existing networks, are in place at the time of their initial formation.</p>	<p>Proposition 3: Cross-sector collaborations are more likely to succeed when one or more linking mechanisms—such as powerful leaders and sponsors; general agreement on the problem; existing networks; neutral conveners; RFPs plans, projects or technologies requiring collaboration; and consequential incentives favoring collaboration—are in place at the time of their initial formation.</p>

Table 2-1. Original and Revised Propositions Regarding the Design and Strategic Management of Cross-Sector Collaborations.

Design Effective Processes	
Proposition 4: The form and content of a collaboration's initial agreements will affect the outcomes of the collaboration's work.	Proposition 4: The form and content of a collaboration's initial agreements, as well as the processes used to formulate them, will affect the outcomes of the collaboration's work. A sequence of increasingly operational agreements involving key decision makers, a certain degree of flexibility, and re-negotiability are likely to be important elements of the agreement process.
Proposition 5: Cross-sector collaborations are more likely to succeed if they have committed sponsors and effective champions at many levels who provide formal and informal leadership.	Proposition 5: Cross-sector collaborations are more likely to succeed if they have committed, able sponsors and effective, persistent champions at many levels who provide formal and informal leadership.
Proposition 6: Cross-sector collaborations are more likely to succeed if they establish both internally and externally the legitimacy of collaboration as a form of organizing, as a separate entity, and as a source of trusted interaction among members.	Proposition 6: Cross-sector collaborations are more likely to succeed if they establish with both internal and external stakeholders the legitimacy of collaboration as a necessary form of organizing, as a separate entity, and as a source of trusted interaction among members.
Proposition 7: Cross-sector collaborations are more likely to succeed if trust-building activities (including nurturing of cross-sectoral and cross-cultural understanding) are continuous.	Proposition 7: Cross-sector collaborations are more likely to succeed if a continuing virtuous circle of trust-building activities (including nurturing of cross-sectoral and cross-cultural understanding) can be established and maintained.
Proposition 8: Because conflict is common in partnerships, cross-sector collaborations are more likely to succeed if partners use resources and tactics (such as dialogue, joint education, straw voting, consensus decision making, consultation) to more nearly equalize power and manage conflict.	Proposition 8: Because conflict is common in partnerships, cross-sector collaborations are more likely to succeed if partners use resources and tactics to help equalize power and manage conflict, particularly in the early phases of planning and organizing the work to be done.

Table 2-1. Original and Revised Propositions Regarding the Design and Strategic Management of Cross-Sector Collaborations. (cont.)

Proposition 9: Cross-sector collaborations are more likely to succeed if they use a combination of deliberate and emergent planning, with deliberate planning emphasized more in mandated collaborations and emergent planning emphasized more in non-mandated collaborations.	Proposition 9: Cross-sector collaborations are more likely to succeed if they use a combination of deliberate and emergent planning, with deliberate planning emphasized more in mandated collaborations and emergent planning emphasized more in non-mandated collaborations. At some point, however, emergent planning needs to be followed by formalization; too much emergent planning can undermine collaboration success.
Proposition 10: Cross-sector collaborations are more likely to succeed if their planning makes use of stakeholder analyses, emphasizes responsiveness to key stakeholders, uses the process to build trust and the capacity to manage conflict, and builds on the competencies and distinctive competencies of the collaborators.	Proposition 10: Cross-sector collaborations are more likely to succeed if their planning makes use of stakeholder analyses, emphasizes responsiveness to key stakeholders, uses the process to build trust and the capacity to manage conflict, and builds on the competencies and distinctive competencies of the collaborators.
	Proposition 11: Inclusive processes are needed to produce inclusive structures that in turn foster inclusive practices. Both inclusive processes and structures facilitate effective collaboration (another virtuous circle). (Proposition 12 is found below.)
Create Effective Structural and Governance Arrangements	
Proposition 11: Collaborative structure is influenced by environmental factors, such as system stability and the collaboration's strategic purpose.	Proposition 13: Collaborative structure is influenced by environmental factors, such as system stability and the collaboration's strategic purpose; structures must be able to handle changes in the environment and strategic purpose.
Proposition 12: Collaborative structure is also likely to change over time due to ambiguity of membership and complexity in local environments.	Proposition 14: Collaborative structure is also likely to change over time due to ambiguity of membership and complexity in local environments.
Proposition 13: Collaboration structure and the nature of the tasks to be performed at the client level are likely to influence a collaboration's effectiveness.	Proposition 15: Collaboration structure and the nature of the tasks to be performed at various levels, including the client or street level, are likely to influence a collaboration's overall effectiveness; a measure of structural ambidexterity is likely to be necessary to manage the array of tasks.

Table 2-1. Original and Revised Propositions Regarding the Design and Strategic Management of Cross-Sector Collaborations. (cont.)

<p>Proposition 14: Governing mechanisms, including those that operate at both informal and formal levels, are likely to influence collaboration effectiveness.</p>	<p>Proposition 16: Governing arrangements, including those that operate at both informal and formal levels, must be able to respond effectively to strategic, operational, and mixed issues, and the extent to which they do is likely to influence collaboration effectiveness. This responsiveness is needed in part to decide who gets to decide and to be able to manage spatial and temporal ambidexterity.</p>
<p>Manage Contingencies and Constraints Affecting Process and Structure</p>	
	<p>Proposition 17: Collaborations that are prepared to take advantage of a window of opportunity are far more likely to succeed than those that are not.</p>
	<p>Proposition 18: In order to be effective, collaborations must manage the many roles of technology as a facilitator of collaboration, and as non-human actors capable of providing solutions, affecting policies and politics, altering public perceptions, and, stimulating internal organizational changes.</p>
<p>Proposition 15: Collaborations involving system-level planning activities are likely to involve the most negotiation, followed by collaborations focused on administrative-level partnerships, followed by service delivery partnerships.</p>	<p>Proposition 12: Collaborations involving system-level planning activities are likely to involve the most negotiation, followed by collaborations focused on administrative-level partnerships, followed by service delivery partnerships.</p>
	<p>Proposition 19: Needed competencies must be available or developed or cross-sector collaboration goals will not be achieved.</p>
<p>Proposition 16: Cross-sector collaborations are more likely to succeed if they build in resources and tactics for dealing with power imbalances and shocks.</p>	<p>Proposition 20: Cross-sector collaborations are more likely to succeed if the collaborations build in resources and tactics for dealing with power imbalances and shocks. Shocks need to be expected and can be positive, e.g., a window of opportunity.</p>

Table 2-1. Original and Revised Propositions Regarding the Design and Strategic Management of Cross-Sector Collaborations. (cont.)

<p>Proposition 17: Competing institutional logics are likely within cross-sector collaborations and may significantly influence the extent to which collaborations can agree on essential elements of process and structure as well as outcomes.</p>	<p>Proposition 21: Competing institutional logics are likely within cross-sector collaborations and may significantly influence the extent to which collaborations can agree on essential elements of process and structure as well as outcomes. Competing logics must be managed effectively.</p>
<p>Assess Outcomes and Manage Accountabilities</p>	
<p>Proposition 18: Cross-sector collaborations are most likely to create public value if they build on individuals' and organizations' self-interests along with each sector's characteristic strengths while finding ways to minimize, overcome, or compensate for each sector's characteristic weaknesses.</p>	<p>Proposition 22: Cross-sector collaborations are most likely to create public value if they build on individuals' and organizations' self-interests along each sector's characteristic strengths, while finding ways to minimize, overcome, or compensate for each sector's characteristic weaknesses.</p>
<p>Proposition 19: Cross-sector collaborations are most likely to create public value if they produce positive first-, second-, and third-order effects.</p>	<p>Proposition 23: Cross-sector collaborations are most likely to create public value if they produce positive first-, second-, and third-order effects far in excess of negative effects.</p>
<p>Proposition 20: Cross-sector collaborations are most likely to create public value if they are long-lived and resilient.</p>	<p>Proposition 24: Cross-sector collaborations are most likely to create public value if they are long-lived, resilient, and engage in regular reassessments.</p>
<p>Proposition 21: Cross-sector collaborations are more likely to be successful if they have an accountability system that tracks inputs, processes, and outcomes; use a variety of methods for gathering, interpreting, and using data; and use a results management system built on strong relationships with key political and professional constituencies.</p>	<p>Proposition 25: Cross-sector collaborations are more likely to be successful if they have an accountability system in place that tracks inputs, processes, and outcomes; use a variety of methods for gathering, interpreting, and using data; and have in place a results management system built on strong relationships with key political and professional constituencies.</p>
<p>Proposition 22: The normal expectation ought to be that success will be very difficult to achieve in cross-sector collaborations.</p>	<p>Proposition 26: The normal expectation ought to be that success will be very difficult to achieve in cross-sector collaborations.</p>

Table 2-1. Original and Revised Propositions Regarding the Design and Strategic Management of Cross-Sector Collaborations. (cont.)

Table 2-1 shows the original Bryson, Crosby, and Stone (2006) propositions along with the revised set of propositions. The discussion necessarily must emphasize simplicity and does not attempt to capture the full extent of interaction among or within major categories or the nonlinear quality of many collaborative endeavors. Recall that before making use of the propositions in any specific case, the people involved should start with potential desired outcomes; then imagine what a cross-sector collaboration would look like that would achieve those outcomes; then pursue the major interconnected activity areas discussed later in order to create a desirable cross-sector collaboration that is fit for purpose and tailored to the specific context. Note as well that desired outcomes are likely to change as the situation changes, as it almost always does (Vangen and Huxham, 2012).

ADDRESS INITIAL CONDITIONS

This category focuses on broad themes related to the general environment in which collaborations are embedded, the notion of sector failure as an overlooked precondition to collaboration, and other specific, immediate preconditions affecting formation.

Address General Environment.

Work on interorganizational relationships (IOR) has directly linked certain environmental conditions to the necessity for single organizations to join with others. Most notably, Emery and Trist (1965) argued over 40 years ago that increased environmental complexity, such that the “ground is in motion” (p. 51), necessitated linkages among organizations to de-

crease uncertainty and increase organizational stability. Fundamental needs of organizations to reduce resource dependencies in their environments (Pfeffer and Salancik, 1978) or decrease transaction costs (Williamson, 1975) also propel organizations toward various types of IOR. Collaborations are subject to both competitive and institutional pressures that significantly affect their formation as well as long-term sustainability (Oliver, 1990; Sharfman, Gray and Yin, 1991; Vangen and Huxham, 2012). The institutional environment includes normative, legal, and regulatory elements with which organizations must conform if they are to achieve the legitimacy necessary for survival (DiMaggio and Powell, 1983, 1991).

For partnerships focused on public policy or public problem solving, the institutional environment is especially important because it includes broad systems of relationships across public jurisdictional areas (Scott and Meyer, 1991) that can directly affect collaborative purpose, structure, and outcomes. For example, in their study of a public-private partnership in the garment industry, Sharfman and colleagues (1991) found that driving forces in both the competitive and institutional environments helped stimulate the partnership's formation but quickly shifted to restraining forces that hindered its sustainability. Institutional forces appeared to be more intractable than competitive forces; for example, a decrease in public funds and changes in welfare payment policies created strong disincentives for the partnership to continue. Our research highlighted two additional environmental features. First, the political environment had a profound effect on whether and what kind of cross-sector collaboration could be formed. Second, the availability of relevant technology affected whether a collaboration

would be formed and whether it would succeed. (By technology we mean both mechanized or computerized tools as well as formal processes and techniques for accomplishing organizational goals.)

Proposition 1: Similar to all interorganizational relationships, cross-sector collaborations are more likely to form in turbulent environments. In particular, the formation and sustainability of cross-sector collaborations will be affected by driving and constraining forces in their competitive and institutional environments, including political forces and the availability of relevant technology.

Identify Sector Strengths and Weaknesses.

While factors in the general environment significantly affect the formation of all IORs, cross-sector collaborations also appear to be influenced by the degree to which single-sector efforts to solve a public problem have failed. We call this “sector failure,” referring to the often observed situation that single sector efforts to solve a public problem are tried first and found wanting before cross-sector efforts are attempted. As a society, we rely on the differential strengths of the for-profit, government, and nonprofit sectors to help overcome the weaknesses or failures of the other sectors and to contribute to the creation of public value. In the United States, the presumption typically is that we will let markets work until they fail, and, only if they fail, is the case compelling for direct government provision of goods and services. On the other hand, Salamon argues (1987, 1995) that historically the United States has relied first on voluntary action to solve public problems, moving to government provision only after “philanthropic failure.” In other

words, government service provision has historically been a product of either market failure or voluntary action failure. If all three sectors fail, we have a public value failure (Bozeman, 2002, 2007) that we address in one of several ways: we can live with the problem; engage in symbolic action that does little to address the problem; or, mobilize collective action to fashion a cross-sector solution that holds the promise of creating public value. For a fuller elaboration of this argument, see Bryson and Crosby, 2008.

Proposition 2: Public policy makers are most likely to try cross-sector collaboration if they believe that separate efforts by several sectors to address a public problem have failed, or are likely to fail, and the actual failures cannot be fixed by a separate sector alone; or less dramatically, that no sector can address the presenting problem effectively on its own.

Take into Account Direct Antecedents to Collaboration Formation.

In addition to general environmental factors and the actuality or likelihood of sector failure, other antecedent conditions, or “linking mechanisms” (Waddock, 1986) affect the likelihood of collaboration formation. Five are emphasized here.

First, a leader, legitimate convener, or brokering organization can facilitate collaboration formation (Gray, 1989; Waddock, 1986; Emerson, Nabatchi, and Balogh, 2012). Powerful sponsors or brokering organizations draw attention to an important public problem and accord it legitimacy within a stakeholder group (Crosby and Bryson, 2005a). Conveners who are often recognized as boundary-spanning leaders with credibility in multiple arenas touched by the

problem (Kastan, 2000) can draw together an initial set of stakeholders (Gray, 1989). Conveners may be powerful individuals, such as a mayor or CEO, or organizations, such as the United Way or a private foundation. Second, an important linking mechanism is initial, albeit general, agreement on the problem definition that also indicates the interdependence of stakeholder organizations when it comes to addressing the problem (Gray, 1989; Waddock, 1986; Emerson, Nabatchi, and Balogh, 2012). The agreement can help clarify the stake or interest an organization has in resolving the social problem and the extent the organization needs others to solve the problem—as Logsdon (1991) found, both recognized self-interest and acknowledged interdependence are necessary preconditions to collaboration formation. Third, the role of prior relationships or existing networks is important because it is often through these that partners judge the trustworthiness of other partners and the legitimacy of key stakeholders. Scholars refer to this factor as the degree of structural embeddedness: the more partners have interacted in the past in positive ways, the more social mechanisms enable coordination and safeguard exchanges (Jones, Hesterly, and Borghati, 1997; Ring and Van de Ven, 1994). If prior relationships do not exist, then partnerships are likely to emerge more incrementally and begin with small, informal deals that do not require much trust (Gulati, 1995; Ring and Van de Ven, 1994). Fourth, consequential incentives favoring collaboration clearly support the establishment of a collaboration (Emerson, Nabatchi, and Balogh, 2012). Finally, observations from our field work prompt us to take a broader view of linking mechanisms, both horizontal and vertical, than we had previously. Requests for proposals, plans, projects,

various technologies, and consequential incentives all worked as linking mechanisms in one or more of the cases because they required cross-sector collaboration if they were to work.

Proposition 3: Cross-sector collaborations are more likely to succeed when one or more linking mechanisms—such as powerful leaders and sponsors; general agreement on the problem; existing networks; neutral conveners; RFPs, plans, projects or technologies requiring collaboration; and consequential incentives favoring collaboration—are in place at the time of their initial formation, and consequential incentives favor collaboration.

DESIGN EFFECTIVE PROCESSES

We begin this section on designing effective processes with a caveat. For analytic purposes, our initial framework included a fairly sharp differentiation between process and structure. What we found in practice in our cases is an intertwining and interpenetration of the two to the point that accurate distinctions between process and structure can be difficult. Our research suggests that such distinctions must not be drawn too sharply, because to do so is not only not useful, but largely inaccurate. Where to draw the line between process and structure is therefore highly problematic. That said, researchers have emphasized several aspects of process within collaborations. We focus on six: forging initial agreements, building leadership, building legitimacy, building trust, managing conflict, and planning.

Prior research on process overlaps with some aspects of research on initial conditions (discussed ear-

lier) and structure (discussed later). For example, a key process in collaboration is negotiating formal and informal agreements about purpose after some initial agreements on problem definition have been reached, as described earlier. Through agreeing on the purpose of the collaboration, partners may consider elements of structure, such as roles, responsibilities, and decision-making authority. The results of case studies include numerous examples of the agreement process blending with establishment of structural arrangements.

Forge Initial Agreement(s).

Informal agreements about the collaboration's composition, mission, and process can work (Donahue, 2004), but formal agreements have the advantage of supporting accountability. The need for different types of initial agreements and the reworking of agreements are likely to increase as collaborations grow to include more geographically dispersed partners and diverse actors within a problem domain (Kastan, 2000; Vangen and Huxham, 2012).

Possible elements of formal agreements include: broad purpose and goals, mandates, commitment of resources, designation of formal leadership, description of members, decisionmaking structure, and built-in flexibility (such as allowing waivers) for dealing with local conditions and changes (Crosby and Bryson, 2005a; Arino and de la Torre, 1998; Page, 2004). When partners do not completely agree on a shared purpose, they may be able to agree on next steps. Studies of collaboration highlight the importance of a drafting process that is highly participatory, involving key stakeholders and implementers (Page, 2004). Less powerful partners may have more difficulty than

others in advocating for their interests in this process, though managers of the process can use several techniques to equalize power (Crosby and Bryson, 2005a, 2005b; Purdy, 2012). In addition, our research findings emphasize the importance of having a sequence of increasingly operational agreements involving key decisionmakers. A certain degree of flexibility and renegotiability are important elements of the agreement process, in part because there will necessarily be tensions among collaboration, organization, and individual goals, and goals can be expected to change over time (Vangen and Huxham, 2012).

Proposition 4: The form and content of a collaboration's initial agreements, as well as the processes used to formulate them, will affect the outcomes of the collaboration's work. A sequence of increasingly operational agreements involving key decision makers, a certain degree of flexibility, and re-negotiability are likely to be important elements of the agreement process.

Build leadership.

Collaborations provide multiple roles for formal and informal leaders (e.g., Agranoff and McGuire, 2003; Crosby and Bryson, 2010; Silvia and McGuire, 2010; Emerson, Nabatchi, and Balogh, 2012; O'Leary and Vij, 2012). Examples of formal leadership positions are: co-chairs of a steering committee, coordinator of a collaborative, and project director. To be effective, these people need formal and informal authority, vision and long-term commitment to the collaboration, integrity, and relational and political skills (Gray, 1989; Crosby and Bryson, 2005a; Waddock, 1986). Two key leadership roles are "sponsors" and "champions" (Crosby and Bryson, 2010; Taylor *et al.*, 2011). Spon-

sors are individuals who have considerable prestige, authority, and access to resources they can use on behalf of the collaboration, even if they are not closely involved in the day-to-day collaborative work. Champions are people who focus intently on keeping the collaboration going and use process skills to help the collaboration accomplish its goals. A champion also acts as a “collaborative capacity builder,” which Weber and Khademian (2008, p. 340) describe as:

someone who either by legal authority, expertise valued in the network, reputation as an honest broker, or some combination of the three, has been accorded a lead role in the network’s problem-solving exercises.

Our research highlights, in particular, the importance of having persistent champions. Key champions need to stay with the collaboration for a long time, in part because sponsors seem to fade in and out as time progresses. Sponsors provide legitimacy, supportive decisions, and initial resources. Sponsors vary in importance, but there is probably a threshold level of sponsorship below which a collaboration is likely to fail. Additionally, we observed that collaborations that depend in some important way on a public bureaucracy need one or more consistent sponsors who are embedded at or near the top of the public bureaucracy.

The parceling out of formal leadership positions has implications for the level of buy-in by collaborating partners; if more powerful partners receive “plum” positions, less powerful partners may require other assurances their interests will be taken into account (Alexander *et al.*, 2001). The development of informal leadership throughout a collaboration is likely to be

especially important, since participants often cannot rely on a lot of clear cut, easily enforced, centralized direction. (For example, “lead organizations” may not be powerful enough to lead in a traditional sense; or an individual participant may be a formal leader in a partner organization, but not play a formal leadership role in the collaboration.) In collaborative settings, collective by nature, building this leadership capacity is essential and may make the difference between successful and unsuccessful partnerships (Huxham and Vangen, 2000, 2005). Furthermore, since turnover of leaders is to be expected in collaborations that continue for years, collaborating partners have an incentive to prepare successors and build in ways to sustain the collaboration during changes in leadership (Alexander *et al.*, 2001; Merrill-Sands and Sheridan, 1996).

Finally, sponsors and champions need to have some important political competencies. These include skill at issue framing and coalition building, since the success of any collaboration will depend on how the issues seeming to require collaboration are framed, and on how strong a coalition emerges in favor of collaboration. Beyond that, a broad range of skills are needed to balance the conflicting demands of autonomy and interdependence required by collaboration in networks that are typically more horizontal than vertical (O’Leary and Vij, 2012).

Proposition 5: Cross-sector collaborations are more likely to succeed if they have committed, able sponsors and effective, persistent champions at many levels who provide formal and informal leadership.

Build Legitimacy.

As institutional theory contends, an organization seeking to acquire resources necessary to survival must build legitimacy through making use of structures, processes, and strategies that are deemed appropriate within its institutional environment (Suchman, 1995). However, when a newly organized entity is a network of organizations, not a single organization, how does the network gain legitimacy to begin with? A network or collaboration is not automatically regarded by others, either insiders or outsiders, as a legitimate organizational entity because it is less understandable and recognizable than more traditional forms, such as bureaucratic structures. In their research, Human and Provan (2000) found three necessary and distinct legitimacy dimensions to be critical: 1) a network had to establish the legitimacy of **network as form** in order to attract internal and external support and resources; 2) networks then concentrated on establishing the legitimacy of the **network as entity**, that is, as a structure recognizable to both insiders and outsiders; and 3) these networks established the legitimacy of **network as interaction**, building trust among members to freely communicate within the network.

Proposition 6: Cross-sector collaborations are more likely to succeed if they establish with both internal and external stakeholders the legitimacy of collaboration as a *necessary* form of organizing, as a separate entity, and as a source of trusted interaction among members.

Build Trust.

Trusting relationships are often depicted as the essence of collaboration. Paradoxically, they are both lubricant and glue—that is, they facilitate the work of collaboration and they hold the collaboration together. Trust can comprise interpersonal behavior, confidence in organizational competence and expected performance, and a common bond and sense of goodwill (Chen and Graddy, 2005). Many researchers realize that collaborations begin with varying degrees of trust, but emphasize that trust-building is an ongoing requirement for successful collaborations (Huxham and Vangen, 2005; Ring and Van de Ven, 1994; Emerson, Nabatchi, and Balogh, 2012). Collaboration partners build trust by sharing information and knowledge and demonstrating competency, good intentions, and follow through; conversely, failure to follow through and unilateral action undermine trust (Merrill-Sands and Sheridan, 1996; Arino and de la Torre, 1998). For example, Huxham and Vangen (2005) emphasize the effectiveness of achieving “small wins” together.

Proposition 7: Cross-sector collaborations are more likely to succeed if a continuing virtuous circle of trust-building activities (including nurturing of cross-sectoral and cross-cultural understanding) can be established and maintained.

Manage Conflict.

Conflict in a collaboration emerges from the differing aims and expectations that partners bring to a collaboration, from differing views about strategies and tactics, and from attempts to protect or magnify

partner control over the collaboration's work or outcomes (Vangen and Huxham, 2012). The mission of the collaboration may also affect levels of conflict. For example, if the collaboration is mainly planning for systems change, versus agreeing on how to deliver a service, the level of conflict may be higher (Bolland and Wilson, 1994). Furthermore, Gray (1996) has found that power issues, as prime sources of conflict, vary by phases. As groups try to agree on the nature of the problem that concerns them, issues are likely to revolve around convening and inclusion; as they debate the direction to take in dealing with the problem, issues concern shaping the collaboration agenda and sharing of relevant information; once the implementation is underway, power issues revolve around the exercise of influence, action authorization and resource control (Gray, 1996).

Conflict may be exacerbated when the collaborating organizations differ in status (either because of size, funding, or reputation). Less-powerful partners will need assurance that their interests are taken into account or their involvement and commitment cannot be assured (Merrill-Sands and Sheridan, 1996). It may be wise, for example, for a collaboration to use resources to put all participants on a more equal footing, for example, by educating participants about concepts, information, and tools that are key to its work (Keast *et al.*, 2004). Effective conflict management goes beyond power sharing, however. An expectation that conflict will be present helps. Use of effective conflict management practices, such as extensive use of regular meetings to raise and resolve issues, is important. Irregular meetings may be needed to stop the action and deal with particular conflicts before moving ahead.

Proposition 8: Because conflict is common in partnerships, cross-sector collaborations are more likely to succeed if partners use resources and tactics to help equalize power and manage conflict, particularly in the early phases of planning and organizing the work to be done.

Engage in Deliberate and Emergent Planning.

Two different approaches to planning in collaborative settings are evident in the literature. One approach emphasizes deliberate, formal planning as a precursor to success. Careful articulation of mission, goals and objectives; roles and responsibilities; and phases or steps, including implementation, are often cited as an important key to success (Mattessich, Murray-Close, and Monsey, 2001). This approach – what Mintzberg, Ahlstrand, and Lampel (1998) call “deliberate” and McCaskey (1974) calls “planning from goals” – would appear to be most likely when collaboration is mandated. The other approach argues that a clear understanding of mission, goals, roles, and action steps is more likely to emerge over time as conversations involving individuals grow to encompass a broader network of involved or affected parties (Winer and Ray, 1994; Huxham and Vangen, 2005; Vangen and Huxham, 2012), and as the need for “workarounds” becomes apparent (Campbell, 2012). This approach is what Mintzberg, Ahlstrand, and Lampel (1998) call “emergent” and McCaskey calls “planning from thrust” – and seems most likely when collaboration is not mandated. Careful attention to stakeholders clearly is crucial for successful planning regardless of approach (Bryson, 2004; Page, 2004). The process also should be used to build trust and the capacity to

manage conflict effectively (Bryson, 2011). Planning is more likely to be successful to the extent that it builds on the competencies and distinctive competencies of the collaborators, including those arising from the distinctive sectors in which they operate (Bryson, Ackermann, and Eden, 2007; Ackermann and Eden, 2011).

Proposition 9: Cross-sector collaborations are more likely to succeed if they use a combination of deliberate and emergent planning, with deliberate planning emphasized more in mandated collaborations and emergent planning emphasized more in non-mandated collaborations. At some point, however, emergent planning needs to be coupled with formalization; too much emergent planning can undermine collaboration success.

Proposition 10: Cross-sector collaborations are more likely to succeed if their planning makes use of stakeholder analyses, emphasizes responsiveness to key stakeholders, uses the process to build trust and the capacity to manage conflict, and builds on the competencies and distinctive competencies of the collaborators.

Finally as we noted earlier, what we found in practice is that making accurate distinctions between process and structure can be difficult.

Proposition 11: Inclusive processes are needed to produce inclusive structures that in turn foster inclusive practices. All other things being equal, both inclusive processes and structures facilitate effective collaboration (another virtuous circle).

CREATE EFFECTIVE STRUCTURAL AND GOVERNANCE APPROACH

Structure is a highly developed concept in organization theory and typically includes goals; specialization of tasks and division of labor, rules and standard operating procedures; and designated authority relationships. Structure concerns vertical and horizontal components, and the need for organizations to both differentiate and integrate across components is a common structural tension (see, for example, Bolman and Deal, 2008; Scott, 1987). Within the collaboration literature, structure has not attracted the same degree of interest, in part because researchers have emphasized “organizing” as a process, over “organization” as more formal structural arrangements (Emerson, Nabatchi, and Balogh, 2012). Indeed, as noted earlier, structure and process often interact in collaborations. For example, building leadership is a process that may produce informal leadership activities as well as formally designated authority positions. In this section, we will focus on research that recognizes structure in relation to other important elements of the collaboration context and that links structural components to overall effectiveness.

Clarify Collaboration Type.

Important differences exist among partnerships formed for system-level planning (that is, identifying and defining system problems and solutions), administrative activities (involving resource transactions, such as staff sharing), or service delivery (such as client referral agreements) (Bolland and Wilson, 1994). Service delivery partnerships are more frequent and

easier to sustain than those aimed at planning for systems change because system-level planning activities, similar to agenda setting in the public policy process, involve negotiating tough questions about the problem and finding creative solutions (Bolland and Wilson, 1994). Similarly, Alter (1990) finds that partnerships involving administrative-level managers are more prone to conflict, while those coordinating service delivery among line staff experience greater cooperation.

Proposition 12: Collaborations involving system-level planning activities are likely to involve the most negotiation, followed by collaborations focused on administrative-level partnerships, followed by service delivery partnerships.

Adapt Structure to Context.

Collaboration scholars are quick to point out that structure itself is influenced by context, including system stability and degree of resource munificence (Human and Provan, 1997; Provan and Milward, 1995; Sharfman, Gray, and Yin, 1991; Van de Ven and Walker, 1984; Emerson, Nabatchi, and Balogh, 2012). For example, changes in government policy often destabilize systems or alter resources in the policy fields in which networks are embedded and hence rearrange the structure of ties among members (Sharfman, Gray, and Yin, 1991; Stone, 2004).

It also appears that the strategic purpose of a network or partnership affects structure. Agranoff and McGuire (1998), in examining local economic development networks, make important distinctions among the strategic purposes of those networks, delineating policy or strategy making networks from resource

exchange and project-based networks. They find that differences in purpose are related to the composition and size of networks. Furthermore, structures are likely to be dynamic because of ambiguity and complexity inherent in collaborations (Huxham and Vangen, 2005), including what Vangen and Huxham (2012) refer to as most collaborations' "tangled web" of goals involving collaboration, organization, and individual-level goals. Ambiguity also arises from many features of membership, including perceptions of who the members of a collaboration are, what these members actually represent (themselves, their organization, or a particular identity group), and turnover among members. Membership turnover may be especially important when powerful players such as top elected officials leave, join, or alter their level of involvement in the collaboration (Crosby and Bryson, 2005a; Kasten, 2000). This ambiguity is further exacerbated by hierarchies of collaborations in which individuals and organizations are often members of multiple and overlapping partnerships. For self-governing partnerships (Provan and Kenis, 2005) in particular, structures may begin to blur among these interrelated, multiple partnerships.

Proposition 13: Collaborative structure is influenced by environmental factors, such as system stability and the collaboration's strategic purpose; structures must be able to handle changes in the environment and strategic purpose.

Proposition 14: Collaborative structure is also likely to change over time due to ambiguity of goals, membership and complexity in local environments.

Adapt Structure to the Task.

Two particularly important studies concern the extent to which structural configurations relate to the overall effectiveness of networks in the adult mental health policy field (Provan and Milward, 1995; Provan and Sebastian, 1998). Effectiveness is defined as achievement of desired outcomes from the client's perspective. The first study found that networks centralized around a lead organization were more effective than dense, strongly tied networks, raising questions about the effectiveness of "fully integrated" networks (Provan and Milward, 1995). The second study highlighted the importance of cliques within networks where dense integration of services takes place at the client level among a few network members (Provan and Sebastian, 1998).

Our research illustrates another aspect of structure not highlighted in previous literature, and that is the importance of being structurally ambidextrous on an as-needed basis (Raisch and Birkinaw, 2008). The ambidexterity involves managing a host of tensions, the poles of which involve: stability versus change; hierarchy versus lateral relations; the existing power structure versus voluntary and involuntary power sharing; formal networks versus informal networks; and existing forums versus new forums. Managing the tensions—meaning being able to handle both poles, to be ambidextrous—typically involves separating the elements of the tension in time or space. For example, actors may try to keep stable as much as they can while changing other things; this is **the strategy of spatial separation**. Alternatively, the strategy formulation process relies a great deal on lateral relations, informal networks, new forums, and more

power sharing, while the implementation process typically experiences a re-emergence of the importance of hierarchy, formal networks, existing forums, and less power sharing; this is the **strategy of temporal separation**. An important area for future research is to explore what kinds of ambidexterity are necessary in large, multi-actor collaborations, and how best they might be managed.

Organizational ambidexterity is also related to the kinds of interdependence that must be managed. We are reminded of James D. Thompson's (1967) classic description of pooled, sequential and reciprocal interdependence. In **pooled** interdependence, each organizational unit contributes to the whole, but in a discrete manner. Standardization coordinates the units. **Sequential** interdependence is serial and ordered, where unit X's outputs are the inputs for unit Y. Coordination by plan is necessary here. **Reciprocal** interdependence includes pooled and sequential interdependence but each unit is penetrated by others and each unit poses a contingency for the other. That is, the actions of each unit must be adjusted to the actions of one or more of the others. As a result, the coordinative mechanism for reciprocal interdependence is mutual adjustment among units. It is, Thompson concludes, the most complex form of interdependence.

Proposition 15: Collaboration structure and the nature of the tasks to be performed at various levels, including the client or street level are, likely to influence a collaboration's overall effectiveness; a measure of structural ambidexterity is likely to be necessary to manage the array of tasks.

Create an Effective Governance Arrangement.

What constitutes governance for networks or collaborations is an elusive question (Emerson, Nabatchi, and Balogh, 2012; O'Leary and Vij, 2012). If one assumes that networks are horizontal systems, then a hierarchical concept like governance is troublesome (Provan and Kenis, 2005). However, governance as a set of coordinating and monitoring activities must occur for a collaboration to survive. As some argue, network governance emerges through frequent, structured exchanges that develop network level values, norms, and trust that serve as enabling social mechanisms to coordinate and monitor behavior (Jones, Hesterly, and Borghatti, 1997; Ostrom, 1990).

In addition, there are specific types of governance structures, and the choice of governance structure is likely to influence network effectiveness (Provan and Kenis, 2005). These include: 1) self-governing structures with decisionmaking through regular meetings of members or through informal, frequent interactions; 2) a lead organization that provides major decisionmaking and coordinating activities; 3) a network administrative organization which is a separate organization formed to oversee network affairs; and 4) hybrids that incorporate aspects of two or more of the structures discussed earlier. Contingencies, such as network size and degrees of trust among members, influence which form is appropriate and managerial choice is critical for matching the best form to conditions (Stadtler, 2010). Governance structures must be able to handle strategic, operational, and mixed issues, as outlined in Figure 2-1.

Proposition 16: Governing arrangements, including those that operate at both informal and formal levels, must be able to respond effectively to strategic, operational, and mixed issues, and the extent to which they do is likely to influence collaboration effectiveness. This responsiveness is needed in part to decide who gets to decide and to be able to manage spatial and temporal ambidexterity.

MANAGE CONTINGENCIES AND CONSTRAINTS AFFECTING PROCESS AND STRUCTURE

In this section, we draw attention to five factors that can significantly influence a collaboration's process and structure as well as its overall sustainability. These factors are: windows of opportunity, technology, competencies, power imbalances among members, and competing institutional logics held within the collaboration itself.

Make Use of Windows of Opportunity.

Kingdon (2002) highlights the importance of being prepared for windows of opportunity to open. Windows that open make it possible to link problems, politics, and solutions at decision points.

Proposition 17: Collaborations that are prepared to take advantage of a window of opportunity are far more likely to succeed than those that are not.

Manage the Many Roles of Technology.

Technology in organizations, including both work procedures and specific tools or equipment, is now often conceptualized as part of an organization's social system (drawing on the socio-technical school of organizational analysis of the mid-20th century) and as an actor in its own right (Latour, 1987; Sandfort, 2009). Technology is not simply "a thing" disaggregated from human work in organizations (Berg 1998), nor is it fixed and static. Viewed as technology-in-use (Orlikowski 2000), technology is an "ensemble or 'web' of equipment, techniques, applications, and people that define a social context. . . ." (Orlikowski and Iacono 2001, p. 122).

More specifically, technologies fulfill two crucial roles: first, as facilitators of collaborative behavior; and, second, as nonhuman actors in the project's processes. Technology may be viewed as a motivating or attractor force when the prospect of making use of new technologies incentivizes participation. Technologies also facilitate the work of the collaboration itself. Certainly common communications technologies, such as email with attachment capabilities and websites, make coordination among partners easier and faster. As a relationship-builder among partnership members, technologies allow or force people to integrate across boundaries, both within their own agencies or across different agencies and organizations.

Technology also acts as a "nonhuman actor," by which we mean that technology can play specific roles beyond simply motivating partners and facilitating partnership work. This is perhaps an unusual use of the term actor, but in sociology of science studies "any thing that does modify a state of affairs by making a

difference is an actor'' (Latour, 2005, p. 71). Our research suggests that technology: 1) provides solutions and presents a systems view of complex interactions that surpass perceptions of individual actors; 2) is a significant policy mechanism and political factor; 3) is essential to changing public perceptions; and, 4) can stimulate internal organizational changes.

Proposition 18: In order to be effective, collaborations must manage the many roles of technology as a facilitator of collaboration, and as non-human actors capable of providing solutions, affecting policies and politics, altering public perceptions, and, stimulating internal organizational changes.

Build in Necessary Competencies.

Perhaps it goes without saying, but collaborating successfully depends on key participants having adequate **competency for collaborating** – since collaboration involves fairly thorough and long lasting communication, cooperation, coordination, mobilization of resources, and highly consultative (if not actually shared) decisionmaking (Huxham and Vangen, 2005; Margerum, 2002; Sydow *et al.*, 2011). More **technical competencies** are also likely to be needed.

Proposition 19: Needed competencies must be available or developed or cross-sector collaboration goals will not be achieved.

Manage Power Imbalances.

Huxham and Vangen (2005) identify power imbalances among collaborating partners as a source of mistrust and therefore a threat to effective collabora-

tion. Power imbalances become most significant when partners have difficulty agreeing on a shared purpose. Over time, a collaboration is likely to experience—and probably should expect—exogenous (and endogenous) shocks that affect relations among partners, resources, and even the purpose of the collaboration (Emerson, Nabatchi, and Balogh, 2012). Once-reliable funding streams may dry up and others may flow. The demographics of the collaboration’s clientele may change for the better or worse. The collaboration may be caught up in scandals involving one or more members or in partisan political shifts. Some members may drop out and new ones join. Tactics like strategic planning and scenario development can help collaborations anticipate and shape future developments (Bryson, 2011).

Proposition 20: Cross-sector collaborations are more likely to succeed if the collaborations build in resources and tactics for dealing with power imbalances and shocks. Shocks need to be expected and can be positive, e.g., a window of opportunity.

Manage Competing Institutional Logics.

Building legitimacy, leadership, and trust, along with managing conflict, all become more complex for multisector collaborations because of the likelihood that members represent and enact competing institutional logics. Institutional logics are macro-level historical patterns, both symbolic and material, that establish formal and informal rules of the game and provide interpretations of action (Friedland and Alford, 1991; Thornton and Ocasio, 1999). For example, the logic of the market includes the material practices of accumulation and ownership, where competition

and efficiency are part of its symbolic system. The logic of the bureaucratic state concerns the regulation of human activity and includes legal and bureaucratic hierarchies, rules, and standard operating procedures. The logic of democracy emphasizes popular control over human activity and citizen participation with symbolic supporting systems such as voluntary association (Friedland and Alford, 1991). Logics influence organization-level behavior by focusing the attention of decisionmakers on certain issues, outcomes, and sources of power consistent with the dominant logic, and away from those inconsistent with the logic (Thornton and Ocasio, 1999).

Logics compete because actions, processes, norms, and structures that are seen as legitimate from the vantage point of one institutional logic may be seen as less legitimate or even illegitimate from the perspective of another logic. For example, contradictions embedded in a cross-sector collaboration might include the extent to which efficiency (the market), adherence to bureaucratic rules (the state), or inclusive participation (democracy) is regarded by collaboration members as essential to the design of a collaboration's structure, process, and set of outcomes. Managing the competing logics requires leaders and managers to be what Joseph Nye calls "tri-sector athletes" (quoted in Lovegrove and Thomas, 2012, p. 38).

Proposition 21: Competing institutional logics are likely within cross-sector collaborations and may significantly influence the extent to which collaborations can agree on essential elements of process and structure as well as outcomes; competing logics must be managed effectively.

ASSESS OUTCOMES AND MANAGE ACCOUNTABILITIES

This section discusses assessing outcomes of cross-sector collaboration in four categories: public value; first-, second-, and third-order effects; longevity; and resilience and reassessment. The section concludes by focusing on managing accountabilities.

Create Public Value.

We argue that the point of creating and sustaining cross-sector collaboratives ought to be the production of “public value” (Moore, 1995; Bozeman, 2007; Benington and Moore, 2011) that could not be created by single sectors alone. Public value in cross-sector collaborations seems most likely to be created through making use of each sector’s characteristic strengths while also finding ways to minimize, overcome, or compensate for each sector’s characteristic weaknesses. Playing to the strengths of the different sectors seems logically linked to keeping costs under control and attending to diverse human needs and aspirations.

Especially valuable is the creation of a “regime of mutual gain” that produces widespread, **lasting** public benefits at reasonable cost and that taps peoples’ deepest interest in, and desires for, a better world (Crosby and Bryson, 2005a, p. 23). By regime we mean “sets of implicit or explicit principles, norms, rules, and decision-making procedures around which actors’ expectations converge in a given area” (Krasner, 1983, p. 2). To be lasting, such regimes must effectively link individuals’ and organizations’ self-interests and sector capabilities with the common good to which they all might contribute.

Proposition 22: Cross-sector collaborations are most likely to create public value if they build on individuals' and organizations' self-interests along with each sector's characteristic strengths, while finding ways to minimize, overcome, or compensate for each sector's characteristic weaknesses.

Assess First-, Second-, and Third-Order Effects.

Innes and Booher (1999; 2010) argue that collaborative planning efforts have first-, second-, and third-order positive effects. First-order effects are immediately discernable as a direct result of the collaboration process. These would likely include the creation of social, intellectual, and political capital; high-quality agreements; and innovative strategies. Second-order effects are likely to occur when collaboration is well underway, or else may occur outside the formal boundaries of the effort. These might include new partnerships, coordination, and joint action; joint learning that extends beyond the collaborative; implementation of agreements; changes in practices; and changes in perceptions. Finally, third-order effects may not be evident until sometime later. These might include, for example, new collaborations; more co-evolution and less destructive conflict between partners; results on the ground, such as adaptations of services, resources, cities, and regions; new institutions; new norms and social heuristics for addressing public problems; and new modes of discourse. Gray (2000) offers a different, but complementary, list of outcomes: achieving goals, generating social capital, creating shared meaning, increasing interaction, and shifting the power distribution.

Proposition 23: Cross-sector collaborations are most likely to create public value if they produce positive first-, second-, and third-order effects far in excess of negative effects.

Build in Resilience and Reassessments.

If big wins are not possible, the collaboration should orchestrate small wins that accomplish its strategies. Whether big or small, the wins should be publicized. Collaborating partners should be able to regroup and reframe after failure (Crosby and Bryson, 2005a). Obviously, failure to achieve desired outcomes can erode support for collaboration, but successes can cause supporters to forget the need to sustain the collaboration. After a regime of mutual gain has been fully implemented, leaders should assess whether it should be continued, modified, or terminated (Crosby and Bryson, 2005a).

Proposition 24: Cross-sector collaborations are most likely to create public value if they are long-lived, resilient, and engage in regular reassessments.

Manage Accountability.

Accountability is a particularly complex issue for collaborations because it is not often clear to whom the collaborative is accountable and for what. Relationships between the collaborative and home organizations may be abstruse, and there typically are multiple and competing stakeholder perceptions of how to define results and outcomes.

Accountability actually can be for inputs, process, or outcomes. Donahue (2004) suggests three general criteria by which to judge the success of cross-sector

collaborations: simply existing, meeting organizational imperatives of the partners, and outperforming feasible alternative arrangements for creating public value. Page argues:

An accountable collaborative . . . needs a measurement system to document its results and how those results change over time. It also needs a ‘managing for results’ system that links the data it measures to specific actors and interventions, that provides critical performance information to its stakeholders, and that uses the information to improve its operations (Page, 2004, p. 592).

To implement such a system, collaborating partners need “strong relationships with key political and professional constituencies as well as the capacity to measure results and use the information strategically to improve performance” (*Ibid.*, p. 593). Of course, accountability may not always be clear-cut—for example, when a collaborative works with other collaboratives. Additionally, collaborating organizations may have their own accountability frameworks that conflict with the collaboration’s accountability approach (Sullivan, Barnes, and Matka, 2002).

Proposition 25: Cross-sector collaborations are more likely to be successful if they have an accountability system in place that tracks inputs, processes, and outcomes; use a variety of methods for gathering, interpreting, and using data; and have in place a results management system built on strong relationships with key political and professional constituencies.

SUMMARY AND RESEARCH AGENDA

As the propositions indicate, cross-sector collaborations are difficult to create and even more difficult to sustain because so much has to be in place or work well for them to succeed. The challenge of designing and implementing effective cross-sector collaboration is daunting – a conclusion that leads to a possibly unwelcome summary proposition:

Proposition 26: The normal expectation ought to be that success will be very difficult to achieve in cross-sector collaborations.

Success depends on leadership of many different kinds. We have highlighted roles that people play, such as sponsors, champions, boundary-spanners, and facilitators. But Huxham and Vangen (2005) and Sydow *et al.* (2011) argue that leadership – in the sense of what “makes things happen” (pp. 202-212) – also occurs through structures and processes. The leadership challenge in cross-sector collaboration may therefore be viewed as the challenge of aligning initial conditions, structures, processes, outcomes and accountabilities such that good things happen in a sustained way over time – indeed, so that public value can be created. We believe that taking a design science approach can help make the leadership challenge more manageable.

To identify cross-sector collaborations as complex entities that defy easy generalization is an understatement. Studies of interorganizational collaboration have proliferated and produced rich material for those seeking to understand the relationships among initial conditions process, structure, and outcomes of

collaborations (Huxham and Vangen, 2005; Ansell and Gash, 2008; Emerson, Nabatchi, and Balogh, 2012; O’Leary and Vij, 2012; Vangen and Huxham, 2012). Yet, few research studies have gathered data on all of these in a way that can easily guide research or help policymakers in government, business, nonprofits, the media, or communities understand when cross-sector collaborations make sense, let alone how to design and implement them. We have studied three cross-sector collaborations in detail and, based on those studies and a review of the literature, have identified, in summary fashion, 26 propositions – many of which are revised versions of those we presented in our 2006 article – related to collaboration outcomes and success. The practices, factors, or variables referenced in these propositions may lead directly to success, but they are more likely to be interrelated with, moderated by, or mediated by, other practices, factors, or variables; be embedded in fairly complicated feedback loops; and change over time. We have presented our propositions in an explicit design science and strategic management framework.

Part of the intellectual challenge in studying cross-sector collaboration is blending multiple theoretical and research perspectives (Rethemeyer 2005). Many public management scholars tend to view these collaborations as “networks,” use network theory to ground research questions, and situate their research within recent work on policy implementation tools. This perspective offers a rich theoretical base, often focused on structural variables, but tends to disregard three critical components of cross-sector collaborations: an appreciation of the uniqueness and differential strengths and weaknesses of governments, nonprofit organizations, businesses, news media, and

communities; ongoing process dimensions, including leadership broadly defined; and the dynamic nature of collaborative development. On the other hand, scholars who focus on collaborations as collective action solutions to public problems offer less theoretically grounded research but rich material on process dimensions, sources of ambiguity within collaborative work, and findings that can more easily be translated to the world of practice. Scholars from each perspective rarely use research from the other perspective and thus consistently miss opportunities to explore more facets of collaboration. Future research must bridge these two perspectives in order to begin to capture the complexity inherent in cross-sector collaborations. A focus on design may help foster needed integration across approaches.

Furthermore, a quick scan of our propositions shows a mix of environmental factors over which managers have little control and strategic choices over which managers may have some control. Support from the institutional environment is critical for legitimizing cross-sector collaboration, but is not easily controlled by local managers. On the other hand, choice of governing mechanism, stakeholder participants, planning processes, and conflict management techniques, for example, are likely to be within the purview of managerial choice; hence, our focus on strategic management. We have attempted to demonstrate in this paper that research and practice must pay attention to the external environment in which cross-sector collaborations are embedded. Many of these components represent strategic contingencies that will influence but not necessarily determine managerial or collaborative action. Leaders and managers, constrained though they may be, are likely to

produce independent effects—in part by design—on collaboration success (Agranoff and McGuire, 2003; Agranoff, 2007).

The research challenges involved in studying cross-sector collaborations and in providing practical, research-based guidance to policymakers regarding the design and implementation of cross-sector collaborations clearly are substantial. Yet the challenges must be met, or effectively addressing the major public problems that confront us will be unlikely, and some of the most important opportunities for creating public value will be missed.

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CHAPTER 3

SEEKING TO EXTEND THE MODEL: CROSS-SECTOR COLLABORATION TO TACKLE SUSTAINABLE DEVELOPMENT IN TRANSNATIONAL AND GLOBAL SETTINGS WITH THE MILITARY AS A PARTNER

David M. Sarcone

In the paper they have written especially for this Workshop,¹ Drs. John Bryson, Barbara Crosby, and Melissa Stone present a detailed, process-driven model of cross-sector collaboration from a public management perspective. Their model is illustrated via a formal and stylized schema that illustrates links among six major activity areas associated with the process of forming and managing collaborations.² Those six areas are mutually and reciprocally dependent in the sense that actions taken in any single area generate feedback to any one of the other five. It is detailed in that the authors identify 26 propositions about those factors which can contribute to the success or failure of a cross-sector collaborative initiative. The factors described in each proposition impact one of the six activity areas.

True to its roots in strategic planning, the model begins with an assessment of the external environment, including the general environment, operating environment, and other antecedents relevant to the formation of a collaborative initiative. It then shifts focus to an examination of those internal structures and processes that, if executed effectively, result in organizational competencies which create advantage for a collaborative organizational form over alterna-

tives, in those circumstances where there is a need for coordinated efforts to address complex and seemingly intractable multisector problems. Ideally speaking, initiatives implemented under cross-sector collaborations create varying levels of public value by either creating positive or mitigating negative first-, second-, or third-order outcomes. But as cautioned by the authors, “normally success will be very difficult to achieve.”³

Their model is primarily based on research and literature that concentrates on partnerships involving organizations from the for-profit, government, and nonprofit sectors within developed nations. Thus, with respect to the themes of the Workshop, they offer a caveat about the direct relevance of their model.

We do not know the extent to which our observations apply to developing countries, nor do we know much about the effects of military involvement in cross-sector collaborations.⁴

Despite their reservations, I believe their model provides a sound foundation for needed research on transnational and global cross-sector collaborations. The need for this promising direction of future research is supported by John Selsky and Barbara Parker:⁵

Research on CSSPs [cross-sector social partnerships] based in different nations is virtually untouched, so a host of cross-cultural issues await attention, especially as CSSPs address more transnational and global issues. Such issues include examination of the embeddedness of particular projects in national cultural contexts and acculturation challenges in cross-national partnerships.⁶

Furthermore, I also believe that their model can serve as a platform for thinking about cross-sector collaborations that are designed to promote sustainable development and also may involve the military as a partner alongside participants from other sectors.

Thus, in this paper, my intent is to identify those aspects of their model that warrant further exploration when one considers extending the model to sustainability-related issues at a transnational level of analysis and may include the military as a partner in the collaboration. Toward that end, I concentrate on seven of their 26 propositions, numbers 3, 9, 15, 20, 21, 23, and 25. To assist the reader, I restate each of those propositions. I then offer brief commentary about each and in some cases support my comments with references to the literature on organizational theory. I then offer follow-up questions that are prompted by the propositions and which I think might spur ongoing dialogue and research about the application of their model in new settings; that is, about extending the boundaries of their model.

REFLECTIONS ABOUT THE PROPOSITIONS

Direct Antecedents to Collaboration.

Proposition 3: Cross-sector collaborations are more likely to succeed when one or more linking mechanisms – such as powerful leaders and sponsors; general agreement on the problem; existing networks; neutral conveners; requests for proposals (RFPs), plans, projects or technologies requiring collaboration; and consequential incentives favoring collaboration – are in place at the time of their initial formation, and consequential incentives favor collaboration.

Via their statement and discussion of Proposition 3, the authors identify five direct antecedent conditions that are relevant to the formation of cross-sector, collaborative initiatives. Three among those are of particular relevance to initiatives that are sustainability-focused and involve broad participation, including that of nontraditional stakeholders.

First, the authors point out that a legitimate brokering organization helps facilitate formation. Given the scope and complexity of sustainability issues, I raise my first question: “To achieve sustainable development goals, which organization might possess the respect and legitimacy to catalyze reciprocal initiatives across sectors, both within and across nation states?”

Second, the authors note that, when it comes to defining the problem, agreement among stakeholders helps facilitate development. Reaching agreement about the problem definition can be especially challenging, however, when one considers the evolving definition of sustainable development. The politically charged nature of the concept is nicely captured by Kates, Parris, and Leiserowitz.⁷ That is, to stimulate thinking, they posit the following incomplete sentence: “Sustainable development is _____”, and from there, they follow up with the following observations.

Considering that the concept of sustainable development is now enshrined on the masthead of *Environment* magazine, featured on 8,720,000 web pages, and enmeshed in the aspirations of countless programs, places and institutions, it should be easy to complete the sentence. But the most widely accepted definition is creatively ambiguous: ‘Humanity has the ability to make development sustainable – to ensure it meets the needs of the present without comprising the ability of future generations to meet their own needs.’ This mal-

leability allows programs of environment or development; places from local to global; and institutions of government, civil society, business and industry to each project their interests, hopes, and aspirations onto the banner of sustainable development.⁸

Thus, a second question is: “How might a cross-sector collaborative initiative begin to align divergent views about sustainable development?”

Third, Bryson, Crosby, and Stone believe that the trust earned by participants via their engagement in previous collaborative initiatives is critically important to initiating a new initiative. Nevertheless, identifying all of the relevant stakeholders—an initial step in developing trust—is not a straightforward exercise. For example, Hall and Vredenburg⁹ caution that efforts to impact sustainable development in a substantive way are likely to have widespread social implications that can often result in controversy. That tendency implies that in order to effectively address barriers to sustainable development, at least one participant will need to exert effort to help a wider range of stakeholders, including those that might initially be relegated to a secondary status, recognize the relevance of the initiative to their respective interests.

Thus, I ask: “How would participants in a collaborative initiative identify all impacted parties?” “How does the process of trust-building begin among members of the public and private sectors and representatives of the military?”

Deliberate and Emergent Planning.

Proposition 9: Cross-sector collaborations are more likely to succeed if they use a combination of deliberate and emergent planning, with deliberate planning

emphasized more in mandated collaborations and emergent planning emphasized more in nonmandated collaborations. At some point, however, emergent planning needs to be coupled with formalization; too much emergent planning can undermine collaboration success.

With respect to deliberate versus emergent planning, in a discussion about their own “collective impact” model, John Kania and Mark Kramer¹⁰ indicate that embracing emergence is the most effective way to achieving positive change; that is:

predetermined solutions rarely work under conditions of complexity—such as conditions that apply to most problems of sustainability—when the unpredictable interactions of multiple players determine the outcomes.¹¹

In a manner consistent with Proposition 9, Kania and Kramer believe that the probability of success of a cross-sector collaborative initiative is elevated when participants implement a process which, at a minimum, includes achieving a common understanding of a problem; agreeing to joint goals; and establishing a common set of metrics that they will use to hold themselves accountable and to mark progress.

Although deliberate planning does remain valuable to an initiative, it may become less important as the participants learn to collectively recognize and exploit opportunities to solve problems which they may not have been able to predict in advance.

Hence: “How might a transnational collaboration encourage an entrepreneurial approach to problem solving?”

Adapting Structure to Task.

Proposition 15: Collaboration structure and the nature of the tasks to be performed at various levels, including the client or street level, are likely to influence a collaboration's overall effectiveness; a measure of structural ambidexterity is likely to be necessary to manage the array of tasks.

Proposition 15 implies that the correct choice of structure for the cross-sector collaboration must be informed by the complexity and urgency of the problem(s) to be addressed, and the commitments in time and treasure required of participants to pursue solutions.

This leads me to ask: "What type of collaborative model should be developed to achieve goals consistent with sustainable development? More specifically, to what extent should the nature of the agreed upon tasks inform the level of interdependence (pooled, sequential, or reciprocal) among participants in the collaborative initiative?"¹²

Managing Power Imbalances.

Proposition 20: Cross-sector collaborations are more likely to succeed if the collaborations build in resources and tactics for dealing with power imbalances and shocks. Shocks need to be expected and can be positive, e.g., a window of opportunity.

As suggested by Proposition 20, power imbalances can create mistrust between partners and can undermine effectiveness. Given the broad range of stakeholders within and across countries, and participation of a nontraditional partner such as the armed services in sustainability-focused collaboration initiatives, it is

logical to assume that the probability of power imbalances would increase.

Thus: "In what ways might a transnational collaboration address power imbalances?"

Managing Competing Institutional Logics.

Proposition 21: Competing institutional logics are likely within cross-sector collaborations and may significantly influence the extent to which collaborations can agree on essential elements of process and structure as well as outcomes; competing logics must be managed effectively.

Proposition 21 implies that each of the organizations that participate in a collaborative initiative will have its own institutional logic, and those differences have to be recognized and managed. To further complicate matters, in cross-sector collaborations that are transnational in scope, the institutional logic of the organizations representing each sector will be influenced by the historical and cultural context particular to their home nation.

I therefore ask: "How does the institutional logic across sectors compare and contrast between nation states?" "How might these differences increase the difficulty of developing a collaborative initiative?" "As important, how might one define the institutional logic of the military services?"

Tracking Outcomes.

Proposition 23: Cross-sector collaborations are most likely to create public value if they produce positive first-, second-, and third-order effects far in excess of negative effects.

Proposition 25: Cross-sector collaborations are more likely to be successful if they have an accountability system in place that tracks inputs, processes, and outcomes; use a variety of methods for gathering, interpreting, and using data; and have in place a results management system built on strong relationships with key political and professional constituencies.

Proposition 23 links the creation of net public benefit (value) with the nature of outcomes of the collaboration. Proposition 25 states that to convincingly demonstrate the achievement of outcomes requires a measurement system similar in character to the “agreed upon and shared measurement system” advocated by Kania and Kramer.¹³

Nevertheless, assessing the progress of sustainable development is fraught with difficulty. As summarized by Thomas Parris and Robert Kates,¹⁴ proponents of sustainable development differ in their emphases on what is to be sustained; what is to be developed; how to link environment and development; and, for how long a time. They conclude that, due to a number of factors – including ambiguity surrounding the term “sustainable development”; the plurality of purposes in measurement; and confusion over terminology, data, and methods of measurement – there are no universally accepted sets of indicators.

In addition, interorganizational network theorists caution against evaluating the effectiveness of cross-sector collaborations based solely on measurable outcomes. Myrna Mandell and Robyn Keast¹⁵ recommend that effectiveness be measured based on the relative vitality of the organization – taking into consideration the type of network, levels of analysis, and stage of development.

Those considerations suggest two final questions: “How might a transnational collaboration reach agreement on a shared sustainable development measurement system?” “What characteristics of the organization should be assessed when regularly measuring performance of a transnational collaborative?”

FINAL THOUGHTS

To paraphrase comments offered by John Bryson during the Workshop, “developing and managing cross-sector collaborations is a hard way to solve hard problems.” Bryson, Crosby, and Stone provide an excellent blueprint on how to establish and manage a multi-sector response to a vexing problem within a national setting. Their model offers promise as the foundation for exploring the value of cross-sector collaborations at transnational and global levels of analysis. It is my hope that the questions raised in my response serve as the start of a research agenda on the exciting and important topic of multinational, cross-sector collaboration.

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ENDNOTES - CHAPTER 3

1. J. M. Bryson, B. C. Crosby, M. M. Stone, "Designing and Strategically Managing Cross-Sector Collaborations," *The U.S.-India Strategic Relationship: Cross-Sector Collaboration to Promote Sustainable Development*, Carlisle PA: Dickinson College, March 12-14, 2013.

2. As illustrated in Figure 1 of their paper, those six areas are: Address initial conditions; Design effective processes; Create effective structural and governance approach; Assess outcomes and manage accountabilities; Manage contingencies and constraints affecting process and structure; and Create effective first-, second-, and third-order outcomes.

3. *Ibid.*, p. 50.

4. *Ibid.*, p. 4.

5. J. W. Selsky and B. Parker, "Cross-Sector Partnerships to Address Social Issues: Challenges to Theory and Practice," *Journal of Management*, Vol. 31, No. 6, 2005, pp. 849-873.

6. *Ibid.*, p. 866.

7. R. W. Kates, T. M. Parris, and A. A. Leiserowitz, "What Is Sustainable Development? Goals, Values, Indicators, and Practice," *Environment*, Vol. 47, No. 3, 2005, pp. 8-21.

8. *Ibid.*, p. 9.

9. J. Hall and H. Vredenburg, "The Challenges of Innovating for Sustainable Development," *MIT Sloan Management Review*, Vol. 45, No. 1, 2012, pp. 61-68.

10. J. Kania and M. Kramer, "Embracing Emergence: How Collective Impact Addresses Complexity," *Stanford Social Innovation Review*, Vol. 11, No. 1, 2013, pp. 1-8.

11. *Ibid.*, p. 2.

12. As explained by Bryson, Crosby, and Stone (p. 14), in **pooled** interdependence, each organizational unit contributes to the whole but in a discrete manner. Standardization coordinates the units. **Sequential** interdependence is serial and ordered, where unit X's outputs are the inputs for unit Y. Coordination by plan is necessary here. **Reciprocal** interdependence includes pooled and sequential interdependence, but each unit is penetrated by others and each unit poses a contingency for the other.

13. Kania and Kramer, p. 2.

14. T. M. Parris and R. W. Kates, "Characterizing and Measuring Sustainable Development," *Annual Review Environmental Resources*, Vol. 28, 2003, pp. 559-586.

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CHAPTER 4

KEYNOTE ADDRESS: SUSTAINABLE DEVELOPMENT AND THE U.S.-INDIA STRATEGIC RELATIONSHIP

Chandrashekhhar Dasgupta

Thank you very much, Dr. Leary, for the very generous introduction.

Friends, I am delighted to participate in this workshop at Dickinson College, both because of the importance of the issues it addresses and because of its venue. Dickinson College, one of the highest institutions of learning in the United States, was founded by one of the signatories of the Declaration of Independence; is named after the penman of the U.S. Constitution; and includes among its benefactors no less a figure of world historical importance than Thomas Jefferson. It is indeed a privilege to speak at this forum.

The Workshop has an ambitious and very splendid agenda. It draws together three very distinct but interconnected themes. First is the U.S.-India strategic relationship, second is sustainable development, and third is cross-sector collaboration to promote the good.

I will speak about the first two of these interconnected themes, the U.S.-India strategic partnership and collaboration to promote sustainable development. On cross-sector collaboration, I have nothing to add to the excellent presentation we had this morning, except to offer the observation that this scope for collaboration is much greater between open societies, democratic societies where the private sector and civil society are truly independent of government control. This helps to make interactions more transparent, and engenders

greater trust and mutual confidence between all parties. For this reason, cross-sector collaboration can be particularly fruitful in the interaction of two great democracies like India and the United States.

One of the most important developments in the post-Cold War era is the formation of a new strategic partnership between the world's two biggest democracies, India and the United States. President Barack Obama has described the U.S.-India strategic relationship as a defining partnership. The partnership addresses a wide spectrum of challenges to conventional as well as nonconventional, or nontraditional, security concerns. At its core are two overarching challenges, the menace of terrorists operating from sanctuaries across borders and the challenges associated with the changing balance of power and the rise of China.

India is a long-suffering victim of terrorist attacks originating from sanctuaries across its borders with Pakistan. In the Cold War period, the United States tended to discount India's concern about the global menace posed by terrorists operating from Afghanistan-Pakistan (Af-Pak) sanctuaries. But all of this changed dramatically after September 11, 2001 (9/11). The United States took the lead in forging a global coalition to combat terrorism. India and the United States are close partners in combating this menace to human civilization. Washington has exerted its considerable influence to dissuade Pakistani authorities from providing sanctuary to terrorist outfits.

The regular, two-way exchange of intelligence between Washington and New Delhi is of crucial importance to combating terrorism. The United States has also provided India with advanced technical equipment and has helped in training India counterterrorism personnel. For its part, India has made important

contributions to bringing stability to Afghanistan, by bringing assistance to its economic reconstruction as well as by training its armed security personnel to take over their new responsibilities.

Turning to more conventional challenges to national security, we have to analyze the implications of the dramatic shifts in the global power balance during this century. The rise of major Asian states is a defining characteristic of our times. In particular, we have to take note of the fact that China's spectacular rise in this century has sharply narrowed the gap in military and economic power between the United States and China. Although U.S. global primacy is likely to endure for at least the next several decades, China is well on the road to becoming a near equal power. Indeed, China has already emerged as a near equal in its East and Southeast Asian neighborhoods.

The United States and India share a common interest in ensuring that the ongoing shift in the balance of power does not lead to an Asian hegemon. In the words of a leading American analyst:¹

The challenge posed by mounting Chinese strength will have to be handled by supporting the growth of other nations on China's periphery in response. This is not containment; it is rather a balance of power policy. It is a policy of encouraging the rise of other Asian states in order to balance China.

The challenge for the United States, in the words of Condoleezza Rice, is to build, and I quote her, "a balance of power that favors freedom."²

India is important in this context because of its size, its impressive growth rate, and its democratic values. The rise of China, paralleled with the rise of a number of Asian countries – among them India, Japan, South

Korea, and Indonesia – and underpinned by continuing U.S. involvement in the region will serve the legitimate interest of all countries, including China. It will provide a stable basis for regional stability and for mutually beneficial economic cooperation among all countries; it will enable the United States to maintain its global position; and it will be fully consistent with China's peaceful rise.

From an American perspective, the strategic partnership with India is an important component of its policy of supporting the rise of democratic powers in Asia in order to maintain a stable balance of power. From the India perspective, the United States is a benign presence in its neighborhood, helping maintain stability in the central Asia region. There is thus a fundamental convergence of strategic interests between the two democracies.

It is against this background that the two partners have taken several impressive steps to strengthen their bilateral cooperation, including the nuclear deal, India's new military imports from the United States, joint exercises between the armed forces of the two countries, and naval cooperation in anti-piracy operations, to mention only some of the more eye-catching items. Collaboration between the two countries also extends to a wide range of nontraditional security challenges, such as the threat to environmental security posed by climate change, promotion of energy security, and a host of other issues that have a direct bearing on sustainable development. This leads me to my second challenge, sustainable development.

We heard this morning about some of the ambiguities in the concept of sustainable development. So perhaps, it might be useful if I give you a view from the south, as it were, of what sustainable develop-

ment means, not so much as a concept, but as a practice. We are sometimes told that there is a trade-off between development and protection of the environment, and that sustainable development implies some sort of trade-off. Two distinct arguments have been advanced in support of this thesis. First, fears have been expressed about the implications of head-long development in poorer countries on global availability of natural resources, such as oil and natural gas: We will naturally run out of resources. Second – and this is a different argument – there are apprehensions that rapid economic development equals massive pollution and then environmental disaster.

Let me try to answer these questions: Is there a real danger of running out of natural resources, and is there an inherent conflict between development and the environment? The concerns about the depletion of natural resources are not a new phenomenon: similar concerns were heard in the wake of the high growth rates in post-World War II Europe and Japan; that is, in the 1950s and 1960s. Some famously warned that the planet was running out of natural resources, and that an economic crisis was imminent by the 1970s. The dire forecast turned out to be baseless; the global economy continued to prosper in the 1970s and beyond. Technology unlocked new resources for economic growth.

Today, we are hearing a chorus of discontent. The rapid economic growth achieved by many Asian countries during the past 2 decades has given rise to concerns about resource availability. Books with alarming titles such as *Rising Powers Shrinking Planet* have found a wide and appreciative audience. Paul Roberts, a leading international expert on the petroleum industry, wrote a celebratory book entitled *The*

End of Oil predicting an early peak in oil production. Once again, these grim predications are turning out to be incorrect: technology continues to deliver new solutions to problems of resource scarcity. Advances in drilling technologies have opened the prospect for a boom in shale gas and off-shore oil production. The International Energy Agency is now projecting an imminent “golden age” of gas, while just 3 years ago they were making precisely the opposite prediction.

I am reasonably optimistic about the future availability of natural resources, because I believe that market forces encourage the development of new technologies that help increase production, or increase efficiency of resource utilization, or provide new substitute materials. The world is not going to run out of resources because developing countries are freeing themselves from the shackles of poverty.

I now turn to the second argument, that industrialization generates pollution and poses a threat to the environment. Industrial growth, of course, generates increased production, and this does impose greater stresses on the environment. At the same time, however, development also gives us the financial and technological resources for remedial or compensational measures; it even enables us in many cases to actually improve the quality of our local environment. Of course, this does not happen automatically. We need to enforce proper environmental regulations and where necessary, to introduce suitable incentives and penalties. Of course, there will be some cases where the environmental costs outweigh the economic benefits, and in these cases the project must be rejected. But with these procedures in place, development will enable us to protect and even enhance the environment. Far from being a threat to the environment, develop-

ment is the essential prerequisite for protecting the environment. Sustainability does not require us to limit and slow down poverty eradication. It does require us, however, to ensure that an appropriate portion of the financial benefits of development are pulled back to repair or compensate for environmental damage and indeed, to the quality of the environment. Development and sustainability are not competitive, but instead are complementary goods.

This is amply vindicated by global experience in real life. When we look around us, we see that the developed countries generally have cleaner water supplies, superior sanitation and waste-disposal systems, and better urban air quality than most poor countries. Industrialized countries generally have higher environmental standards than developing countries because they have the money and technology needed to enhance the environment. Development makes it possible to promote sustainability.

I shall not attempt to survey the entire spectrum of questions related to sustainable development and how they impact security issues. Instead, I shall focus on a question of crucial concern both for national security as well as for sustainable development. This is the question of energy supplies. Assured and affordable energy supplies are a central component of national security. At the same time, energy generation—specifically the combustion of hydrocarbons, coal, oil, and natural gas—is the major contributor to climate change. Unregulated energy consumption is causing climate change, which is the greatest threat to sustainable development.

So that is the problem. In what ways can the United States and India cooperate to promote energy security and at the same time respond to the threat posed by

climate change? I believe that the dramatic expansion in U.S. shale gas production has now opened up new opportunities to advance energy security, mitigation of climate change, and therefore promote the broader goal of sustainable development. We have already noticed the advances in the United States of drilling and fracking technologies that have brought about a revolutionary change in shale gas production. The new technology has already produced a seven-fold increase in U.S. shale gas production. Until recently an importer of natural gas, the United States now has the option of emerging as one of the two major exporters of gas in the next few years, on par with Qatar, today the leading exporting of natural gas. But will the United States actually exercise this option? Legislation dating back to 1938 requires a case-by-case determination by the U.S. Department of Energy of whether an export application serves the U.S. public interest. Automatic clearance is given only to the few countries with which the United States has a bilateral free-trade agreement. Other U.S. strategic partners, including India, must await a case-by-case finding.

A U.S. decision to follow a liberal export policy would greatly advance the energy security interests of its allies and its strategic partners. It would significantly increase global supplies, leading not only to reduced prices, but also a de-linking of gas from oil prices. Many long-term gas contracts are linked to oil prices; and de-linking means that the sharp spikes in oil prices would not affect the price of natural gas. A liberal U.S. policy would also contribute to global climate change mitigation by allowing importing countries to substitute coal, which generates a much greater amount of carbon dioxide, with natural gas, which is a relatively cleaner fuel.

The economic advantages and disadvantages of allowing liberal exports of natural gas are currently being debated in the United States. A study commissioned by the U.S. Government has reported that in every scenario, a liberal export policy means economic benefits to the United States. Hopefully, the U.S. administration will adopt a policy based on this finding without undue delay.

It seems to me that a liberal export policy would not only serve the economic but the broader security interests of the United States. At stake is nothing less than the future role of the United States as a global leader. Can the United States sustain its claim to global leadership as the champion of the liberal, multilateral trading system if it imposes arbitrary export restrictions on natural gas? Secondly, some American political initiatives sometimes cause unintended collateral damage to its strategic partners. For example, the sanctions against Iran—which, incidentally, has the second largest deposits of natural gas in the world—have significant unintended fall-out on natural gas availability to energy-deficient countries. In the long run, would it be realistic for the United States to expect its partners to follow the lead of the United States if it denies them access to its own natural gas market, while at the same time denying them access to another important source? Finally, can the United States aspire to global leadership in combating climate change if it denies other countries the possibility of shifting from coal to a cleaner fuel? I am convinced that an early decision in favor of liberal exports of natural gas would benefit the U.S. economy, consolidate its strategic partnerships with other democracies, and enhance its role as a global leader.

Thank you for your patience.

ENDNOTES - CHAPTER 4

1. Ashley J. Tellis, *Opportunities Unbound: Sustaining the Transformation in U.S.-Indian Relations* Washington, DC: Carnegie Endowment for International Peace, January 7, 2013.

2. Dr. Condoleezza Rice, "A Balance of Power That Favors Freedom," Wriston Lecture, Manhattan Institute, New York, October 1, 2002.

SECTION 2

CROSS-SECTOR COLLABORATION: IMPLICATIONS FOR STRATEGIC LEADERS

Moderator: Professor Rick Coplen, U.S. Army Peacekeeping and Stability Operations Institute.

Presenter: Colonel (Retired) Dr. Jeff McCausland, Founder and Chief Executive Officer of Diamond6 Leadership.

Presenter: General (Retired) Vijay Kumar Singh, Formerly Chief of Staff of the India Army.

Discussant: Dr. Jack Clarke, The Marshall Center, Garmisch, Germany.

In each of their papers, McCausland and Singh identify and support the use of cross-sector collaborations as a way to address increasingly complex transnational and global challenges.

McCausland builds a compelling argument for the use of collaborative processes by the U.S. Army to meet progressively difficult missions. To present his case, he relies on a three-sided strategic framework linking the external environment, strategy, and culture. In brief, he acknowledges the growing complexity of the U.S. Army's operating environment. Army leadership realizes that the challenges arising within this environment cannot be addressed successfully by a single organization or even a single sector. The growing complexity of problems and corresponding responses have, in turn, required the U.S. Army to be prepared to accept a broader array of missions conducted across

all four phases of conflict. McCausland argues that the Army's success with many of these missions requires the competent execution of strategies driven by cross-sector partnerships. He further states that the U.S. Army must change its culture to make certain it develops and maintains the organizational competencies to lead and/or participate in multisector initiatives. This needed change in organizational culture will require current U.S. Army leadership to reconsider and revise two critically important organizational process associated with the development of future U. S. Army strategic leaders. These are the education and training of U.S. Army officers and the recognition and promotion processes associated with officer career paths.

Singh offers a concise summary of the U.S.-India relationship since the middle of the 20th century. With this history in mind, Singh recognizes the growing need for cross-sector collaborations and offers insightful and pragmatic recommendations on how to successfully build these relationships. He follows this by providing the rationale for promoting increased cross-sector collaborations between the United States and India for the purpose of positively affecting the future of South Asia.

The papers presented by McCausland and Singh are rich with parallels to the conceptual model of cross-sector collaborations offered by Drs. John Bryson, Barbara Crosby, and Melissa Stone. Table 1.1 provides a listing of cross-sector propositions.

Proposition 1: Similar to all interorganizational relationships, cross-sector collaborations are more likely to form in turbulent environments. In particular, the formation and sustainability of cross-sector collaborations will be affected by driving and constraining forces in their competitive and institutional environments, including political forces and the availability of relevant technology.

Both presenters acknowledge that senior military leaders must function in an increasingly complex global operating environment. McCausland best summarizes this growing complexity in his remarks on the Army's role in maintaining international stability. He states,

The Army must operate with coalition partners in an environment that includes our adversaries' regular forces, irregulars, criminals, refugees, [nongovernmental organizations], and others. Each of these actors may have a separate agenda that is at odds with our objectives, other actors, and the political order in the region. . . . Finally, this complex environment is not static but will continuously evolve as conditions change.¹

Proposition 2: Public policymakers are most likely to try cross-sector collaboration if they believe that separate efforts by several sectors to address a public problem have failed, or are likely to fail, and the actual failures cannot be fixed by a separate sector alone; or less dramatically, that no sector can address the presenting problem effectively on its own.

Both presenters support the active participation of military representatives in cross-sector collaborations for the purpose of more effectively and efficiently (given institutional resource constraints) addressing multi-causal security issues. Singh best captures support for this organizational form when he states,

. . . collaborations can be powerful tools for mobilizing individuals to action, bringing issues and interests to prominence, and developing robust policies. These associations are also an effective means of providing focus so that resources are not wasted and efforts are not needlessly duplicated.²

Proposition 5: Cross-sector collaborations are more likely to succeed if they have committed, able sponsors and effective, persistent champions at many levels who provide formal and informal leadership.

Successful cross-sector champions are "collaborative capacity builders" who attain their role as a result of legal authority; mastery of specific knowledge and skills critical to the collaboration, or their reputation as an honest broker. McCausland directly speaks to the needed knowledge and skills of future military leaders participating in cross sector partnerships. Although he lists specific needed leadership attributes, he best summarizes an effective future military leader as one who

. . . must also be able to think conceptually while remaining technically proficient. But proficiency in future may mean that an officer is less

**Table 1.1. Propositions about
Cross-Sector Collaboration
Relevant to Strategic Leadership.**

a specialist than he or she understands enough to manage and lead a complex organization in a dynamic environment.³

Proposition 7: Cross-sector collaborations are more likely to succeed if a continuing virtuous circle of trust-building activities (including nurturing of cross-sectoral and cross-cultural understanding) can be established and maintained.

Singh acknowledges that relations between the United States and India over time are best characterized by a “yo-yo” effect. Lack of trust exacerbated by cross cultural insensitivity has influenced these highs and lows over the last 65 years. In offering recommendations on managing successful cross-sector collaborations, he states,

They (collaboration partners) also need to understand each other’s strategic culture, as well as the cultural make-up of the societies or the nation with which such collaborative effort is undertaken.⁴

Proposition 21: Competing institutional logics are likely within cross-sector collaborations and may significantly influence the extent to which collaborations can agree on essential elements of process and structure as well as outcomes. Competing logics must be managed effectively.

Singh extends this proposition beyond the management of competing institutional logics within a national ecosystem of organizations. The successful global leader must be aware and sensitive to these sector differences in nations with whom they collaborate. On this matter, he states,

Strategic leaders will also face the challenge of ‘taking stock’ of and understanding the ‘work culture’ and bureaucratic quagmires of participants with whom the collaboration is sought. We must comprehend the way each nation does work in various fields, be it official, governmental, business or even nonprofit undertakings.⁵

Proposition 22: Cross-sector collaborations are most likely to create public value if they build on individuals’ and organizations’ self-interests along each sector’s characteristic strengths, while finding ways to minimize, overcome, or compensate for each sector’s characteristic weaknesses.

The proposition offered by Bryson, Crosby, and Stone is supported by Singh. With regard to the relationship between individual and collective benefit generated by collaborative, Singh states,

A cross-sector collaborative process needs a great amount of ‘unity of effort’ and an understanding by all participants that the solutions sought must be factored into the ‘win-win’ quadrant for all nations involved.⁶

Table 1.1. Propositions about Cross-Sector Collaboration Relevant to Strategic Leadership. (cont.)

ENDNOTES - SECTION 2 INTRODUCTION

1. J. McCausland, "Preparing for the Future: Brcko, Kabul, Baghdad, and Beyond," Chap. 5 of this book.

2. V. Singh, "Strategic Cross-Sector Collaboration: The United States and India," Chap. 6 of this book.

3. McCausland.

4. Singh.

5. *Ibid.*

6. *Ibid.*

CHAPTER 5

PREPARING FOR THE FUTURE: BRCKO, KABUL, BAGHDAD, AND BEYOND

Jeffrey D. McCausland

INTRODUCTION

As we move into the future, it would appear that the U.S. military, and its Army in particular, must accept the reality of persistent conflicts with terrorist groups, failed states, and growing asymmetric threats to the security of the nation. Still new challenges loom on the horizon. They will require more innovative thinking to confront emerging problems around the globe that are brought about by climate change, demographic trends, energy needs, water shortages, etc., which will serve as sources of instability and conflict in many places. They will also require the Army to work across domains with elements of the public and private sector to deal with these challenges.

The Barack Obama administration acknowledged this in the conclusions to the most recent *National Security Strategy*. The administration argued that, while it must seek to “leverage capabilities” across the government to deal with these challenges, “collaboration across the government and with our partners at the state, local, and tribal levels of government, in industry, and abroad – must guide our actions.”¹

Obviously, the development of better cross-sector ties will affect all of the military services – Army, Navy, Air Force, and Marine Corps. The leader of each must not only prepare for immediate challenges, but also concentrate on what is the most important thing the

leader of any organization must do—develop those who will follow them. These “future” leaders must be as qualified or more qualified than those they replace. Nonetheless, this analysis will focus on the American Army as the most fundamental of all the military services with respect to the nation’s attitude toward civil-military relations, commitment abroad, and the breath of potential future missions (peacekeeping, humanitarian assistance, nation-building, counterterrorism, counterinsurgency, major conventional war, cyber conflicts, and so forth.)

THE EVOLVING STRATEGIC LANDSCAPE

Three cities—Brcko, Baghdad, and Kabul—characterize in many ways the complexity of the international security environment during the past 20 years. They further illustrate the variety and evolution of “conflicts” that have challenged the U.S. military for the past 2 decades.

Brcko, in northern Bosnia, was both a focal point for the ethnic conflict that embroiled the Balkans in the aftermath of the Cold War as well as an important part of the peacekeeping and stability operations the U.S. military was called upon to conduct in concert with its NATO allies.

Kabul, of course, refers to the war in Afghanistan, which is now the longest conflict in American history. Clearly, the attention of the entire nation shifted dramatically following the terrorist attacks on September 11, 2001 (9/11). In the aftermath of this attack, the United States conducted what seemed at the time to be a successful campaign in Afghanistan against al-Qaeda and the Taliban. Many believed this effort in 2001-02 ushered in a new type of warfare that com-

bined precision airstrikes, special operations forces on the ground, and assistance to local groups (in this case the Northern Alliance). In the years that followed, this conflict has evolved. It now includes but is not limited to a counterinsurgency effort against the Taliban, counterterrorism operations against al-Qaeda, nation-building, counternarcotics efforts, and training of local Afghan forces/police.

Finally, Baghdad refers to the 2003 invasion of Iraq by American forces supported by allies. Over a period of a few weeks, coalition forces conducted a large-scale conventional campaign against the Iraqi Army. Using heavy forces as well as “fire and maneuver” reminiscent of the Gulf War in 1991, the United States and its allies overwhelmed Iraqi forces and captured the Iraqi capital of Baghdad. For a few brief weeks, America “basked” in its victory. But the conflict mutated over time and consumed the focus of the U.S. military. One can argue that during the nearly 9-year occupation of Iraq, the United States fought numerous “wars” and opponents. These include an initial conventional conflict against Iraq’s Army; a counterterrorism effort against al-Qaeda; counterinsurgency warfare focused on Sunni groups; conflicts with Shiia militia groups, particularly in Iraq’s major cities; and efforts against organized crime.

While those three cities may summarize operations abroad, they fail to portray fully other emerging requirements. The American military was called upon to conduct major humanitarian assistance and consequence management efforts in the United States following Hurricanes Katrina and Sandy. U.S. forces were deployed to Asia for tsunami relief in 2004, Pakistan in 2010 in the aftermath of flooding, and Japan following the Fukushima nuclear disaster in 2011. Some

have even suggested that these latter humanitarian efforts could be characterized as the most “successful” operations in the so-called “War on Terrorism.”

Those developments informed the ideas of then Secretary of Defense Robert Gates in a speech delivered in February 2011 at West Point. He observed:

We cannot know with absolute certainty what the future of warfare will hold, but we do know it will be exceedingly complex, unpredictable, and – as they say in the staff colleges – **unstructured**.²

Some might call this a gross understatement. With the end of the Iraq War and the impending conclusion of the conflict in Afghanistan, Army leaders are confronted by two clear realities.

First, the international environment will remain unsettled for probably the next 2 decades. The United States will be confronted by what former Army Chief of Staff George Casey characterized as a period of “persistent conflict.” More broadly, a recent study, *The Operational Environment through 2030*, defined the future security environment as “complex” and “characterized by a multitude of actors presenting a wide range of possible threats under conditions of uncertainty and chaos.” The Army must operate with coalition partners in an environment that includes our adversaries’ regular forces, irregulars, criminals, refugees, nongovernmental organizations (NGOs), and others. Each of these actors may have a separate agenda that is at odds with our objectives, those of other actors, and the political regime in that region. They will be armed with a broad range of conventional weapons as well as affordable technologies that can be quickly adapted to create unexpected and lethal weapons.

Social media will further enable small groups to mobilize people and resources in ways that can quickly constrain or disrupt U.S. efforts. Finally, this complex environment is not static but will continuously evolve as conditions change.³

Second, all of the military services, and perhaps the Army most of all, will be forced to confront the reality of constrained resources. The defense budget has already declined and will likely be reduced further. According to Dr. Andrew Krepinevich, Director of the Center for Strategic and Budgetary Analysis, this will require all elements of the Department of Defense (DoD) to work harder to “minimize the additional risks to national security.” This must further include an emphasis on strategy that is focused on how to best employ scarce resources. It must also stimulate much-needed organizational changes and innovations.⁴ Once again, this will be a particularly daunting challenge for the Army as it attempts to manage competing budgetary requirements across the Total Force: Active, Guard, and Reserves.

This combination of new challenges and dwindling resources should force a careful consideration of the impact that some emerging problems will have on the Army. Two examples may serve to illustrate. First, The American Security Project’s recent *Climate Security Report* examines carefully the significant challenge climate change presents to the global security system in the 21st century. It argues that this poses a clear and present danger to “the United States through its effects on our global allies as well as its direct effects on our agriculture, infrastructure, economy, and public health.” Climate change will affect food security, water security, access to energy, communicable diseases, and the potential for large-scale variations in weather

that will affect America's economic and physical security. These developments will likely be sources of conflict. The U.S. military has bases in all 50 states, as well as 40 countries around the world. These will likely be directly subjected to economic and physical damage due to climate change which will threaten their effectiveness.⁵

The Army has been, and will continue to be, involved heavily in "consequence management" following natural disasters, which will place additional stress on military readiness. Hurricane Sandy struck the northeastern portion of the United States in October 2012 and was the largest Atlantic hurricane on record. Water from this storm inundated several states, flooded lower Manhattan, and crippled infrastructure across the region. Eighty-two people were killed. In its aftermath, thousands of Army National Guard troops were mobilized to provide humanitarian relief.

While there is no doubt this was an appropriate mission for those forces, such events are predicted to be more likely in the future. They will have a negative operational impact on the Army by placing an additional burden that will sap military money, manpower, and other logistical resources that will already be reduced due to fiscal constraints. It is likely that the Army Corps of Engineers, which prides itself as the "Nation's environmental engineer," will become even more involved in both consequence management and prevention. Currently, the Corps of Engineers, through its districts across the United States, owns and operates 600 dams, operates or maintains 12,000 miles of commercial inland-navigation channels, oversees 926 inland as well as coastal ports, preserves wetlands that are crucial to protect coastal cities from the full effects of tropical storms, and owns or operates facilities responsible for 24 percent of U.S. hydropower.⁶

A second major example is associated with energy. There can be little argument that global petro-centric energy consumption causes effects that threaten American national security now and will do so in the future. Since 1990, the United States and China have increased oil consumption by over seven million barrels per day.⁷ This has been followed by significant increases in India and other emerging economies. Obviously, American force deployments in the Middle East are tied to ensuring a consistent flow of oil from this region.

In addition, the Army, as well as the U.S. military overall, is the world's largest consumer of energy. In 2011, DoD spent \$17.3 billion on energy, a 26 percent increase from the previous year. It is believed that in 2012, \$20 billion may have been spent for energy in Afghanistan alone.⁸ Many experts argue that Army leaders to date are not held accountable and do not feel a sense of responsibility for energy use. There are no metrics to track use or incentives to reduce energy consumption, particularly in combat theaters. Obviously, energy efficient design and construction, coupled with the use of renewable fuels (solar, wind, geothermal, hydroelectric, waste-to-energy biomass, etc.), could have an enormous impact, particularly at remote operating locations where the fully funded cost of a gallon of fuel often approaches \$500.⁹

It would appear that in the future, international stability will be challenged by an "unfavorable order" resulting from the actions of those states that seek to change the global environment in their favor. It will also be characterized by "disorder" that results from failed and failing states, which may frequently result from natural disasters connected to climate change, contests for water, energy shortages, and unfavorable demographic trends.

EVOLVING MISSIONS

In a book written in 2009, Joshua Ramo argued that the hard problems of the past are becoming even harder, the possibility of surprise is increasing, and we face “an avalanche of ceaseless change.”¹⁰ In short, Army leaders in the future will be confronted by so-called “wicked problems” that do not lend themselves to being solved, but rather to being “managed.”

The Army Strategic Planning Guidance 2013 does direct the Army to “embrace change.” It further endorses a transition from the counterinsurgency operations that have dominated the past decade to the creation of adaptable forces to meet the full spectrum of requirements. As noted in the January 2012 document released by the White House and DoD, *Sustaining U.S. Global Leadership: Priorities for 21st Century Defense*, this will require American armed forces to be prepared to conduct the following missions:¹¹

- Counterterrorism and Irregular Warfare
- Deter and Defeat Aggression
- Counter Weapons of Mass Destruction
- Defend the Homeland and Provide Support to Civil Authorities
- Project Power despite Anti-Access/Area Denial Challenges
- Operate Effectively in Cyberspace
- Operate Effectively in Space
- Maintain a Safe, Secure, and Effective Nuclear Deterrent
- Provide a Stabilizing Presence
- Stability and Counterinsurgency Operations

- Humanitarian Assistance, Disaster Relief, and other Operations

With these missions in mind, the Army has developed a revised vision:

The Army is globally responsive and regionally engaged; it is an indispensable partner and provider of a full range of capabilities to combatant commanders in a Joint, interagency, intergovernmental, and multinational environment. As part of the Joint Forces and as America's Army, in all that we offer, we guarantee the agility, versatility, and depth to Prevent, Shape, and Win.¹²

THE RELEVANCE OF CROSS-SECTOR COLLABORATION

The evolution of the strategic environment and of missions just noted would seem to necessitate more careful and regular coordination with the leaders in the public and private sector at all levels, in order to respond to new challenges and shape conditions to avoid future conflicts. Furthermore, as budgets plummet and energy costs rise, the Army will have to work more closely with elements of the public and private sector to develop a sound energy strategy. Both types of considerations suggest that the U.S. military and the government will need to engage in **cross-sector collaboration**.

Cross-sector collaboration between future Army leaders and those in the public and private sector may also be relevant to challenges Thomas Homer-Dixon described in his book, *The Ingenuity Gap*. That is, he postulated that humanity faces significant challenges

when dealing with complex problems such as conflict rooted in long-term energy needs. This was due to a growing gulf between the need for increasingly creative new ideas and their likely supply.¹³

The need for cross-sector collaboration may also present an additional problem for all branches of the military, particularly the Army. All of the competencies and developmental requirements that would be needed to shape and manage collaborative initiatives will also be needed in both the public and private sector. The Army will find itself in a competition with organizations from these other sectors to not only recruit but also retain highly talented men and women.

Finally, in thinking about how the Army might improve its capacity for engaging in cross-sector collaboration to meet challenges, one should keep in mind that the Army views itself as a “Total” Army that consists of the Active Force, the National Guard, and the Reserves. Consequently, the Army leadership must negotiate relationships among these three components, in terms of individual/organizational development, roles/missions, resources, and so forth. One Army Chief of Staff even remarked that this was “the toughest job I have.”

In that light, the operational experience of the National Guard and the Reserves during the past decade of war has made them into very different forces than they were in 2001. Prior to the onset of the “War on Terrorism,” they were largely viewed as “reserve” forces that would be called up for local requirements (riots, hurricanes, forest fires, etc.) or mobilized for a major conventional conflict, which explains why they were not mobilized for the Vietnam War. However, after the past decade of war, they are now “rotational forces” that have demonstrated their ability to mo-

bilize, deploy as units, conduct combat operations, return home, and demobilize. Indeed, the National Guard and Reserves may be particularly well suited to being participants in cross-sector collaboration.

HOW THE ARMY VIEWS ITSELF – A PROFESSION

The Army views itself as a “profession.” The traditional view of the Army profession was set forth in the classic treatments by Samuel Huntington (1957) and Morris Janowitz (1960). They emphasized the individual role of the members of the military professions and how they were socialized into that individual role.¹⁴ The earmarks of a profession in this time-honored view were:¹⁵

- **Authority** delegated by society to the profession in order for performance of a critical social function that society cannot perform by itself.
- **Unique Expertise** over a body of knowledge that requires extensive education and training.
- **Society’s Sanction** that creates the moral obligation for professional effectiveness.
- **Limited Autonomy** granted within the society’s political structure.
- **Professional Culture Distinct from Society** that embodies corporate governance, self-policing, and a regulative code of ethics.
- **Life-long Calling** in which intrinsic satisfactions of service strongly complement extrinsic ones.

These defining characteristics were reflected in the symbols and rituals of the profession. For example, the U.S. Government commissions and promotes its

Army officers by name both to control the membership of the profession and to certify the expertise of its members. Army officers, as moral agents of society, are granted a limited degree of autonomy to set standards and police the profession for the good of the client society.¹⁶

In contrast to this traditional view, in the late-1980s, Dr. Andrew Abbott, a leading sociologist at the University of Chicago, began to describe professions as “somewhat exclusive groups of individuals applying somewhat abstract knowledge to particular cases.”¹⁷ He postulated that the evolution of, and interrelationships among, professions were determined by how well a profession controlled its required knowledge and skills. “Practical skill grows out of an abstract system of knowledge, and control of the occupation lies in control of the abstractions that generate the practical techniques.”¹⁸ Abbott further argued that unless a knowledge system is governed by abstractions, it cannot redefine its problems and tasks, nor can it defend its “turf” from competitors or assume new tasks that present themselves. This abstract knowledge is what enables professions to survive in the competitive “system of professions” according to Abbott. The knowledge system and its attendant degree of abstraction “are the ultimate currency of competition between professions.”¹⁹ Abbott posited that the key variable for explaining the rise and fall of various professions over time is “the power of the professions’ knowledge systems, their abstracting ability to define old problems in new ways.”²⁰ In other words, unless the leaders of the profession tend to the profession’s body of expert knowledge and its effective application to new situations and tasks by the members of the profession, they run the risk of competing poorly and declining in standing or legitimacy in the eyes of their client.

Over time, the Army's doctrinal writings have come to reflect the insights of Abbott's model. Instead of focusing on the individual, they now focus more on the military profession itself and the system of professions in which the Army exists and competes.²¹ The defining characteristics of this concept of professions are:

- **Unique Expertise** based on a body of abstract knowledge that can be adapted and applied to various situations.
- **Jurisdiction** that defines those situations and conditions where the application of the profession's expertise is legitimate in the eyes of the client and is established through effective application of the Army's expertise and negotiation between the Army profession and the civilian leaders of the society it serves.
- **Legitimacy** as the foundation of jurisdiction, which arises from legal, organizational, or social mechanisms; and which directs clients to this particular profession for the "treatment" or services that they believe the profession offers.
- **Competition among Professions and within a System of Professions** in which they compete for jurisdiction, legitimacy, members, and resources with other professions and non-professional organizations.
- **Professional Death** for professions that fail to compete effectively or become overly bureaucratized. Such professions may very well "die," losing their status as a profession.

HOW THE ARMY DEVELOPS

The Army traditionally has focused on three things when considering the development of future leaders and organizations: operational experience, institutional learning, and self-education.²² This analysis has to be coupled with an accurate assessment of the current and future security environment. Some might argue that the Army has shown itself to be a “learning organization” from its recent operational experience in Afghanistan and Iraq. As previously discussed, it moved from a largely special operations mission in Afghanistan to a conventional invasion of Iraq followed by both counterinsurgency and counterterrorism operations in both countries. Ironically, the American military had paid little attention to these forms of conflict since its departure from Vietnam in the early-1970s, enabling critics to suggest that these changes occurred far too slowly and were often forced on the Army leadership by either civilian leadership or “insurgents” within its own ranks.²³

As we move toward the future, however, this begs a larger question. Will the Army determine that its recent operational experiences are relevant for the future or discard them and return to its traditional focus on major conventional warfare? One can argue that in 1973, the American Army was the finest counterinsurgency force on the planet. In a few short years, however, it rejected this role. This resulted not only in an end to a serious discussion of this form of warfare, but also to a corresponding dismissal of “experts” from its ranks as the Army got smaller, ended the draft, and returned its attention to the threat posed by the Soviet Union. Many might argue that it did the same with peacekeeping operations in the aftermath of deployments to Bosnia and Kosovo.

The Army's Educational Institutions.

Professions demand a precise system of higher education. This system must allow its professionals to master, usually in ascending stages, the appropriate body of abstract knowledge and the techniques for its application. Such an education system must also evolve as requirements of the profession grow and improved techniques are adopted.

These competencies will place increased demands on the Army as a profession, as the future “abstract body of knowledge” continues to change. It will further place a burden on the educational institutions that are the foundation for officer professional military education (PME) such as the war colleges, staff colleges, and military academies. Leaders at these institutions must deal with the tension between “training” officers to be technically competent and “educating” them to be able to think conceptually and apply sound judgment. This will require a rebalancing over time from a competency-based training approach to an educative approach that involves cognitive learning. Leaders must accomplish this rebalancing effort even as they retain the immediate relevance to the Army of the curriculum while at the same time establishing an ethos for self-development in the officer corps. Current leaders should encourage future leaders to acknowledge and embrace the need for lifetime learning throughout their military career.

The Army must further develop future educational programs at those educational institutions that do not emphasize “technological solutions” to complex problems. As Barbara Tuchman warned, “war is not a big engineering project,”²⁴ and technology is often a “two-

edged sword." Our ability to acquire more and more information from a variety of platforms and sources may over time discourage risk taking and hamper initiative. The development of future information networks that more closely link leaders at all levels may push tactical choices up to senior decisionmakers if not carefully managed.

The study of war at those institutions must also consider a study produced in June 2012 by the Joint Staff entitled *Decade of War – Enduring Lessons from the Past Decade of Operations*. The report is described as the "Battle for the Narrative." The report acknowledged that in the wars in both Iraq and Afghanistan, American forces were slow to "recognize the importance of information" in achieving goals at all levels.²⁵ But this is not unique to these conflicts, and actually suggests a broader change in the nature of warfare. General Rupert Smith noted in his book, *The Utility of Force*, that the media has now become crucially important to military commanders in modern warfare for "attaining the political objective of winning the will of the people." Smith further observed that this medium "connects the people, government, and the army, the three sides of the Clausewitzian trinity."²⁶ As a result, understanding and leveraging strategic information has now risen to the same level of importance in modern warfare as understanding the enemy or analyzing the terrain.

Finally, the Army's educational institutions must confront the challenge of "learning lessons." This should force a careful consideration of two questions: First, what "transcendent" experiences from the recent operational environment in Iraq and Afghanistan should be incorporated in future curriculum? Second, what lessons are transitory or unique to those specific

conflicts and should thus be discarded? Indeed, David Petraeus, then a young Army major, described this second requirement in a 1986 article in *Parameters* that examined the American Army's experience in Vietnam. Petraeus advised that while the Vietnam War did have much to teach future Army leaders, those lessons had to be "used with discretion and should not be pushed too far."²⁷ Clearly, the Army's educational institutions must avoid preparing officers for the "last war" or as one senior officer lamented "preparing for the last war it liked!"

Individual Development.

The imperatives of the future dictate a need to develop Army leaders who can operate in an uncertain environment and maintain a high level of flexibility; and who can question existing paradigms, accept risk, and foster cooperation with other agencies and organizations in both the public and private sector. The *Decade of War* report not only underscored those requirements for future Army leaders²⁸ but also tied those requirements to the need for leader self-development.

Several individual competencies would appear to be critically important. A strong sense of **self-discipline** coupled with **willpower** would be at the top of the list. Self-discipline may be framed to a large degree by the Army's identification as a "profession." But Barbara Tuchman described **will** as the *sine qua non* of military action. She cited Hannibal crossing the Alps, George Washington at Valley Forge, or General Stilwell during World War II in Burma as classic examples where willpower may have been the difference between defeat and victory.²⁹

Clearly, the chaotic nature of the future security environment demands leaders with **intelligence**, **sound judgment**, and **initiative**. It is likely true that both intelligence and judgment can be improved through both institutional and individual study, assuming the Army is able to attract and retain “the best and the brightest” in the future. **Initiative**, however, is much more difficult to nurture. It is based in the ability to originate new ideas or methods and to both think and act without direction from above. Individual initiative is closely tied to an organization’s overall ability to innovate.

General of the Army Omar Bradley stressed in remarks at the U.S. Army War College in 1971 that a leader must have good **interpersonal** skills and possess “human understanding and consideration for others.” Future Army leaders must combine this with **self-confidence** in themselves, their unit, and their subordinates. In his speech, Bradley recounted how critical this was to him as the Army began the invasion of Normandy in June 1944.³⁰

Tuchman further stresses the need for **cultural awareness**, particularly with respect to possessing both “knowledge of the enemy” as well as the overall environment. Sadly, a lack of cultural understanding has bedeviled the U.S. military for many decades. Tuchman cited the war in Vietnam as a classic example of our inability to achieve cultural understanding.³¹ Some contemporary authors would likely suggest that we lacked cultural awareness at the strategic level prior to the invasion of both Iraq and Afghanistan: the *Decade of War* study would substantiate this analysis.³² A recent report has also cited a lack of cultural awareness as a major contributing factor in the so-called “green-on-blue” attacks by Afghan soldiers against American and allied troops. The study concluded by

noting with respect to these attacks that “much of this problem is of our own making” due to lack of understanding and respect for the Afghan culture.³³

Future Army leaders must also be able to think **conceptually** while remaining **technically** proficient. But proficiency in future may mean that an officer is less a specialist and more a generalist who understands enough to manage and lead complex organizations in a dynamic environment. It is important to keep in mind the admonition of Thomas Watson, former head of IBM, who once said that the genius of an executive was his or her ability to deal successfully with matters they do not fully understand.

The Army as a Learning Organization.

Over the past 20 years, the military profession attempted to maintain its expertise and capabilities in traditional warfighting. At the same time, it sought to develop the expertise, equipment, and other resources to conduct major counterinsurgency and counterterrorism campaigns in both Afghanistan and Iraq. The need for the Army to be a learning organization is further underscored by the future international security environment and American fiscal realities. With the conclusion of the Iraq War in 2011 and the impending end of major American troop presence in Afghanistan by the end of 2014, policymakers must grapple with the following question: “Is the past a prologue?”

Tim Kane, in his book, *Bleeding Talent*, argued that today’s military is “a leadership factory” that suppresses entrepreneurs, which has resulted in a hemorrhaging of talent. Gates echoed this in his remarks at West Point in 2011, when he told the assembled cadets and officers that his greatest worry was:

[H]ow can the Army break-up the institutional concrete, its bureaucratic rigidity in its assignments and promotion processes, in order to retain, challenge, and inspire its best, brightest and most battle-tested young officers to lead the service in future?³⁴

Gates provided a cautionary tale in this regard. He observed that, during the past decade, junior Army officers had been given extraordinary opportunities to innovate, accept risks, and be accountable for their actions. Sadly, these attributes have not been rewarded in “rear-echelon headquarters and stateside bureaucracies.” Despite the fact that these young Army officers frequently had been responsible for countless lives and millions of dollars in equipment, they could find themselves in the future “reformatting PowerPoint slides, preparing quarterly training briefs, or assigned an ever expanding array of clerical duties.”³⁵

Some have suggested that the Army may be stuck with an Industrial Age personnel system that does not place value on individuals and talent, particularly during a period of likely force reductions. As Lieutenant General (Retired) Dave Barno, former West Point commandant and commander of American forces in Afghanistan, observed, “in a smaller professional force competing for talent with the Googles of the world” the Army must completely reform its personnel management system as the “first priority of today’s senior military leaders.”³⁶

In a 1962 speech at West Point, General Douglas MacArthur observed that the mission of the Army is “to fight and win the Nation’s wars.”³⁷ Generally speaking, that observation still holds. It has thus led some observers to argue that the Army must push leaders now and in the future to embrace a warrior

ethos, where success or failure is solely measured on the battlefield. Others might observe that the Army's organizational culture and professional focus also reflect MacArthur's statement. For example, during the 1990s, the Army referenced to peacekeeping or humanitarian assistance as "operations other than war" (OOTW), which was interpreted by many as suggesting these were at best secondary missions.

Nevertheless, while "victory" in any future conflict will remain paramount, it will not likely be defined in the classical terms, including the overt surrender of an opponent as a final gesture. Furthermore, the Army's articulated professional ethic, which, as noted earlier, was influenced by the work of Abbott, acknowledges that the Army is in service to its client: the American people. Consequently, future military operations like Somalia, Haiti, tsunami relief, and Hurricanes Katrina and Sandy, will be critically important; and this, coupled with changes to the international security environment, may suggest important organizational and cultural changes.

In 2008, Gates observed that, from the standpoint of future American national security:

the most important assignments in an officer's military career may not necessarily be commanding US soldiers, but advising or mentoring the troops of other nations as they battle the forces of terror and instability within their borders.³⁸

While this was recognized by some as vital in the wars in Iraq and Afghanistan, other experts would argue it was regarded as secondary to combat operations and was often under-resourced. This was particularly true in Afghanistan where the United States really did not begin a concerted effort to train Afghan forces until 2008.

John Nagl, author of *Learning to Eat Soup with a Knife*, observed that the role of the military “adviser” will be critical to meeting future security challenges. He further argues that unless the Army “makes significant changes across its doctrine, organization, training, and force structure” with respect to institutionalizing the role of advisory forces, it “will continue to be poorly prepared for the most likely security challenges of the 21st century.”³⁹

Nagl does acknowledge that the situation improved somewhat in 2009 when the Army decided to modify standard combat brigades to create “advisory and assistance brigades and produced a field manual on security force assistance.” He has also argued that more fundamental cultural change needs to be made to the Army as an institution, to create a permanent 20,000 member Advisory Corps, and to seek further changes that will ensure personnel who are assigned to those units are properly rewarded in terms of promotions, selection for education, etc.⁴⁰ Such ideas are important and should also be addressed with an eye toward the Total Army – Active Force, National Guard, and Reserves. There may be ways to better incorporate National Guard and Reserve units into the Advisory Corps. Consideration could also be given to creating a cadre of active duty officers and noncommissioned officers for National Guard or Reserve units with the dual mission of training American forces or being called upon to conduct security assistance abroad.

Such an effort to enhance the American Army’s ability to provide advice and assistance could be quite important, as the United States creates policies for states emerging from periods of disorder (Tunisia, Libya, and potentially Syria). Those nations will need

the ability to resurrect or create new military forces that can operate in a democratic society, which will be essential to long-term stability. Furthermore, this approach would be consistent with the stated desire for American forces to have a “smaller footprint” abroad, one that is both less expensive and less likely to cause friction with the local population. In this regard, it is probably important to keep in mind that the large overseas deployment of American forces in the decades since World War II is a historical anomaly for the United States and any nation.⁴¹

Still certain caveats are in order. Our experiences in Vietnam, Iraq, and Afghanistan suggest that it is relatively easy to “teach others how to fight.” The more difficult and fundamentally more important question is “Who and what are the forces we develop fighting for?” The end state is not to create military forces, but rather to ensure long-term stability, which requires a “whole of nation” effort that the United States found exceedingly difficult to accomplish in Brcko, Kabul, and Baghdad.

Establishing the “rule of law” is fundamental to preventing conflict, consequence management, and the recovery of “failed” states. The American Army was reminded of this again in Mali. Army Special Forces had trained Malian forces. Malian Army Captain Amadou Sanogo had completed his basic officer training in the United States and participated in a number of American-funded international military education programs. This did not prevent him from leading an insurrection against the Mali political leadership in March 2012.⁴²

The “whole of nation” approach demands greater cross-sector collaboration, as we have experienced in both Iraq and Afghanistan. For example, this involved creating combat support and service support units

to provide logistical support for combat forces, and training police and other personnel assigned to the Ministries of Defense and Interior. These latter efforts required numerous representatives from the public and private sector—contractors, educators (to teach basic literacy), current and former police officers, representatives from Department of Justice and other agencies, and so forth.

Finally, the creation of the 20,000 man Advisory Corps suggested by Nagl must confront problems of cost and culture. In a period of budgetary austerity, the Army is very unlikely to convince any administration or Congress to increase its budget for that initiative: that would only occur if the Army were to consider the movement of a significant percentage of its heavy mechanized united forces from the Active Force to the National Guard and Reserve components.

Nevertheless, such an adjustment would seem consistent with an assessment of the future security environment. That is, recent studies have suggested there are a limited number of potential requirements for the deployment of a significant heavy force. Consequently, the Army might accept a certain amount of “risk,” based on the assumption that if these scenarios should occur, then the nation would have sufficient warning in order to mobilize the National Guard and Reserve forces. Still such a decision would necessitate a change in the Army’s “organizational culture,” which has largely been focused on heavy conventional forces since the end of World War II.

CONCLUSIONS

In many ways, the Army is at a historical “inflection point” in the aftermath of the Iraq War and the

impending end of the conflict in Afghanistan. The emerging security environment will be characterized by a complex array of threats, challenges, and opportunities. Army forces will be called upon to operate under a broad range of conditions. Simultaneously, innovation and technological developments will reshape the environment, which may over time multiply and intensify the effect that even relatively minor actors can achieve.⁴³ As a result, the need for closer cross-sector collaboration between leaders in the military and the public and private sectors will only grow. Furthermore, there will be an accompanying critical demand to cultivate those who will eventually assume the highest positions of responsibility.⁴⁴

This is nothing new. John W. Gardner served in a number of key leadership roles in the public, private, and nonprofit sector throughout a long and illustrious career. He served in the Marine Corps during World War II, and during the Johnson administration, he was Secretary of Health, Education, and Welfare. He later became the President of the Carnegie Corporation in New York and was the founder of two influential organizations – Common Cause and Independent Sector. Finally, Gardner authored numerous books on leadership and created both the White House Fellowship and a fellowship program at Stanford University. In 1965, Gardner argued for greater cooperation across leadership domains as he worried that “fragmented leadership” meant no one was thinking about

the big questions that cut across specialties – the largest questions facing our society. Where are we headed? Where do we **want** to head? What are the major trends determining our future? What should we do about them?⁴⁵

As a former Army Chief of Staff once observed, “if you don’t like change . . . you will like irrelevance even less.” Change in individual development, organizations, and culture are inevitable if the Army is to meet the demands of the future. This will require careful consideration of key competencies for future Army leaders, and the need for its educational institutions to consider those as well as impending changes in the international security environment. The officer development and management system must become more agile, so that it can quickly identify those with unique backgrounds to meet emerging demands. This will require a greater holistic effort to examine the backgrounds of Active Force, National Guard, and Reserve officers to determine what specific skills they “bring to the table” upon commissioning.

The future also demands changes in organizational structure and culture. Laws must be changed that allow Army officers to move more quickly between the three parts of the Total Army. Serious consideration must be given to the establishment of advisory forces, while acknowledging the effect this will have on the Army’s budget and culture. The Army personnel system must also move from the “industrial to the information age.”

Clearly the future will demand “joint and combined operations” that will require Army forces to operate with sister services as well as allies. But it will also require a more robust understanding between Army leaders and those in the public and private sectors to confront a multitude of challenges. While the Army’s professional ethic will remain fundamental, this should not make future officers insular or unwilling to learn and cooperate outside their professional domain.

In 1964, Robert A. Lovett, the fourth Secretary of Defense and a man described as the “Cold War architect,” received the Thayer Award for leadership at West Point. In his remarks, Lovett counseled the cadets that while “knowledge is power,” “**insulated knowledge** fails to meet fully our needs in making public policy.” He concluded his remarks by telling those present that:

an expanding mind can deal with a world of expanding complexities . . . [and that broadening your horizons] will not diminish the value of your special military skills but will, on the contrary, enhance their validity and usefulness in those great Councils of Government where, as servants of the Republic, you will sit as keepers of the faith and guardians of the peace.⁴⁶

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CHAPTER 6

STRATEGIC CROSS-SECTOR COLLABORATION: THE UNITED STATES AND INDIA

Vijay Kumar Singh

If you want to go fast, go alone.

If you want to go far, go together.

Moreover, together, we can sometimes go both far and fast.

An Indian Proverb

CONCEPT

People who want to tackle tough social problems and achieve beneficial outcomes are beginning to understand that multiple sectors of a democratic society – business, nonprofits and philanthropies, the media, the community, and government – must collaborate to effectively deal with challenges. Thus, as described by Bryson, Crosby, and Stone, **cross-sector collaboration** is associated with forging responses to public problems by linking or sharing of information, resources, activities, and capabilities of organizations in two or more sectors to achieve jointly an outcome that could not be achieved by organizations in one sector separately. Such collaborations usually will involve a lead agency with a clear understanding and charter, so that effective institutional support can be provided for the desired outcome.

APPLICATION

The aim of this chapter is to explore the implications of the concept of cross-sector collaboration for the community of strategic leaders in the United States and India. We need to examine if we can apply this concept at the strategic level to attain better synergy in the relations and cooperation between the two countries. This becomes more important as the relations between the oldest democracy and the largest democracy have grown stronger and there is convergence of interests in many spheres. It is also important to underline the fact that the structures of present global equations demand better collaboration between the United States and India, which would be mutually beneficial to the furtherance of common interests and for the promotion of sustainable development.

U.S.-INDIA STRATEGIC RELATIONSHIP: CHANGING CONTEXT

The relations between the United States and India at times are best characterized by a Yo-Yo or a sine wave, with many lows and highs over the period of the past 65 years. In recent times, there appears to have been a realization that both democracies need to make a greater effort to enhance relations and cooperation in all fields. It is good to see these efforts are succeeding. In the present and foreseeable future, India has important stakes in the Asian region and should play a greater contributory role in global affairs.

Long considered a “strategic backwater” from Washington’s perspective, South Asia has emerged in the 21st century as increasingly vital to core U.S. foreign policy interests. India, the region’s dominant

actor with more than one billion citizens, is often characterized as a nascent major power and “natural partner” of the United States, one that many analysts view as a potential counterweight to China’s growing clout. Since 2002, the two countries have engaged in numerous combined military exercises. Since 2004, Washington and New Delhi have been pursuing a “strategic partnership” based on shared values such as democracy, pluralism, and rule of law. Numerous economic, security, and global initiatives—including plans for civilian nuclear cooperation—are underway. That last initiative, launched by President George W. Bush in 2005 and finalized by the 110th Congress in 2008, reversed 3 decades of U.S. nonproliferation policy. Also in 2005, the United States and India signed a 10-year defense framework agreement that calls for expanding bilateral security cooperation. Furthermore, major U.S. arms sales to India are underway and more are anticipated.

Several factors have contributed to the improvement of Indian-American relations. One is the growth of trade and investment ties between the two countries. Another is the important role played by the highly educated and relatively wealthy Indian Diaspora community of more than two million in America’s high-tech corporations, as well as in other facets of American life, as reflected in the influence of Congress’s largest country-specific caucus. The most important factor contributing to the improvement in Indian-American relations, however, lies in the geopolitical realm.

During the Cold War in particular, Washington and New Delhi felt threatened by each other’s alliance partners. America’s main security concern was the Soviet Union, and so Washington sought as many allies

as possible against it. Pakistan became an American ally in the 1950s. The Sino-Soviet rift that developed in the 1950s and became worse in the 1960s resulted in the emergence of Sino-American cooperation in the early-1970s. By contrast, Pakistan has been a principal security concern for India ever since both became independent, and China has been one ever since the 1962 Sino-Indian border war. Thus, India regarded the Soviet Union as an ally against two other rivals in its neighborhood, both of which were cooperating with the United States.

The end of the Cold War and the collapse of the Soviet Union implied that Moscow was no longer a threat to Washington and correspondingly no longer an influential ally for New Delhi. Since that time, the United States has come to share India's concerns about China being a potential threat. Post-September 11, 2001 (9/11), the United States and India have also shared a threat from radical Islamists.

Meanwhile, India has never been happy about America's close collaboration with Pakistan. Pakistan helped facilitate the U.S.-led intervention in Afghanistan and at the same time extended support to the Taliban and other radical Islamists that America and its allies had been fighting. That displeasure contributed to U.S. efforts to accommodate concerns of India about Pakistan.

As far as China is concerned, although the countries of South and Southeast Asia cannot individually withstand the growing domination of the rising power, if assisted by the United States, they collectively can create the necessary counter balance. In turn, that development could prod China to proportionately contribute to international security obligations.

THE U.S.-INDIA STRATEGIC RELATIONSHIP: SHARED INTERESTS, POSSIBLE COOPERATION

The strategic relationship between the two countries provides the context for cross-sector collaboration involving agents from various sectors. There are many areas for potential cooperation between the United States and India in the social and economic domains, which have already been witness to serious engagement from both sides. In contrast, the military and defense arena has seen rather lukewarm cooperation, which could be attributed to the hangover of the Cold War era and the dynamics of relations between the United States, Pakistan, and China. In the prevailing global environment, the vistas for greater cooperation are opening up, and both nations can explore various fields to enhance or upgrade their relations.

U.S.-China Relations.

One issue that confronts all parties in the global system is the rise of China. After 2 decades of economic reforms and rapid growth, China has pulled millions out of poverty and created a new middle class. Looking ahead, it is expected to overtake the United States as the world's largest economy within a decade. Given that the economy has been largely controlled by the government and fuelled by state-owned enterprises, China offers a distinctive model of political economy to the world, which has contributed to its international influence.

The re-election of Obama as the President of the United States, coupled with the emergence of the new government in China, has global implications. As the

two nations share worldwide influence, they must figure out how to work with and not against each other. However, tensions between the two remain. They are separated by huge gaps in political systems and cultural values, which can be a major cause of conflict. U.S. politicians are used to speaking from a position of dominance; but such an approach may not work with today's more assertive and nationalistic China. Indeed, China was a hot topic in the U.S. presidential campaign, mentioned 53 times in the debates. Both President Barack Obama and former Massachusetts Governor Mitt Romney took a tough stance and proposed to push China to "play by the rules." Regardless of that rhetoric, the United States and China are highly interdependent, a condition which robs parties of the luxury of choice about interaction.

While both governments still deeply distrust each other, they are each struggling to deal with the new power structure in the international system—the "big picture" that is relevant to the type, manner, and intensity of cooperation that will be forged. Those factors prompt some important questions. Are the two countries friends or foes? Is the United States ready to cope with an increasingly powerful, confident, and yet non-democratic China? How does the United States respond when China behaves clumsily in international affairs, as evidenced in China's forcefulness in the recent Senkaku dispute and South China Sea controversy? Thus, the world is monitoring the leadership transition in the world's two largest economies. To complicate matters, since the Obama administration's implementation of its "strategic rebalancing" toward Asia in 2010, the U.S. Government has failed to convince China and many other countries in Asia that containing China's growing power is not its primary purpose.

India-China-Pakistan.

For its part, India, like many other countries of Asia, does not want to be seen as being part of an American-led, “China-containment” strategy. (Of course, in this day and age, containment will not work, and Asian countries do not want to be drawn into a great power conflict.) Nevertheless, India is keeping a wary eye on China’s rapid global ascent, for India must include the potential threat of conflict with China in its security paradigm and projections. Unresolved issues that resulted in the Sino-Indian War of 1962 have begun to heat up in recent years.

Meanwhile, China has also been paying increasing attention to India and South Asia. China has hardened its position on its border disputes with India, even as it has increased its assertiveness in the East and South China Seas. The People’s Liberation Army (PLA) has strengthened its forces in the Lanzhou and Chengdu Military Regions bordering India. Furthermore, China’s long-standing close relations and military support for Pakistan lead India to view both the increased Chinese presence in the northern area of Pakistan-occupied Kashmir and the expanded civil nuclear cooperation between Beijing and Islamabad as particularly worrisome.

Indian policymakers have scrambled to develop effective policies to cope with an increasingly powerful and assertive China. Indian military strategists believe they must create sufficient deterrent capabilities against the country, and as well must plan for the possibility of a two-front war with Pakistan and China. Thus, India has initiated an ambitious military modernization program that will build land, air, na-

val, and missile capabilities. Simultaneously, political leaders actively seek to avoid conflict, and thus have engaged in dialogue with delegates from both countries to avoid the dire two-front war scenario.

The drivers of the current Indian-Chinese rivalry are varied and complex. While China's economy is several times larger than India's and its conventional military capabilities today outstrip India's by almost any comparison, Beijing has begun to take notice of India's growing global, political, and economic stature, as well as broad-based American support for expanding strategic ties with India. The efforts of both India and China to expand trade and economic relations with countries that seemingly are in the other's traditional sphere of influence will add to the intensity of the rivalry. The rivalry is also influenced by the rapidly expanding resource requirements of both countries, whose economies continue to grow steadily despite the global economic downturn: competition over energy and water resources will increasingly shape the contours of their relationship.

U.S.-India Relations.

The United States must keep a watchful eye on the trends and fault lines in Sino-Indian relations and factor these into its overall strategies in the broader Asia region. The United States has the option of pursuing robust strategic and military engagements with India, so as to encourage a stable balance of power in Asia, which will prevent China from dominating the region and surrounding seas. A strong India that is able to hold its own against China is in the U.S. interest. U.S. Secretary of State Hillary Clinton's visit to India for Strategic Dialogue talks provided an opportunity to

comprehend India's take on China and to discuss new diplomatic and security initiatives that would contribute to maintaining a stable balance of power in Asia.

In light of its own strategic interests, the United States needs to demonstrate support for Indian military modernization and enhanced U.S.-India defense ties. The military cooperation between India and the United States has been steadily growing. Although India selected France over the United States in the huge Medium Multi-Role Combat Aircraft (MMRCA) deal, India's overall purchases of military hardware from the United States are growing. The two sides finalized a deal last year worth nearly \$4 billion, in which the United States will provide India with enough C-17 aircraft to give India the second-largest C-17 fleet in the world. There are also other military hardware deals in the pipeline, like the one associated with ultra light howitzers. As India's military modernization program progresses, the U.S. share in provision is likely to increase.

Meanwhile, there has also been some talk in certain quarters in India which favors a go-slow approach to U.S.-India cooperation in order to avoid deterioration of relations with China. However, China's posturing on its border disputes with India presents few options to it other than to play all the strategic cards at its disposal, which includes strengthening and expanding strategic cooperation with the United States. India will not be too far off the mark if it surmises that Chinese alarms over "containment" may be part of stratagem to prevent closer Indian cooperation with likeminded nations, including the United States.

Looking ahead, the partnership between the United States and India is unlikely to develop into an "alliance," given India's core foreign policy goal

of maintaining its “strategic autonomy.” However a more robust and mutually beneficial partnership that acknowledges India’s growing political, economic, and military strength would create a relationship that would assist in moderating China’s ambitions to settle the border disputes by use of force in its favor. The United States and India would seem to share a broad strategic interest in creating limits on China’s geopolitical horizons. Both nations could enhance cooperation and collaboration to support mutually reinforcing goals without ever becoming “allies” in the traditional sense. As a global leader, the United States has the moral responsibility to help promote democracy, human rights, and rule of law in the world. With China in transition, the United States has a great opportunity to help shape the future of a nation with which it will be politically and economically intertwined for generations to come.

A Growing Need for Cross-Sector Collaboration.

The complexity of issues just described invites consideration of the prospects for cross-sector collaboration in international affairs. International evidence shows that cooperation and collaboration are increasingly being carried out in organizational forms built around cross-sector (government, business, nonprofit, academic, etc.) and transdisciplinary teams with well-defined national, social, economic, or environmental objectives. As a result, new and unfamiliar forms of organizational arrangements are emerging within various spheres. These collaborative efforts to achieve cooperation to attain solutions to complex problems spanning more than one discipline have on occasion been termed hybrid efforts. At the same time, lead-

ership and collaboration are integral to 21st century governance and management. However, despite growing literature, understanding about leadership for collaboration is hampered by a lack of specificity.

Increasingly, the problems that countries and communities need to resolve are complex, requiring contributions of people from diverse backgrounds and disciplines. Despite the challenges involved in forging and executing such collaborative efforts, partnerships, collaborations, and coalitions can be powerful tools for mobilizing individuals to action, bringing issues and interests to prominence, and developing robust policies. These associations are also an effective means of providing focus, so that resources are not wasted, and efforts are not needlessly duplicated.

Cross-sector collaboration is becoming increasingly relevant to the U.S.-India relationship. Cross-sector collaborations may provide a way to “fix bugs” and craft concrete methodologies for enhancing cooperation in all fields of the relational calculus. Meanwhile, cross-sector collaboration is also becoming increasingly relevant for China. While economic reforms initiated by China’s leadership have resulted in 2 decades of unparalleled growth, rapid economic growth has also brought multiple challenges that the public sector alone cannot adequately address. That is, issues such as inadequate infrastructure, environmental degradation, income disparity, and limited human rights cannot be efficiently addressed without cross-sector collaboration among agents within China and from other parts of the globe.

In fact, collaboration across sectors began to surface in China at the beginning of this millennium. One such initiative is the Guangdong Environmental Partnership Program, launched in 2007 by the Institute for

Sustainable Communities, an organization focused on helping communities around the world tackle environmental, economic, and social challenges. The Partnership was created to reduce greenhouse gas emissions, improve public health, and increase environmental accountability in the Guangdong Province of China, which is commonly referred to as the “factory of the world.” The Partnership receives financial support from the U.S. Agency for International Development (USAID) through a congressional earmark. Nevertheless, the Chinese government is still somewhat reluctant to engage in cross-sector partnerships on a large scale. Thus, it will be interesting to see how Xi Jinping, the new President and General Secretary of the Communist Party of China, engages China’s civil society to help promote continued economic and social stability.

CROSS SECTOR COLLABORATION: THE CHALLENGES FOR STRATEGIC LEADERS

Cross-sector partnerships do not just happen, but instead have to be assiduously built. The key staff involved must be compatible and must understand the “why” and “how” of the effort. They need a “getting acquainted” period and process to ascertain compatibility and to develop positive relationships. They also need to understand each other’s strategic culture, as well as the cultural make-up of the societies in the nation with which such collaborative effort is undertaken. Bad personal chemistry can quickly kill any alliance or coalition: History has many examples of such events. Available evidence also points out that beyond traditional measures of effective leadership such as involvement, consensus building, and strategic implementation, there also exists a need for

emotional bonding or “connectivity” that key members make among themselves, their counterparts, and the mission tasked to them. This personal connectivity becomes invaluable in developing the levels of trust needed to proceed with the mission.

National security has an all-encompassing connotation and thus transcends the narrow postulates that only talk of security and matters in the military domain. A nation has to cater not only to narrowly defined external and internal security concerns, but also to economic growth, preservation of the nation’s core values, environmental issues that endanger the nation, energy security, and the creation of a suitable regional and international order that allows the nation to grow peacefully. This has to be comprehended by strategic leaders so that overarching terms of reference can be identified to provide strategic guidance to all who are selected to form the core group. This is necessary, as it helps ensure that the collaboration or coalition is in tune with the security interests of the country. This is a challenge, as any nation’s security interests can have profound effect on the way cross-sector collaboration is perceived and progress is undertaken. Additionally, the leaders from the nations or institutions engaging in cross-sector collaboration must remain aware of one another’s compulsions at the macro level so that they design the parameters of work in such a manner that fences between parties are avoided.

Strategic leaders will also face the challenge of “taking stock of” and understanding the “work culture” and bureaucratic quagmires of participants with whom the collaboration is sought. We must comprehend the way each nation does work in various fields, be it official, governmental, business, or even non-profit undertakings. In the absence of this understanding,

deliberations may come to a dead-end in a fairly early time frame without yielding any results. What is even more damaging is the fact that this may also create impediments for any future collaborative efforts. That negative outcome would assume greater significance where military-to-military dialogues are concerned or where the cross-sector collaboration team has military members seeking solutions to a larger, complicated problem.

In the context of the United States and India, this issue assumes great significance as the “civil control over the military” in a democratic setup translates differently in both nations. For example, while a U.S. military representative will usually lead the dialogue on peacekeeping operations, a civilian bureaucrat who will not be conversant with the military intricacies involved will typically represent the India contingent, which increases the probability that the outcome will not be satisfying to both teams.

A cross-sector collaborative process needs a great amount of “unity of effort” and an understanding by all participants that the solutions sought must be factored into the “win-win” quadrant for all nations involved. The strategic leaders involved must ensure that the strategy adopted is such that mission and values sought are appropriately aligned. There has to be an effort by all for value generation and achieving a “shared vision” so that all participants focus in the correct direction. Frederick Long and Matthew Arnold (*The Power of Environmental Partnerships*) have pointed out that there are three psychological impediments that often undermine the formation of alliances. These are listed as mistrust, the fear of loss of control by the leaders over the groups, and misunderstandings over motivation and intent of each partner. These

certainly have a profound effect on the group dynamics in cross-sector collaboration, and strategic leaders will do well if they understand these dynamics and factor them into their considerations, so that unity of effort will not be disrupted. The leaders must ensure that the communication channels between all the participants are always open and there is transparency in the working of various groups. Mistrust and misunderstandings must be tackled jointly by the entire team so that they do not impinge on deliberations and do not impede the collaboration process. Strategic leaders must constantly monitor the atmospherics of the collaborative process so that they can detect the aforementioned impediments.

Strategic leaders engaged in a collaborative process must keep abreast of technical developments in various fields. These developments have the potential to assist various stakeholders in ensuring that technology is leveraged for the betterment of cross-sector partnerships and alliances. The approach adopted by the leaders should focus on getting the best out of the participants and sustaining success over time. The focus must remain on desired results, otherwise the process and negotiations can meander endlessly without producing worthwhile outcomes.

The cross-sector process would involve representatives from various sectors working to find a solution to a complex problem or set of problems, implying thereby that tension and uncertainty is a natural by-product. Strategic leaders thus face the challenge of diversity management. They need to create a supporting culture to ensure that the process moves with positive energy. The leaders also must give due thought to possible disruptions and dissensions within the teams. The abilities to engage in timely intervention

and to create space for healing are also challenges that face the leaders. Leaders must ensure that suitable protocols are established to override such issues and create an affirmative growth environment for completion of the mission with a positive outcome.

CROSS-SECTOR COLLABORATION: UNITED STATES, INDIA, AND SOUTH ASIA

The logic for seeking and initiating cross-sector collaborations between India and the United States is illustrated in the following proposition, which has an “assumption – if – then” structure.

Assuming the interdependence between the United States and China, and China’s domination of South Asia,

If China’s strategy in South Asia clashes in part with the common interests of the United States and India, and

If neither of the two can address the concern alone,

Then, there is scope for collaboration between the United States and India, and areas of such cooperation need to be worked out to ensure that such collaboration results in mutual benefit.

In light of that proposition, the potential for the strategic collaboration between the United States and India can be evaluated by engaging in a three-part process.

- Attempt a strengths-weaknesses-opportunities-threats (SWOT) analysis of South Asia relative to China (see Exhibit 1).

- Deduce from the SWOT analysis South Asia's strategic **objectives** for managing China's rising influence in and possible domination of the region, and **ways** to achieve those objectives (see Exhibit 2).
- Specify sectors for collaboration between the United States and India to achieve the mutual interests in the strategic continuum (see Exhibit 3).

CONCLUSION

In recent years, India's foreign relations have undergone considerable change, particularly in the context of its deepening relationship with the United States. This bilateral relationship has evolved extensively since the Cold War, when relations were abysmal. One manifestation of deepening India-U.S. ties is an intensifying arms trade. American aerospace firms and other weapons makers are competing to provide billions of dollars worth of arms to India. Stronger India-U.S. ties have also created ample opportunities for maritime security cooperation. The improved relations have opened windows of opportunities to undertake cross-sector collaboration. In this chapter, we have discussed the concept and the possibilities of such cooperation. We have also looked at the relational calculus among India, the United States, and China to derive some ideas on what can trigger cross-sector collaboration between India and the United States.

However, there are many wrinkles that must be ironed out to ensure that engagements yield positive results. We discussed the need for the strategic leader community to ensure that the collaborative process

is not stalled due to impediments. We also discussed how it is in the interest of the United States to seek better bilateral engagement with India in the light of prevailing realities of global power structures. Ties between India and America have undertaken a strategic shift over the last couple of years. The United States also has a substantial interest in the stability of the Indian Ocean region as a whole, which will play an ever more important role in the global economy.

It emerged that Pakistan and China, the two countries that concern India the most, have large military agendas in place. As a result, India is increasingly turning to countries such as Israel and America to procure arms (Israel, in fact, has overtaken Russia as India's largest defense supplier), while also remaining close to long-time partner, France.

Managing perceptions and expectations will require a common strategic vision for the relationship that guides subsequent interactions and cooperation toward shared goals. In the coming decades, India will have to devote much attention to the creation and maintenance of an optimal India-China-U.S. triangle. It is also fair to assume that the American concern about China's emergence as a rival power, and China's keenness to ensure that India does not become an active member of a U.S.-led China containment policy, will ensure that a self-confident India will not be without diplomatic options.

All in all, India and the United States must reduce the trust deficit with China to ensure better understanding of each other's strategic intentions, so that policies are not based on the assumption that the worst-case scenario is a probable one. In such a context, cross-sector collaboration can be assumed to be both a necessary and desirable way for addressing the

vexing issues between nations. It has also emerged that such collaboration is not going to be easy; hence, shall we abort in fear of failure or strive regardless in hope of success? This is a question that should form the backdrop for all strategic leaders.

EXHIBIT 1

THE STRATEGIC RELATIONSHIP OF SOUTH ASIA WITH CHINA – STRENGTHS, WEAKNESSES, OPPORTUNITIES, AND THREATS (SWOT) ANALYSIS

Strengths of South Asia in terms of its ability to influence China:

- Facilitate flow of China's energy needs through sea lines of communication;
- Provide land communication from China to Indian Ocean ports;
- Offer markets and raw materials in South Asia, and through South Asia in West Asia and Africa;
- Ally with extra regional powers like the United States;
- Economically link South Asia with Association of Southeast Asian Nations (ASEAN);
- Lay regional energy pipelines for mutual benefit;
- Cooperate in anti-terrorism intelligence and operations in contiguous areas.

Weaknesses of South Asia with respect to influencing China:

- Weak infrastructure and poor investment climate;
- Unstable and weak democratic governments facing internal and external challenges;
- Negligible lateral intra-regional land and rail communication;
- Mutually unfriendly nuclear states;

- Unequal military capability with no interoperability;
- Ineffective regional grouping of South Asian Association for Regional Cooperation (SAARC) in comparison to ASEAN;
- Hotspots of religious fundamentalism, secessionism, and terrorism.

Opportunities for South Asia in its relationship with China:

- Procure capital for development;
- Increase interdependence in trade;
- Improve water and flood management;
- Conduct joint military exercises focused on transnational threats by nonstate actors;
- Join Shanghai Cooperation Organization (SCO);
- Enhance interaction in higher education and tourism.

Threats to South Asia from China:

- Unfavorable export-import imbalance;
- Military resolution of territorial disputes;
- Unjust trade practices like dumping and unfair competition;
- Aggressive pursuit of its “string of pearls” approach;
- Selective favoritism by China to divide and influence South Asia;
- Chinese arms exports to South Asia;
- Discreet manipulation of SAARC’s proceedings.

EXHIBIT 2

SOUTH ASIA'S OBJECTIVES IN A STRATEGY INTENDED TO OVERCOME CHINA'S RISING INFLUENCE OF THE REGION AND WAYS OF ACHIEVING OBJECTIVES

Objectives for South Asia:

- Involve China in long-term investment in South Asia's development;
- Optimize potential of its trade interdependence with China;
- Link economically with the Association of Southeast Asian Nations (ASEAN);
- Establish an anti-terrorism intelligence network and conduct operations in contiguous areas;
- Lure China to development projects instead of its sponsored arms race;
- Urge China to initiate confidence building measures to mitigate the threat perception from China;
- Have South Asian Association for Regional Cooperation (SAARC) engage constructively with China to develop regional solutions;
- Join Chinese-dominated Shanghai Cooperation Organization (SCO) to leverage geopolitical situation;
- Jointly exploit water management potential of the Himalayas for hydroelectricity, irrigation and consumption.

Ways for South Asia to achieve strategic objectives:

- South Asian states use their collective influence to prod China to give more economically than

it is currently giving to the region's weaker states;

- India initiates confidence building measures with all its neighbors, to make the South Asian Free Trade Area more economically effective;
- India assists fledgling democracies to build democratic institutions, so that states can look beyond their individual borders, form a regional identity, and improve regional security;
- India engages China to mutually resolve their boundary dispute;
- South Asia builds lateral land communications to ASEAN to connect the two economies;
- China and India together steer regional projects focused on hydroelectricity in the Himalayan Mountains, energy pipelines, transnational road and rail networks, and inland water transport;
- South Asia conducts joint military exercises dealing with transnational threats at its level today, and in conjunction with SCO tomorrow;
- With improvements in regional security, South Asia drastically reduces or stops imports of Chinese arms;
- South Asia supports a transit facility to send energy through the region to China in exchange for Chinese capital investment in South Asian development;
- South Asia postpones construction of Myanmar's Indian Ocean port for China;
- South Asia invites the United States to participate more fully in SAARC, to address interoperability, contingency planning, and response escalation.

**EXHIBIT 3:
POSSIBLE AVENUES FOR CROSS-SECTOR
COLLABORATION
BETWEEN THE UNITED STATES AND INDIA
TO COPE
WITH A RISING CHINA (IN DECREASING
ORDER OF IMPORTANCE)**

Diplomatic Collaboration:

- South Asia regards the United States as a better partner than China for steering its collective destiny: mutual interests in security, access to the global commons in the Indian Ocean, democracy, development, and status are aligned;
- The United States contributes significantly to SAARC's affairs to improve collective regional security;
- The United States facilitates confidence building measures between India and Pakistan;
- To promote equitable representation of Asia, the United States pursues reforms at the United Nations to include India as a permanent member of the Security Council.

Informational Collaboration:

- The United States contributes to SAARC's establishment of an information network to study regional outsourcing, supply chain management, off-shore manufacturing, education, talent transfer, and immigration.

Economic Collaboration:

- The United States offers its domestic market to South Asia to send an economic signal to China's export oriented economy;

- South Asia increases interdependence in trade incrementally with China to reach mutual economic deterrence level;
- The United States technologically assists the online functioning of SAARC's economic working group;
- The United States links the economic zone formed by South Asia, ASEAN, Japan, and South Korea to the Trans Pacific Partnership to optimize the Pacific region's economic opportunity to shift the Asia-centric market to a Pacific-centric one;
- South Asia reduces its trade imbalance with China by accessing its internal markets collectively.

Financial Collaboration:

- On cue from the United States, international organizations offer aid and development assistance to South Asia;
- The World Trade Organization pressures China to drop its barriers to investment by countries from South Asia.

Legal Collaboration:

- The United States strengthens its stand on South Asia's trade issues with China.

Intelligence Collaboration:

- South Asia shares intelligence with the United States on transnational threats, illicit drug trafficking, and piracy;
- A joint working-mechanism on the Indo-China border helps stop occasional flare-ups by local commanders;

- South Asia's intelligence network monitors Chinese military capability, preparedness, and intention.

Military Collaboration:

- The United States facilitates reduction of India-Pakistan defense expenditures, in order to improve regional stability;
- South Asia reduces arms imports from China due to increased stability;
- India and the United States monitor and selectively dominate sea lines of communication in the Indian Ocean;
- India upgrades its capability of long-range delivery systems and navy, as a deterrent against China;
- South Asia cooperates with the United States in anti-terrorism intelligence, joint exercises, and operations against regional transnational threats;
- South Asia conducts joint exercises with the United States in the Indian Ocean and in the hinterland.

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CHAPTER 7

DISCUSSANT COMMENTS

Jack Clarke

Thanks very much for that introduction. I have been coming to the U.S. Army War College for a number of years, but this is my first opportunity to participate in a forum at Dickinson College. Dickinson College has always been to me that other great school in Carlisle, and I thank the organizers of the Workshop for this opportunity to visit.

My understanding of the role of the discussant is that I should synthesize what has been presented; but that presents a bit of a problem because of the wonderful amount and variety of information that has been presented by both Dr. Jeff McCausland and General Vijay Singh.

When we think about the relationship between India and the United States and the possibilities for collaboration, I am reminded of the situation in which I have found myself for the past quarter-century. I am in an intercultural marriage. I am married to an Austrian, and being in an intercultural relationship – and, indeed, a marriage – poses additional challenges, to say the least. I have found that in such a relationship, it is sometimes necessary to say things that in a monocultural relationship might go unsaid. You simply cannot assume that the other person understands your point of view. You have to go beyond a presumption of comprehension.

In the case of the India-U.S. relationship, my observation can be very insidious, because we do speak the same language. General Singh has helped make this

insidious, because he has effectively spoken to us in a way that we can understand; but we should never lose sight of the fact that when our friends from around the world speak to us in English, what they mean may not be what we think they mean. We may get into a lot of trouble that way, as I do sometimes in my relationship with my wife. We Americans need to better understand what is important to our Indian partners, and they need to better understand what is important to us.

General Singh has pointed out that even though we share the same language, we do not necessarily share the same threat perception or the same strategic culture. Thus, the best that we can do is work hard to understand what the other party thinks about a situation. One of the things that I have learned at the George Marshall Center, where I teach classes with representatives of up to 45 different nationalities, is that the one thing that we do not share is the same threat perception.

Another key issue in all of this is trust—this critical aspect of a relationship comes into play when we are talking about cooperation between security forces, between police forces, between intelligence agencies, and so forth. Trust is predicated on personal relationships. There are no institutional mechanisms that really function. That does not seem good enough to me. We have to get beyond depending on personal relationships. That is, there is something wrong with a scenario in which two people are sitting across from one another at a coffee table, and a great idea emerges. What happens when those two people move on? That is why I say that it is very important that we create some institutional methodology that enables us to sustain the deepening of a relationship.

McCausland talked about those skills that we need to develop in our leaders – the so-called core competencies. One thing that stands out in my mind is that we tend to bifurcate this into training versus education. I would like to suggest that there is another category that we all too infrequently use, and that is professional development. It is neither education nor training, but is somewhere in-between. I do think that what we do at the Marshall Center is professional development. That is, we take people in the middle of their career, we allow them to build relationships, and we give them information that broadens their perspectives and deepens their understanding. But all of that does not necessarily take place in a formal setting.

McCausland did list a few needed core competencies. One is strategic thinking – not necessarily in the way that they teach it at the war colleges, but rather in the way one would experience it in taking up chess: trying to anticipate the next moves, and the next moves, and the next moves . . . because I think that model is well-suited to thinking about first-, second-, and third-order effects – you are able to think ahead: this move will have these effects and so forth.

Risk management is another area that I think is very important in developing our leaders, and we do not do a good job with that. I do not think anyone does a good job in risk management, risk analysis, and risk appreciation, because no one wants to think about risk in that way. Certainly, the public does not. Yet we as public servants are obligated to talk to the public about risk, but we do not do a good job with that, either.

Innovation, diversity management, managing uncertainty, and being technologically adept as a method of collaboration are all important. When it comes to engaging in collaboration, I think that the younger

generations might be better at this. The issue of being culturally sensitive is, as I said at the outset, quite important.

I wonder if there are some really important lessons we can learn about strategic relationships and collaborative relationships by looking over our experiences of the past 10 years with what we call in America the “interagency” process, or what is otherwise known as the “interministerial” process. The lessons I draw from that, I believe have some bearing on this issue of the relationship. A lesson I draw is that partners, unless prodded, will not develop unique relationships or capabilities.

They will not go out of their way to develop a capability that their partner needs. I do not think that most partners will step up and volunteer unless they can be properly incentivized. They will not devote the necessary level of assets, particularly money. They will likely maintain separate agendas, as we have heard. They will resist alternative leadership styles, particularly if it comes from the military, and that is one of the lessons we learned from Afghanistan. Yes, our state department officials are there, but they really resent the way that we in the military do business, to the point where it affects our ability to cooperate. Finally, I believe they will not share goals and objectives, at least in the way that we in the military understand. They will see things differently.

To begin with, why is the military an attractive partner for collaboration? One thing that has become clear over the past 10 years is that the military is a unique organization. The general public tends to view the military as rigid, hierarchical, and unable to shift. I think that one thing that stands out is that there is no organization in the world that is as flexible as the mili-

tary. They have an enormous “can do” attitude: “No one else is going to do it, so we have to.” As McCausland indicates, one of the dangers is that the Army can get out too far, can weaken their competencies, by getting engaged in ancillary activities that may not be so important.

What are the appropriate roles for the military? My particular research is on what we in America call the defense support to civil authority: all the things the military does besides fighting wars or as we colloquially say, “breaking things and hurting people.” My research in Europe has uncovered a huge amount of tasks and jobs that the Army – I use the word “Army” as a placeholder for all the military – is doing, from picking up the trash in Naples to protecting the money transports in Ireland. They are good at it, but this is one of those areas we have to be careful about, or the military will lose its essential character. I think it is the case in a number of select countries – Austria being one – where the military has gotten out of the job of defending the country, perhaps in response to the fact that they do not perceive an external threat. Nevertheless, the military can do all of these things, but one has to be careful.

With respect to our India partners, we Americans need to be aware of all the things the India military forces do besides defending the country. My impression is that they are even more involved. We call it defense support to civil authority in the United States, and think of it in those terms for China as well. But perhaps in India we might call it defense support to commercial authority, because they are involved in businesses and so forth.

We have to ask ourselves, going forward: Why do we need an Army? What is an Army? McCausland

talked about all the contractors, which raises the question: What is the difference between the Army and the private sector? Is it that one is protected by the Geneva Convention, the other is not; or that one has sworn an oath, the other has not? However, aside from that, is there that much difference any more? So, we need to ask: What is a soldier? Do we still need that kind of organization?

That said, the fact the militaries of the United States and India share a cultural affinity, based on the fact that we are an enclosed society—all militaries are—that provides an avenue of increased cooperation, a common vocabulary (even if we pronounce words differently) of what we are trying to achieve, and the fact that we are trying to do this in a democracy is certainly among the most important characteristics.

To conclude, thinking about some of the solutions that might be leveraged to improve the level of cooperation and sustain it over time—if we are going to depend on personal relationships—then we have to enhance that situation by an increased exchange of personnel. For example, how many U.S. officers go to educational institutions, military institutions, or training institutions in India, and how many Indian officers come here? You can count them on one hand. It strikes me that if we are going to have a special relationship with India, then we really need to increase that exchange, especially if we are going to depend on personal relationships. We have to invest in young officers to do that.

Another thing that I think is interesting, and with which some of you may be familiar, is the U.S. National Guard-State Partnership Program. The State Partnership Program takes a U.S. state and teams it up with a foreign country. Generally speaking, this

is done with smaller countries; e.g., the U.S. state of Georgia and the country of Georgia; the U.S. state of Vermont, and the country of Macedonia. Certainly, this is not appropriate for a great power such as India, but nevertheless, there are aspects of that State Partnership Program that I would like to highlight, and one has expanded far beyond military to military. It has taken the State Secretary of Agriculture and sent him to Macedonia to help assist with agriculturally related matters. It is spreading far beyond the military. Yes, it does involve personal relationships, but those types of relationships do not shift nearly as rapidly as they do at the federal or national level. So, I think that there are certainly attributes of the State Partnership Program that would pay dividends in terms of sustaining the U.S.-India relationship.

There are some aspects of what we do in securing our homeland that I think are also useful, for example, critical infrastructure protection, which is predicated on what we call the public-private partnership. The necessity for security is a public or government responsibility, but most of the critical infrastructure in the United States, and certainly a great deal of it in India, is privately owned. So, in order to achieve a particular level of protecting our critical infrastructure, private industry has to learn to work with the government, and the government has to properly incentivize security, so that private industry actually engages in it.

In talking about how to incentivize this properly, I try to draw a parallel to the issue of foreign direct investment, which is a problem in India today. It is difficult for business to invest in India because there are barriers to foreign investors buying Indian companies. Clearly, we do not want to go in and buy Indian

military capabilities, but nevertheless, I think that, with respect to some of the barriers that apply to foreign direct investment, we ought to look at those in the security environment as well and see if those are also impacting our relationship, and if so, find an intelligent way to overcome some of those barriers.

In closing, I will say that I am ready to take advantage of a professional development opportunity to visit India.

SECTION 3

ENVIRONMENTAL SECURITY AND TRANSNATIONAL CHALLENGES IN SOUTH ASIA

Moderator: Dr. John Kemelis, Pennsylvania State University.

Presenter: Dr. Richard Matthew, University of California Irvine.

Presenter: Dr. Stephen Blank, Strategic Studies Institute, U.S. Army War College.

Discussant: Dr. Leif Rosenberger, Economic Advisor to Central Command.

Matthew summarizes society's evolving understanding and articulation of the relationship between environment and security, culminating in the inclusion of this relationship in the definition of human security. This is a critical insight about the context in which strategic leaders find themselves, and speaks to the general idea that initiatives involving cross-sector collaboration are relevant when problems cannot be solved by actors from any single sector. Given the level at which he offers comments, the links between Matthew's paper and the specific propositions about cross-sector collaboration included in the model offered by Drs. John Bryson, Barbara Crosby, and Melissa Stone in their paper presented in Section 1 of this volume are somewhat limited.

In contrast, Blank’s strategic assessment of the New Silk Road policy mirrors the design science approach described by Bryson, Crosby, and Stone. Table 3-1 lists propositions offered by them that correlate with observations contained in Blank’s paper.

**Propositions About Cross-Sector Collaboration
Relevant to Environment and Security**

Proposition 3: Cross-sector collaborations are more likely to succeed when one or more linking mechanisms—such as powerful leaders and sponsors; general agreement on the problem; existing networks; neutral conveners; requests for proposals, plans, projects or technologies requiring collaboration; and consequential incentives favoring collaboration—are in place at the time of their initial formation.

With regard to the New Silk Road initiative, two key linking mechanisms are absent—the presence of a neutral convener and existing networks. Arguably, the United States may be considered a champion of this collaborative effort. Key stakeholders perceive U.S. support for the New Silk Road as being exclusively driven by U.S. political and economic interests at the expense of others. This is revealed by efforts of a counter coalition, made up of China, Russia, Pakistan, and Iran, to establish an alternative response to regional needs. Additionally, Central Asian nations have met with limited success in collaboratively reaching regional goals. As stated by Dr. Blank in reference to Central Asian government cooperation, “There is, in fact, little tradition or history of genuine regionalism or collective action.”

Proposition 5: Cross-sector collaborations are more likely to succeed if they have committed able sponsors and effective, persistent champions at many levels who provide formal and informal leadership.

Dr. Blank argues one reason for stalled efforts to move the New Silk Road initiative forward is that the United States, as the New Silk Road champion, has not demonstrated the strategic coherence or political will to date to make the policy a reality.

**Table 3-1. Propositions About
Cross-Sector Collaboration
Relevant to Sustainable Development
and Security in India.**

Proposition 17: Collaborations that are prepared to take advantage of a window of opportunity are far more likely to succeed than those that are not.

The withdrawal of United States and North Atlantic Treaty Organization military forces from Afghanistan in 2014 creates a “window of opportunity” for regional stakeholders to act in the interest of stabilizing and ideally revitalizing Afghanistan and Central Asia. The inability to establish an effective collaboration among stakeholders jeopardizes the chance of fully exploiting the opportunity.

Proposition 23: Cross-sector collaborations are most likely to create public value if they produce positive first-, second-, and third-order effects far in excess of negative effects.

The overt outcomes of the New Silk Road initiative are narrowly described in political and macroeconomic terms, but Dr. Blank notes that U.S. hopes are more broad with respect to embracing the creation of public values such as the eventual emergence of good governance and respect for human rights; the emergence of market economies; the reduction and/or possible elimination of trafficking in people and narcotics; and the maintenance of a sustained state of nonproliferation. These broader outcomes are representative of positive second- and third-order effects.

Proposition 25: Cross-sector collaborations are more likely to be successful if they have an accountability system in place that tracks inputs, processes, and outcomes; use a variety of methods for gathering, interpreting, and using data; and have in place a results management system built on strong relationships with key political and professional constituencies.

The failure to establish comprehensive and agreed upon measurement systems to evaluate project forecasts or actual project performance have negatively affected New Silk Road progress. For example, Dr. Blank suggests that reasons for failed efforts to secure financing for New Silk Road projects have been either the lack of cost/benefit analyses or the contested findings of completed cost/benefit analyses.

**Table 3-1. Propositions About
Cross-Sector Collaboration
Relevant to Sustainable Development
and Security in India. (cont.)**

CHAPTER 8

ENVIRONMENT AND SECURITY: TRANSNATIONAL CHALLENGES, TRANSNATIONAL SOLUTIONS¹

Richard Matthew

INTRODUCTION

In this paper, I provide a very brief overview of the field of environmental security. I begin by describing the historical development of this field of inquiry. A subsequent section examines the major areas of research and the main criticisms of this research. I then suggest that the analytical lens of environmental security may be usefully applied to South Asia, given the scale of environmental stress the region is experiencing and the quite dire predictions climate scientists have made about its future.

BRIEF HISTORY OF ENVIRONMENT AND SECURITY

Early formulations of environmental security date to antiquity. Thucydides' *The Peloponnesian War* and Plato's *Republic*, for example, compare the security of societies living within their limits, like Sparta, to those like Athens that rely on imports.² While interdependence created an exciting dynamism in Athens, it also created vulnerabilities, and both authors concur that self-sufficient societies are more secure. Some variant of this thinking extends across the ages, as in the famous work of the 18th century demographer Thomas Malthus, who contended that, if human populations

grew faster than their agricultural output—a likely scenario—then shortages would result in famines, epidemics, and wars.

Contemporary formulations of environment-security linkages grew from the environmental movement of the 1960s and 1970s. Defining arguments of this movement include Rachel Carson's *Silent Spring* (1962), which disclosed the social and ecological effects of using pesticides; Lynn White Jr.'s essay, "The Historical Roots of Our Ecological Crisis," (1967); Garrett Hardin's article, "The Tragedy of the Commons" (1968); Paul Ehrlich's *The Population Bomb* (1968); and Donella Meadows *et al.*'s *The Limits to Growth* (1972). These seminal works crafted a compelling neo-Malthusian worldview of shortages and strife, and catalysed a strong policy response in the United States that included creation of the Environmental Protection Agency (EPA), legislation to ensure clean air and clean water, and funding the United Nations Environmental Program (UNEP).

Connections to security events seemed obvious to many observers who explained the 1967 war between Israel and Jordan as a conflict linked to water scarcity, and used the oil shocks of 1973 and 1979 to argue that national power might be compromised by dependence on foreign oil. Protests against the use of herbicides such as Agent Orange focused on the devastating consequences these weapons had on the environment as well as its inhabitants. Policy responses included the 1973 Department of Defense (DoD) Directive 5100.50, "Protection and Enhancement of Environmental Quality," the Additional Protocol I to the 1949 Geneva Convention on the Protection of Victims of International Armed Conflicts (1977), and the Convention on the Prohibition of Military or Any Other Hostile Use

of Environmental Modification Techniques (1977). The linkage was made explicit by analysts such as Lester Brown, who argued that environmental issues had become matters of national security;³ Richard Ullman, who argued that growing environmental problems necessitated a redefinition of national security;⁴ and Norman Myers,⁵ who argued that environmental security is humanity's "ultimate security."⁶

These early formulations received considerable attention when the end of the Cold War (1989-92) coincided with a cascade of scientific evidence about global environmental change presented to the world at the Rio Earth Summit in 1992. One immediate response was a collaborative effort to assess the toxic legacy of the Cold War and experiment with new forms of military cooperation. In the United States, the George H. W. Bush administration added environmental issues into the *National Security Strategy* of 1991; later the Clinton administration ramped up commitment to base clean-up and integrated civilian environmental expertise into the defense community, appointing Eileen Claussen from the Environmental Protection Agency as special assistant to the president for global environmental affairs at the National Security Council, and creating the Under Secretary of Defense for Acquisition and Technology, which housed the new Office of the Deputy Under Secretary of Defense for Environmental Security, headed by Sherri Wasserman Goodman.

In 1996, Secretary of Defense William Perry introduced the doctrine of "preventative defense," which included environmental security as a basis for military-to-military contact programs. A broader vision was expressed that year by Secretary of State Warren Christopher:

the environment has a profound impact on our national interests in two ways: First, environmental forces transcend borders and oceans to threaten directly the health, prosperity and jobs of American citizens. Second, addressing natural resource issues is frequently critical to achieving political and economic stability, and to pursuing our strategic goals around the world.⁷

U.S. activities and rhetoric were part of a global discussion among the world's defense communities on the links among environment, national power, and violent conflict, and also on the issue of "greening defense" policies and behavior.

The attempt to link environment and security moved along a second trajectory at this time as well, one that sought to broaden or replace the conventional understanding of national security with concepts and referents deemed more appropriate to the complex, globalized post-Cold War world. Terms like "human security" and "comprehensive security" emerged and gained support worldwide. Proponents of alternative ways of thinking about security felt that the discussion within the traditional defense community "is theoretically rather than empirically driven, and is both a product and legitimation of the North's security agenda."⁸ In gathering cases to support this agenda, analysts worried that the global South was being recast as the planet's new security problem, with a propensity to violence that environmental stress could easily trigger, a view popularized in Robert Kaplan's "The Coming Anarchy."⁹

The debate between those who saw environmental change amplifying familiar security threats and those who saw it as a transformative force that called conventional security thinking into question and required

a deeper type of social response to manage has not been resolved. It has, however, been given a greater sense of urgency since the publication of the *Fourth Assessment Report* in 2007 by the Intergovernmental Panel on Climate Change (IPCC) on the causes and consequences of global climatic change.¹⁰ This report sounded an influential, science-grounded alarm for an issue that has been on the agenda of international society since at least the United Nations Framework Convention on Climate Change (UNFCCC) was established in 1992, and that received enormous attention in 1997, the year of negotiating the Kyoto Protocol, a treaty obligating industrial nations to reduce greenhouse gas emissions by 2012.¹¹ Media reporting and high casualty environmental disasters, including Hurricane Katrina in 2005 and the Asian tsunami of 2004, have served to highlight the sort of threats one can associate with climate change—although neither has been classified as the direct result of global warming.

The next assessment report, due out in 2014, is likely to be even more explicit in arguing that the world is tracking toward a worst case scenario of severe weather events, long heat waves and droughts, continuing sea level rise and aggressive flooding. Areas already regarded as vulnerable to security problems due to factors such as weak governance, identity conflicts, and extreme poverty are over-represented in the geography of acute sensitivity to drought, storms, and flooding—coastal South Asia, much of the Middle East, and Sub-Saharan Africa.

KEY THEMES IN ENVIRONMENT AND SECURITY

The field of inquiry that has emerged over the past 50 years, and especially since about 1992, has generated two related but somewhat distinct research areas, as well as a number of critiques.

Environment and the Conflict Cycle.

In simple terms, the conflict cycle has three phases—pre-conflict, conflict, and post-conflict—and environmental factors are relevant, and may become more relevant, to each phase. The bulk of research to date has focused on the contribution of environmental factors to violent conflict. Thomas Homer-Dixon, for example, has argued that under certain social conditions natural resource scarcity contributes to civil war.¹² Colin Kahl contends that resource scarcity can be related to state failure (the collapse of functional capacity and social cohesion) and state exploitation (when a collapsing state acts to preserve itself by giving greater access to natural resources to groups it believes can prop it up).¹³ Complementary research by Indra de Soysa and many others explores how forms of natural resource abundance, especially of resources such as precious metals, diamonds, and oil, might contribute to conflict.¹⁴ Analysts such as Nancy Lee Peluso and Michael Watts, however, are skeptical of these simple models of causality.¹⁵ They emphasize limitations in understanding “the sheer complexity of the relationships between environment and violence in many places.”¹⁶

A related strand of research has focused on how environmental factors might affect elements of na-

tional power such as resource endowment, military capacity, intelligence-gathering, population, social cohesiveness, type of regime, and economic health.

For example, militaries may be less effective at projecting and exercising power if they have to operate in flooded terrain or during a heat wave. Warming that affects land cover could reduce a country's renewable resource base. Intelligence is difficult to gather and analyze in a domain marked by uncertainty about social effects.¹⁷

Much of the research exploring the second phase of the conflict cycle has been carried out by the UNEP's Post-Conflict and Disaster Branch, tasked with assessing the environmental impacts of conflict. The use of natural resources to fund war and the extent to which lawlessness creates new opportunities to exploit natural resources for personal profit and hence creates a new incentive for the continuation of war have also received attention from scholars such as Philippe Le Billon.¹⁸

The post-conflict phase has been addressed mainly by investigating the role of environmental factors in mediation and peace-building.¹⁹ Natural resources have been identified as critical to many aspects of the peace-building process (UNEP 2009). Natural resources support economic recovery and sustainable livelihoods; can be an element of reconciliation processes; and provide opportunities to improve government effectiveness and transparency, and hence to build trust in a society.

Environment and Human Security.

In the 1994 United Nations Development Program (UNDP) report that popularized the concept, human security:

was said to have two main aspects. It means, first, safety from such chronic threats as hunger, disease and repression. And second, it means protection from sudden and harmful disruptions in the patterns of daily life.²⁰

The UNDP report explains four dimensions of human security as fundamental: it is universal, its components are interdependent, it is easier to protect through prevention than intervention, and it is people-centered.²¹ In response to this report, a group of scholars established the Global Environmental Change and Human Security program in 1997 and defined human security:

as something that is achieved when and where individuals and communities have the options necessary to end, mitigate or adapt to threats to their human, environmental and social rights; have the capacity and freedom to exercise these options; and actively participate in pursuing these options.²²

Many of the key findings of this program are presented in the volume entitled *Global Environmental Change and Human Security*.²³

Several types of criticism have been levelled at the arguments described previously. A few scholars focus on methodological weaknesses in establishing causality.²⁴ This is a very common form of social science

critique that tends irrevocably toward the conclusion that all knowledge is uncertain, a somewhat obvious conclusion that is of interest mainly to elements of the academic world. Others, such as Ole Waever and Dan Deudney, worry about the implications of securitizing the environment.²⁵ Stephen Walt has argued that security studies should be about the phenomena of war and things directly related to war, and is concerned that expanding its purview “would destroy its intellectual coherence and make it more difficult to devise solutions to any of these important problems.”²⁶ Another strand of critique suggests that the arguments linking environmental factors to the onset of violent conflict may be exaggerated. Deudney, for example, believes that countries will tend to meet resource scarcity through innovation and trade rather than war.

CONCLUSIONS: ENVIRONMENT, SECURITY AND SOUTH ASIA

South Asia is home to two nuclear states and has been the site of relatively high levels of both civil (e.g. India, Nepal, Pakistan, and Sri Lanka) and interstate (e.g. Pakistan-India) conflicts. The Failed State Index, prepared by the Fund for Peace, which uses data on a dozen social, economic, and political indicators to rank the countries of the world along a spectrum of government competence, classifies Pakistan, Bangladesh, Sri Lanka, and Nepal as failed or fragile states. Maplecroft’s Natural Disaster Risk Ranking identifies South Asia as the highest risk region of the world, including Bangladesh (1), Pakistan (4), and India (11). Much of the region has been ravaged by deforestation, experiences chronic scarcities of fresh water and arable land, and has faced floods that regularly displace tens of millions of people.

The IPCC's *Fourth Assessment Report* predicts that South Asia will experience warming of 3.3. degrees centigrade (well above the predicted global average for warming); that its dry areas will become significantly drier and its wet areas significantly wetter; that glacial outburst floods could cause havoc in mountainous areas; that the monsoon could change in ways that dramatically affect agriculture, which directly employs 70 percent of the population; and that severe weather events will increase.

Global burden (mortality and morbidity) of climate-change attributable diarrhea and malnutrition are already the largest in South-East Asian countries including Bangladesh, Bhutan, India, Maldives, Myanmar, and Nepal in 2000, and the relative risks for these conditions for 2030 is expected to be also the largest.²⁷

The authors of the *Fourth Assessment Report* also note that:

Climate-related disruptions of human populations and consequent migrations can be expected over the coming decades. Such climate-induced movements can have effects in source areas, along migration routes and in the receiving areas, often well beyond national borders. Periods when precipitation shortfalls coincide with adverse economic conditions for farmers (such as low crop prices) would be those most likely to lead to sudden spikes in rural-to-urban migration levels in China and India. Climatic changes in Pakistan and Bangladesh would likely exacerbate present environmental conditions that give rise to land degradation, shortfalls in food production, rural poverty and urban unrest. Circular migration patterns, such as those punctuated by shocks of migrants following extreme weather events, could be expected. Such changes would likely affect not only internal migra-

tion patterns, but also migration movements to other western countries.²⁸

Under these real and predicted conditions of acute environmental stress, it is reasonable to analyze South Asia through the lens of environmental security, and consider opportunities to reduce the likelihood that such stress will push hazards into the realm of disaster and conflict with increasing vigor.

ENDNOTES - CHAPTER 8

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CHAPTER 9

HOW SUSTAINABLE IS U.S.-INDIA COOPERATION IN CENTRAL AND SOUTH ASIA?

Stephen Blank

INTRODUCTION

In the current era, **interagency coordination** across different branches of government within a particular country, along with **multilateral cooperation** among governments, may reasonably be taken as necessary conditions for success in major strategic initiatives at the global level. To the extent that coordination and cooperation are lacking, an initiative is unlikely to succeed. Some analysts regard the dual requirement for interagency coordination and multilateral cooperation as a step beyond the well-known political science concept of two-level games that pertains to foreign and security policy.¹

In addition, as John Bryson, Barbara Crosby, and Melissa Stone point out in their paper, there is another level of theoretical complexity to consider. That is, in addition to interagency coordination and multilateral cooperation, many of the challenges that today confront government policymakers require contributions from individuals representing the for-profit business community and civil society, and thus the need for **cross-sector collaboration**.

Beyond purely theoretical considerations, all three levels of interaction are increasingly relevant to the actual practice of states. That proposition is illustrated by the U.S.-India relationship, which encompasses

social, economic, political, and military matters; calls for joint exercises; entails arms sales; and regards as a common interest the success of the nation-building process in Afghanistan both at the current time and after the North Atlantic Treaty Organization (NATO)-led International Security Assistance Force (ISAF) leaves the area in 2014.

Nonetheless, there are obstacles to achieving success within the context of the U.S.-India partnership. They include the inherent difficulties associated with shaping coherent strategy, given the three levels of interaction just noted; the attributes of the Central Asian environment; and the purposeful actions of rivals that would be engaged in a countercoalition.

So a central question presents itself: Given the scope of the U.S.-India partnership and opposition to it, what are its chances for success and can it be sustained over time?

THE U.S. INDIA RELATIONSHIP

Analysts have long recognized opportunities for an Indo-American partnership in Central and South Asia. In 1999, C. Raja Mohan noted the possible objectives of such a partnership:

This should involve encouraging political pluralism in India's neighborhood, as well as combating terrorism and its connection with narcotics trafficking on India's periphery. Building a positive engagement with the Islamic world, working toward a more secure Persian Gulf, cooperating in protecting the sea lanes in the Indian Ocean and building a cooperative energy strategy policy are among the areas that must become the foci of the Indo-US strategic dialogue.²

The Barack Obama administration has expressed similar thoughts. As Assistant Secretary of State for Central and South Asian Affairs, Robert Blake told the Senate Foreign Relations Committee in 2009:

With India we will seek an expanded strategic partnership, building on the growing convergence of our interests and values . . . In addition to our shared democratic values, we have common interests in combating terrorism, stopping the spread of weapons of mass destruction, getting the global economy back on track, addressing global climate change, and reinvigorating global trade talks. India, with its vibrant democracy and rapidly expanding economy, can be an anchor of stability and opportunity for South and Central Asia.³

Since 2011 if not before, Washington has made clear that it seeks a partnership with India in all theaters from Latin America to the Middle East and East Asia.⁴ For its part, India has pursued—with Washington’s blessing—cooperative initiatives with Japan, Australia, and members of Association of Southeast Asian Nations as part of its Look East policy.⁵

Circumstances in Afghanistan and Central Asia have added new relevance to the prospects of the U.S.-India relationship. Given that NATO and U.S. forces are currently preparing to withdraw from Afghanistan, all interested parties must, to some degree, hedge their bets on what will be U.S. policy in Afghanistan and Central Asia. Afghan President Hamid Karzai cannot succeed himself after 2014, which creates uncertainty as to who will be ruling in Afghanistan or what kind of state, either politically or territorially, it will be once ISAF forces leave. Still worse, U.S. officials candidly admit the absence of plausible plans to manage the succession to Karzai, since all other alternatives look worse.⁶

A recent assessment by Michael Hunt highlights the complexities of potentially increased international involvement once the United States and NATO leave the scene, and suggests that the geopolitical rivalry for influence in and over Central Asia among the great powers would most likely continue to intensify.

Like nature, geopolitics abhors a vacuum. The looming cessation of full Western military engagement will precipitate intensified encroachment of Afghanistan's neighbors on the Afghan polity, economy, society, and, in some cases, the insurgency. Iran, Pakistan, India, China, and Russia have the ability to project influence and power into Afghanistan. Their geographical proximity and political, economic, and cultural linkages with Afghanistan ensure depth and durability in their engagement. Their motivations range from ethnic and cultural affinity to complex interrelationships with external strategic issues such as Kashmir, which acts to drive both Pakistani and Indian policy in Afghanistan.⁷

Nonetheless, it now appears that the United States is interested in maintaining at least some as yet undefined defense presence in Afghanistan and the region after 2014. On numerous occasions, leading U.S. policymakers have stated openly that they want India to play a bigger role in Afghanistan and Central Asia once ISAF forces leave in 2014.⁸ India, too, has signaled its willingness to play a larger role in Afghanistan and Central Asia.⁹ Those factors suggest that U.S. and Indian interests across a range of issue areas will continue to converge.¹⁰

A larger role for India in Afghanistan would enhance its capacity to stand on its own in Asia and thus be a counter to China, while not being a U.S. ally or subordinate. That outcome would be consistent with

a relationship articulated by Ashley Tellis several years ago:

Conditioned in part by fears of a rising China, India seeks to promote a relationship that emphasizes 'strategic coordination' with the United States. While its traditional, and still strong, desire for political autonomy and its continuing search from greatness will prevent it from ever becoming a formal U.S. alliance partner, it nonetheless seeks to develop close relations with the United States both in order to resolve its own security dilemmas vis-à-vis Pakistan and China and to develop cooperative solutions to various emerging problems of global order. Even as it seeks to draw closer to the United States, India remains committed to developing those instruments it believes are necessary for its long-term security, like nuclear weapons.¹¹

At the moment, India has not managed to achieve its desired level of autonomy or influence. While it would like to be a regional balancer, relationships with Pakistan, China, Russia, and the United States constrain its ability to forge regional cooperation,¹² especially since cooperation does not characterize tendencies in Central Asia.¹³ Meanwhile, the U.S. presence helps enlarge much needed political, economic, and military space for India. Absent that U.S. role, it is likely that, despite Russian support, China and Pakistan would succeed in checking any Indian ability to project meaningful power into the region, obtain genuine influence, or win contracts for energy supplies.¹⁴

The fact that India is not competitive in Central Asia is noted by Charles Ebinger:

To those who view oil equity as a zero-sum game, China has been the clear victor so far. It has regularly been able to outbid India for international oil and gas depos-

its: from June 2009 to June 2010, India lost out to China on oil and gas deals worth approximately \$12.5 billion, with notable head-to-head victories in Kazakhstan and Ecuador. China is actively expanding its foreign asset portfolio to include coal and uranium, among other precious metals. With China's more than \$2 trillion in foreign exchange reserves and a political structure that is not encumbered by layers of decision-making, the rivalry is lopsided. India's foreign reserves, while substantial, pale in comparison to China's and India's government bureaucracy is as notorious for its grinding pace as China's is for ruthless efficiency.¹⁵

THE NEW SILK ROAD

For several years, many well-informed observers of Central Asia have been advocating a New Silk Road policy involving infrastructure, trade, and transport, on two grounds. First, the policy would, in a coherent and coordinated fashion, reintegrate Afghanistan with its Central (and South) Asian neighbors, which would help to stabilize the country and provide an economic foundation to promote recovery from the war. Second, it would improve links between Central Asia and South Asia, thus strengthening countries of the region against threats to their independence from China, Russia, or Iran.¹⁶

The Obama administration has endorsed such an initiative. Indeed, as outlined by the U.S. State Department—specifically Secretary of State Hillary Clinton and Assistant Secretary Blake—it is the central metaphor for cooperation in Central Asia. Thus:

Building on existing initiatives such as the EU's Transport Corridor Europe-Caucasus-Asia, and the Central Asia Regional Economic Cooperation (CAREC) development program underwritten by the [Asian] Devel-

opment Bank, Washington envisions the construction and expansion of infrastructure linking Central and South Asia via Afghanistan, including energy transmission lines, roads, railways, pipelines, and fiber-optic cables (the State Department has identified more than 40 infrastructure projects that could form the backbone of a New Silk Road). The U.S. vision also aims to take advantage of the agreements reached to facilitate the NDN [Northern Distribution Network-author] to boost the 'soft infrastructure' of border crossings, customs and tariff agreements, and procedures for battling cross-border crime and corruption needed to sustain the regional economic integration fostered by the war.¹⁷

Some of the key projects contemplated under the New Silk Road rubric include: general reforms to build governmental capacity; cross-border agreements among trade partners; a regional electricity market, facilitated by transmission lines between Central and South Asia; six major road improvement projects, including the Afghan Ring Road; durable rail links between Afghanistan and all its neighbors; and perhaps most noteworthy, the Turkmenistan-Afghanistan-Pakistan-India (TAPI) pipeline.¹⁸ The TAPI pipeline will be 1,680 kilometers long, starting from Dauletabad, Turkmenistan, going through Herat and Kandahar in Afghanistan, entering Pakistan at Quetta, and running to the Indian border town of Fazilka. If constructed, it could begin commercial operations in 2017-18.¹⁹ It would have the capacity to handle 33 to 38 billion cubic meters (BCM) of gas annually, 5 BCM of which would go to Afghanistan, with India and Pakistan splitting the rest. All the parties have agreed to take equity in the pipeline. Its current estimated cost is between \$7 to 8 billion, and the project is supported by the Asian Development Bank (ADB).²⁰

The administration's view of a future Central Asian Silk Road clearly encompasses India as a major player, participant, and anchor of that road.²¹ Indeed, Under Secretary of State William Burns stated that the "vision of a 'New Silk Road' is not a single path; it is a long-term vision of economic, transit, infrastructure, and human links across Asia. And India is its natural engine."²² Equally important, leading Indian analysts like C. Raja Mohan fully recognize the broad scope of the opportunities now open to India and regard cooperation as being fully in India's vital interests.²³

Benefits to Afghanistan Envisioned from the New Silk Road.

Advocates believe the New Silk Road project would generate economic benefits to Afghanistan and the region. They would reduce the obstacles to transportation, thereby simultaneously cutting costs that have inhibited trade: the ADB forecasts that the completion of new roads would boost trade in the region by 160 percent and would increase Afghan exports by \$5.8 billion (14 percent) and imports by \$6.7 billion (16 percent). A United Nations (UN) study also found that the projects could raise Central Asian growth by 50 percent within a decade, if those states cooperated with each other, and gross domestic product growth in Afghanistan by 8.8 to 12.7 percent. In turn, such economic growth would help move Afghanistan from aid-dependency to greater self-sufficiency and would help reduce poverty, a catalyst for recruitment by terrorist groups.²⁴

Gregory Gleason and Timothy Krambs of the George Marshall Center in Garmisch, Germany, observe that this project would be essential to the sta-

bilization and recovery of Afghanistan once ISAF leaves the scene in 2014. They emphasize the need to tie Afghanistan to its Central Asian neighbors in what represents essentially a virtuous circle. As they note:

Afghanistan's stabilization is of exceptional importance to the countries of Central Asia. As the draw-down proceeds, the Central Asian countries are likely to realize that Afghanistan's stabilization requires greater effort in terms of partner strategies. The withdrawal of international forces is not likely to lead to an abrupt and complete halt of fighting, but rather a reconciliation of disputes carried out in such a way that the strategy integrates societal segments into a progressively more stabilizing configuration of local actors. Confrontational, frontal combat operations at some point segue into awakenings of resourceful local factions that become positive agents of stabilizing change through counterbalancing, countervailing, and counterpoising.²⁵

The New Silk Road project is Afghan-centric, advocates regard military capacity and economic development as mutually reinforcing and overall outcomes as more broad in scope.²⁶ The means for achieving this virtuous circle would duly be economic, as Gleason and Krambs suggest. By connecting South and Central Asia through "multi-modal corridors" in transport, trade, and energy, Afghanistan would become the fulcrum or hub around which regional development and integration would take place over time. Trade, transport, and energy could then expand to Europe and Asia, bringing the participants hundreds of millions if not billions of dollars.²⁷

The New Silk Road and U.S. Interests.

The New Silk Road initiatives have the potential to help the Obama administration realize strategic objectives for Central Asia: maximize the cooperation of regional governments with counterterrorism operations in Afghanistan (particularly as regards hosting U.S. and NATO air bases and the transit of troops and supplies along the Northern Distribution Network); promote the eventual emergence of good governance and respect for human rights; foster the emergence of market economies; combat trafficking in people and narcotics; and sustain nonproliferation.²⁸

Beyond those Afghan considerations, the New Silk Road project and its component parts would have many broader effects, some of which have been noted previously. First, it would further isolate Iran in the region, a fundamental goal of the United States for over a decade, because the alternative to this project would be an Iran-Pakistan-India (IPI) pipeline, which would be highly profitable to Iran and reduce its ostracism.

Second, it would reorient Central Asian economies, and not least power and energy trade, away from too close a dependence on Russia toward South Asia and India, which has been a key part of a U.S. strategy that dates back to 2005-06. Thus, it would enhance both the independence of Central Asian states and India's standing and economic capability in the region, and would reduce Russia's ability to dominate those states through the monopolization of energy exports.

Third, it would provide an economic foundation for the revival and future security of Afghanistan, based on closer economic ties between the country and its neighbors and, if successful, establish Afghanistan as a hub in a larger process of regional integration

throughout Central and South Asia. Fourth, it would foster large-scale economic cooperation between India and Pakistan, thereby reducing Pakistani apprehensions about Indian policy in general, and India's policies in Afghanistan in particular; alleviate Pakistan's serious energy problems; deflect Pakistan from too close a relationship with Iran; and overall improve Indo-Pakistani relations by the example of such cooperation in vital sectors.

Fifth, this project would also reduce China's ability to dominate Turkmen gas, as Turkmenistan is now committed to repaying \$8 billion in loans to China for construction of a gas pipeline to China, which is scheduled to sell China 40 BCM of gas annually and possibly go up to 65 BCM in the future. Sixth, it would be a major step forward in the grand design of the United States to oppose Russia's monopolization of energy supplies or effort to reintegrate Asia under its own neo-imperialistic auspices, a project dating back to the Bill Clinton administration.²⁹

Seventh, it would ensure a long-term U.S. influence inside India's projected large-scale economic development. Thus, Geoffrey Pyatt, Principal Deputy Assistant Secretary of State for South and Central Asian Affairs, told the U.S.-India Business Council that:

According to a McKinsey report, India will need to invest \$143 billion in health care, \$382 billion in transportation infrastructure, and \$1.25 trillion in energy production by 2020 to support its rapidly expanding population. We aim to be India's leading partner in all three sectors.³⁰

More recently Assistant Secretary of State Blake told Congress that:

Current estimates suggest that 80 percent of the infrastructure required to sustain and support India in 2030 has yet to be built. The United States is home to some of the most competitive road, bridge, water supply, electrical grid, and telecommunications companies in the world. So we see an enormous opportunity in this growth to deepen our commercial partnership with India, working together with American companies to build the airports, power plants, water and sanitation systems, and fiber optic networks of India's future.³¹

Eighth, it would help position the United States to become the leading seller of arms to India. Indeed, with respect to arms sales, one should remember that arms sales are a major component of globalization and link together internal and external interest groups and governments.³²

New Silk Road and India's Interests.

The thrust of the project also plays to India's interests, even if they are not totally aligned with those of the United States. For example, the TAPI pipeline would certainly help alleviate India's energy shortage and skyrocketing demand for energy, particularly natural gas.³³ Indian analysts such as Mushiaq Kaw are optimistic that even before TAPI (or an alternative IPI pipeline) opens up in 2017, India could import Central Asian gas or electricity based upon hydropower over land-based routes through Afghanistan and Pakistan, specifically the Srinagar-Muzaffarabad, Gilgit, and Wakhan corridors.³⁴

Arguably one reason why India opted for the TAPI pipeline over the rival IPI pipeline was price: Iran was constantly raising the price of various elements of the costs that would be involved in the IPI.³⁵ Nevertheless,

India cannot refuse to consider the possibilities of the IPI, especially if progress on TAPI is not forthcoming. India continues to have reservations about U.S. policy toward Iran, as it still depends on Iran not just for energy, but also for access to the port of Chahbahar, a way to circumvent Pakistani obstruction of Indian trade to otherwise landlocked Central Asia. Moreover, India's investment in Chahbahar began despite blunt warnings from the United States against it, indicating the limits of U.S. power on so vital an issue to South Asian governments as energy.³⁶

More broadly, the Silk Road project is consistent with the previously stated views of Indian Prime Ministers and high-ranking officials that economic engagement with the United States is the central thread of bilateral ties in stating economic engagement drives strategic and political ties, and not vice versa.³⁷ As Raymond Vickery writes, "successful economic engagement engenders forces that are positive politically in meeting shared problems. Unsuccessful economic engagement creates the opposite dynamic."³⁸

Furthermore, the project is also consistent with the nature and goals of India's existing policies toward Afghanistan. For example, Harsh Pant writes that:

In consonance with the priorities laid down by Afghanistan's government, Indian assistance has focused on building human capital and physical infrastructure, improving security, and helping the agricultural and other important sectors of the country's economy. In the realm of defense, India's support has been limited to supplying Afghanistan with defensive military equipment, such as armored checkpoints and watch-towers.³⁹

Indian analysts also see the Silk Road project as consistent with what they term the Greater Central Asia project (GCA). Thus, Retired Brigadier General Vinod Anand observed in 2009 that Afghanistan was the fulcrum of a “GCA Concept” that sought to link South and Central Asia through economic and energy corridors. He noted that “By extension of plans for grand reconciliation between India and Pakistan, it provides [an] economic rationale to [the] go south policy of CARs (Central Asian Republics).” As he saw it, in this concept, India could present itself to Central Asia as the inheritor of past civilization-based and cultural linkages, and thus as best suited to play the role of a balancer in Central Asia. In addition, since Central Asian governments all want to pursue a so called “multi-vector” foreign policy, they do want to engage India in a mutually beneficial and comprehensive relationship, especially as they find themselves in the middle of the vortex of intense great power competition there.⁴⁰

More broadly, General Anand also offered similar observations about the shared interests of the United States and India.

The ‘Grand Bargain’ is meant to rescue the situation in Afghanistan by reestablishing relations between key South Asian stakeholders on the basis of cooperation and enlightened self-interest. The USA is keen to broker a genuine rapprochement between India and Pakistan – with hopes of sealing a deal over Kashmir – the aim being to strengthen Pakistan’s civilian democracy vis-à-vis the military and conservatives, and to induce them to make sincere efforts to crush Al-Qaeda and Taliban in Eastern and South Eastern Afghanistan and Western Pakistan. Within the above construct supporting them is to induct moderate Taliban into the Afghan Government, assisted by the democracies of In-

dia and possibly Pakistan, so that Afghanistan would become a bulwark of stability in the region providing substance to [a] greater Central Asian framework.⁴¹

OBSTACLES TO IMPLEMENTATION OF THE NEW SILK ROAD

Unfortunately, there are numerous obstacles to the realization of these plans.

War in Afghanistan.

Perhaps the most glaring problem is the continuation of the war in Afghanistan, which makes building a pipeline a much more hazardous and precarious affair than would otherwise be the case. Furthermore, outside of U.S. Government officials and military officers who continue to assert that we are making progress in Afghanistan, the vast majority of policymakers, scholars, or journalists do not have much confidence in the ability of Karzai or any other political figure to maintain power after 2014 and believe that whatever happens in Afghanistan will not be good.

Russian voices have been clear on this matter. For example, Fedor Lukyanov, the editor of *Russia in Global Affairs*, recently wrote that:

After the inevitable departure of American and NATO troops, the country will probably descend into an 'everyone against everyone else' civil war, just as it did in 1992-1995 after the fall of the pro-Soviet Najibullah regime. Only this time around, the internecine conflict could spiral to a much more dangerous scale because each of the warring factions will be backed by competing foreign powers, such as Pakistan, India, Iran, China, the United States, Russia, and Central Asian states.⁴²

Moreover, other Russian figures also publically expressed a mounting concern for the future of Afghanistan after 2014 and have sometimes offered scathing criticisms of conditions inside the country. These include Nikolai Bordyuzha, the head of Russia's Collective Security Treaty organization (CSTO), its military alliance in Central Asia;⁴³ Andrei Novikov, Head of the Commonwealth of Independent States (CIS) Anti-Terrorist Center;⁴⁴ Zamir Kabulov, now the Director of the Second Asia Department at the Russian Ministry of foreign Affairs and formerly Russia's Ambassador extraordinary and plenipotentiary to Afghanistan;⁴⁵ and Andrey Avetisyan, Russia's Ambassador to Afghanistan.⁴⁶

Troubling reports have also surfaced from other quarters. In 2011, Denmark's Defense Intelligence Service issued a "pessimistic" assessment which speculated that Afghanistan would not be able to defend itself without NATO forces and that the Taliban's influence would grow.⁴⁷ Similarly a United Kingdom (UK) Ministry of Defence report—though allegedly not a representation of official views—argued that, "NATO troops in Afghanistan find themselves in a similar situation to the failed Soviet invasion and are also waging a campaign which is 'unwinnable in military terms'."⁴⁸ In addition, a classified but leaked NATO report suggests that Taliban captives believe they are winning the war and are not demoralized; that collaboration is occurring between insurgents and local government officials and security forces; and that many Afghans are "bracing themselves for an eventual return of the Taliban."⁴⁹

Many noted U.S. experts also see little reason for optimism. For example, Dr. Steven Metz told an interviewer,

I simply cannot imagine a situation where the Karzai government defeats the Taliban, imposes stability over all of Afghanistan and builds an economy capable of sustaining Afghanistan's population growth (which is one of the highest on earth) and supporting a massive security force (or finding other employment for the hundreds of thousands of members of the police and army).⁵⁰

Taken together, these opinions suggest that, after 2014, the government of Afghanistan will fail, and that the country could then enter into civil war.⁵¹

Questions About U.S. Strategic Coherence and Political Will.

Some independent observers (including this author⁵²) feel that it is difficult, if not impossible, to discern a coherent U.S. strategy for dealing with complex issues involved in the future of Afghanistan and neighboring Central Asia. They note that the chief spokesman for U.S. Central Asian policy, Assistant Secretary of State for South and Central Asia Blake, has testified before Congress that U.S. policy in Central Asia remains primarily bound up with the war in Afghanistan.⁵³ Thus, they wonder, can the United States and the West devise a coherent Central Asian strategy that is not bound to the war in Afghanistan but to more enduring regional realities and interests?

At the same time, this posture of Afghanistan's war first and everything else second has consequences for the United States in Central Asia that directly reduce the chances for the Silk Road project to realize its objectives. By letting the war drive regional policy, the United States has visibly "forfeited" its ability to shape

outcomes and react positively to regional economic-political challenges. If anything, as Blake admits, regimes in Central Asia are moving further away from good governance despite our massive presence.⁵⁴

If the United States deems the area to be strategically important or even vital to its interests, then Washington will have to compensate for the military withdrawal by a vigorous and well-funded economic and political presence there to uphold the regional balance against forces like Russia, China, and the Taliban, who each seek to undermine the status quo. Alternatively, if the United States does not deem Central Asia to be a critical policy area after 2012, then appropriations will dry up and trigger far-ranging military, economic, and political consequences.

When this author queried State Department officials in December 2011 about the future of funding and the spending needed to make the Silk Road into something more than a rhetorical contrivance, all he heard was a shamefaced silence. Similarly, the majority staff of the U.S. Senate Foreign Relations Committee published a report strongly advising support for the project in late-2011, but there has been no word from the White House or the U.S. Government supporting that endeavor.⁵⁵ Indeed, the President has not bothered to say a word in public about supporting the Silk Road project despite the obvious priority of Afghanistan.

Economic Considerations.

The high degree of uncertainty adds significantly to the difficulties involved in building a multi-national pipeline through a war zone. These considerations may be a major reason for the fact that, as of this writ-

ing, no international firm is ready to finance the TAPI project.⁵⁶

Furthermore, a 2011 study raised several concerns.⁵⁷ It indicated that many projects still have no cost-benefit analyses; claims made for per capita income growth are not sustained by solid analysis, and projects may not create enough jobs for Afghanistan to meet population growth—not to mention the fact that experts estimate that millions of young men will enter Central Asian labor forces, even as jobs associated with the U.S. presence continue to decline.⁵⁸ It noted that many projects have not been subjected to cost-benefit analysis. It also observed that estimated rates of return for projects would only be viable under optimal market-based conditions, and thus do not reckon with corruption, violence, and lack of state capacity. The last is a quite valid concern, given that those who are in power and are benefitting from arrangements are likely to attempt to preserve the status quo.⁵⁹ That is true for Afghanistan as well as the region. To illustrate, the many opportunities for predatory and corrupt economic behavior at customs and border installations preclude a genuine free-trade zone: it now takes 71 days to export an item from Uzbekistan and 92 days to import one.⁶⁰ To date, the United States has not truly pushed regional integration efforts hard enough to make a serious dent in the predatory practices of local governments.

Although some of these projects are moving forward, they are not doing so in an integrated fashion, and the whole idea of the new Silk Road proclaimed by Secretary Clinton and Assistant Secretary Blake is foundering.⁶¹ In addition, those projects that are currently ongoing will not be completed before the United States withdraws, and the capital needed to complete them is diminishing.

Concurrently, all the agreements for projects that comprise the Silk Road operate exclusively within the context of the NDN, and this leaves their post-2014 continuation and maintenance very open to doubt.⁶² Furthermore, given the wrenching fiscal stresses and domestic political context confronted by the United States, it is not clear that Washington either has the means, let alone the strategic vision, to implement a coherent post-Afghanistan Central Asian strategy. Nonmilitary funding for the region in Fiscal Year (FY) 2010 was \$186.2 million, an amount hardly enough to spur the project on the scale that it needs to survive. Future funding program for Central Asia will most likely come under very close scrutiny and experience major cuts. Those forces already are in play. The Pentagon halved the request for funding for the Afghan National Security Forces (ANSF) in the FY 2013 budget.⁶³

Another important factor is the level and type of governance assistance that the United States and the international community give to Afghanistan.⁶⁴ To date, most aid money has been allocated to large showy projects at the expense of the more mundane governance programs that might actually allow infrastructural and economic projects to realize their maximum potential.⁶⁵ Meanwhile, civilian agencies in Afghanistan only get 20-30 percent of all government spending and only about one-fifth of that reaches ordinary people, with the rest going to contractors and intermediaries.⁶⁶

To compound matters, the Istanbul Conference in late-2011, which the United States had hoped would give birth to a regional solution for resolving issues associated with Afghanistan, proved to be a failure,⁶⁷ thereby adding to a long list of failed efforts to initiate

regional cooperation programs in Central Asia.⁶⁸ With respect to outcomes, the subsequent Tokyo conference of July 2012 was not much better. Although donors pledged \$16 billion for Afghan aid over 4 years, the roughly \$4 billion a year falls short of the \$6 billion per year that Afghanistan's national bank says is needed to foster economic growth through the next decade.⁶⁹

View of Central Asian Governments about the New Silk Road.

Uzbekistan's President Islam Karimov publicly stated in 2010 and repeatedly thereafter that an unstable and conflict-torn Afghanistan means that the threat to all of Central Asia will remain.⁷⁰ Tajikistan's leadership has also made similarly repeated statements.⁷¹ Although the observations made by the well-known journalist and regional analyst Ahmed Rashid may seem somewhat exaggerated to persons from outside the region, he may have understated the threat perceived by regional governments, which believe their fate is linked with that of Afghanistan.

The consequences of state failure in any single country are unimaginable. At stake in Afghanistan is not just the future of President Hamid Karzai and the Afghan people yearning for stability, development, and education but also the entire global alliance that is trying to keep Afghanistan together. At stake are the futures of the United Nations, the North Atlantic Treaty Organization (NATO), the European Union, and of course America's own power and prestige. It is difficult to imagine how NATO could survive as the West's leading alliance if the Taliban are not defeated in Afghanistan or if Bin Laden remains at large indefinitely.⁷²

Perceptions about declining will on the part of the United States and its allies to allocate resources or to formulate any kind of coherent nonmilitary strategy will not inspire Central Asians to formulate an integrated regional strategy.⁷³ However, despite having reasons to collaborate, the local states also see each other as rivals and competitors. Kazakhstan and Uzbekistan contend for leadership in the region, Kazakhstan through economic leverage, and Uzbekistan by throwing its weight around and trying to bully its neighbors.⁷⁴

The countries of the region therefore have not developed effective collective security institutions. There is, in fact, little tradition or history of genuine regionalism or collective action. Security organizations in Central Asia are initiated—if not imposed—by foreigners, and these organizations, the NDN, the CSTO, and the Shanghai Cooperation Organization (SCO) all represent “virtual regionalism,” not the genuine article. This regionalism is entered into as much to preserve the domestic status quo or to secure material and political benefits from key foreign states as for any other motive.⁷⁵

In similar fashion, George Gavrilis recently noted that none of Afghanistan’s neighbors truly espouse multilateralism. Every regional multilateral initiative of the past decade has failed, including those convened to discuss the drug trade which might be considered a multilateral scourge. The genuine regional accomplishments of the past decade in fact have actually little to do with multilateralism.⁷⁶ Therefore, one should not expect regional cooperation on a large scale, unless they were initiated within the NDN or some alternative U.S. framework.⁷⁷

Nevertheless, there have been recent indications of cooperation in the region on bilateral projects involving transportation and infrastructure projects for the provision of electric power from Central Asia to Afghanistan.⁷⁸ For example, as of 2008, Tajikistan and Kyrgyzstan signed accords with both Pakistan and Afghanistan to begin construction on a 1,300-megawatt power importing project from the Central Asian states to the South Asian ones. The Asian Development Bank, World Bank, and Islamic Development Bank would provide financing: 1,000 megawatts would go to Pakistan and 300 to Afghanistan.⁷⁹ By 2010, although the project still existed only on paper, Russia signaled its intention to join the project, clearly to prevent Tajikistan from reorienting its economic and energy programs away from Russia and to reassert its presence in Afghanistan and Pakistan.⁸⁰

As another illustration, in late-2009, Uzbekistan launched an electric power line to Afghanistan that bypassed Tajikistan, no doubt to prevent the latter from gaining access to the line. This line also allowed Uzbekistan to withdraw from the unified energy system of Central Asia. As a result, by early-2010, Uzbekistan was sending 2.3 kilowatt-hours daily to Mazar-i-Sharif and Kabul.⁸¹ Similarly, Uzbekistan has built 11 bridges from Mazar-i-Sharif to Kabul.⁸² More recently, Uzbekistan has opened a railroad line from Heiraton (Hayaratan) on its side of the border to Mazar-i-Sharif, from which it hopes to earn about \$32 million annually. The United States and the Asian Development Bank supported the project.⁸³

Reservations on the Part of India.

India, too, has a range of concerns that might undermine its commitment to components of the New Silk Road project, that are captured by the following commentary.

India has concerns regarding project security after the 2014 withdrawal of U.S. forces from Afghanistan. More immediately, the GSPA between Afghanistan and Turkmenistan is still pending, despite the two having signed MoUs addressing long-term cooperation in the gas sector and providing full security to TAPI. Only once the GSPA has been signed can commercial partners to build, finance, and logistically support the pipeline be attracted. At least one Turkmen energy analyst doesn't think a GSPA will be signed anytime soon, delayed in part by that country's own concerns regarding post-2014 security in Afghanistan. Concerns also exist regarding Pakistan's ability to ensure TAPI's safety. Sections of the Pakistan armed forces and intelligence remain sympathetic to the Taliban and could conspire to attack the pipeline, particularly in light of tepid popular support for the project. Pakistan, however, plans to place security forces along the pipeline and also create settlements near its route. To the degree the security of TAPI—which will run through the Herat and Kandahar regions of Afghanistan and Baluchistan province in Pakistan—cannot be ensured, ADB's ability to support the project will wane.⁸⁴

THE COUNTERCOALITION: CHINA, RUSSIA, PAKISTAN, AND IRAN

The joint Indo-American partnership has predictably stimulated a countercoalition, comprised of China, Russia, Pakistan, and Iran. The nature of their

operations with regard to the larger Silk Road project and the TAPI pipeline indicate the fluidity of the dynamics of partnership and rivalry in regional as well as world politics.

China.

The most potent challenge comes from China. China can be counted on to use its growing presence in Central Asian economies – for example, in terms of its ability to influence those states’ efforts to raise money on international markets – to block this scheme that it sees as benefiting Washington and not China.⁸⁵

Furthermore, there is no doubt that both China and India are currently undergoing major military buildups, and that there is a more honest awareness in both capitals of their evolving strategic rivalry. This rivalry extends from Southeast Asia to Central Asia. Thus, China systematically has blocked India’s membership in the SCO.⁸⁶

Certainly, China has also far outpaced India to date throughout the region despite India’s undeniable rising wealth and power.⁸⁷ China is far ahead of India in competing for access to Central Asian hydrocarbons and resources. In Afghanistan, China has signed major copper and coal mining, power generation, and road deals as part of the package of agreements enabling its investment in the Aynak copper mine. It has also agreed to build a railway with Afghanistan connecting the Aynak copper mine to Torkham on Afghanistan’s northern border with Pakistan and Heiraton.⁸⁸ As another illustration, while India is only now trying to persuade Turkmenistan to grant it blocks for exploration, China already gets 40 BCM of Turkmen gas annually, plans to increase that figure to 65 BCM,

and has extended loans to Turkmenistan totaling \$8 billion.⁸⁹

At the same time, many Chinese analysts perceive the burgeoning partnership with the United States as more than an expression of India's efforts to carve out a greater role in Asia. They see this partnership between its strategic rivals as part of a joint albeit generally American-led effort to encircle or at least contain China.⁹⁰ Thus, it has begun a systematic strategy of creating its own version of the Silk Road through massive investments in rail, road, air-travel, infrastructure, telecommunications, pipelines for oil and gas, and so forth⁹¹ that would extend across the Himalayas to Iran and beyond, and would help tie together China, Pakistan, Afghanistan, and Central Asia.⁹²

That infrastructure network would allow China to overcome its well-known Malacca Strait problem, whereby the U.S. or Indian navy could interdict energy supplies from the Middle East or Africa.⁹³ China recently pulled off perhaps the grandest coup in overcoming that problem by acquiring control of Pakistan's Gwadar port. This will give China a link to Iranian oil and gas as well as other gas coming from the Middle East and Africa via either a landline originating in Gwadar, or via trucks travelling on newly constructed roads. Given its control of Gwadar, China supports the IPI pipeline and has evidently given Pakistan sufficient assurances that, if India drops out, it will replace India (and add its financial clout to the construction of this pipeline).⁹⁴ China can also establish Gwadar as an alternative to the seaport of Chahbahar, the Indian operated Iranian port, for Central Asian exported goods.⁹⁵

Russia.

For its part, Russia is deeply apprehensive about what comes once ISAF and U.S. forces leave Afghanistan. Russia claims that it was told there would be no permanent U.S. military bases in Afghanistan after 2014 and has reputedly demanded that U.S. forces leave and that the bases be dismantled. It also is reputed to have demanded that the NATO ISAF force report to the UN.⁹⁶ Therefore, Russia will undoubtedly (along with China) oppose such a presence even if it does materialize.⁹⁷

Militarily, Moscow is trying to build up its own forces and those of the CSTO. As the Russian press currently reports:

Russia's future role in Afghani affairs is now the subject of animated behind-the-scenes-haggling between Moscow and the Central Asian capitals. The rulers of the former Soviet republics neighboring on Afghanistan are really scared. They want Russia to be beside them and 'hold their hands' at the crucial moment.⁹⁸

Russia remains a staunch friend of India and, in view of the mounting rivalry Russia has with China for influence in Central Asia, has even sponsored India for membership in the SCO. However, Russian support for an Indian presence would also be limited, since it goes against the grain of Russian security policy for Central Asia to accept other powers there. To illustrate, India's effort to refurbish and maintain an air base at Ayni in Tajikistan was quashed when the Tajik government told India that Moscow opposed any foreign bases there, regardless of to whom they belonged.⁹⁹

Russia is so anti-American that it clearly regards any hint of a long-term U.S. presence in Central Asia with great suspicion. It also wants to thwart Chinese commercial penetration of Central Asia. In that light, while it appears that Moscow will not “step on the same rake twice” and become massively involved in the future Afghanistan, it certainly is poised to insert its own influence into the country and the region with its own integration plans. Thus, Russia seeks to promote its own economic integration project in the CIS, a priority for President Vladimir Putin¹⁰⁰ that includes initiatives like the Eurasian Customs Union to which both Kazakhstan and Kyrgyzstan have given their assent, and the Eurasian economic community. Perhaps more illuminating, since 2010, Moscow has decided to support TAPI.

Russia’s support of TAPI would go a long way towards gaining Turkmenistan’s support in other Russian endeavors in the region. The Russians also certainly do not want to anger India by continuing to publicly oppose TAPI. Now that China is accessing Central Asian natural gas from the Turkmen pipeline, the Indians are determined to get access to it as well. In general, the Russians welcome the growth of Indian influence in Central Asia as a counterweight to China’s investment and growing power there. In the past, Russia opposed TAPI in part because successive U.S. administrations enthusiastically supported it. But now, as U.S. relations unravel with Pakistan—its traditional ally in the region—Russia wants to establish itself as more friendly to Pakistan. Supporting TAPI is essential if Russia is to improve its relations with Islamabad. And since TAPI would run through Afghanistan, getting on board the project could also give Russia back a foothold of influence in that war-ravaged country, where it fought a 10-year, losing conflict from 1979 to 1989.¹⁰¹

Other analysts think Moscow still wants to develop a north-south infrastructure and transportation network along the lines of the Silk Road project that would integrate a vast geopolitical space from Russia to south Asia and the Middle East through Central Asia. Thus support for TAPI would fit logically into that scheme.¹⁰² So would Russia's support for the rival IPI pipeline. (Gazprom's officers have expressed their support for the IPI pipeline, because it would greatly facilitate regional economic development.) The reasons for supporting the IPI again are quite obvious and similar to those driving support for the TAPI pipeline. That support would enable Russia to gain leverage on India and Iran, thereby balancing Chinese leverage on Iran, since China, as we shall see, supports the IPI and is invested heavily in Iranian energy. It would checkmate U.S. plans and reduce U.S. influence in Central Asia, while preserving Russia's ties to India via support for India's energy and economic development—a program also supported by enabling the Oil and National Gas Cooperation Videsh to gain access to Russian energy in the Far East.

Pakistan.

While Pakistan is obviously a partner in TAPI, it is also India's most determined rival in Afghanistan. Although U.S. officials have long recognized that a large-scale Indian presence in Afghanistan would be anathema to Pakistan, they have failed to come up with any solution that either assuages or sufficiently overrides Pakistan's concerns. Meanwhile, Pakistan suffers from a truly desperate energy situation and a checkered history of failed efforts to deal adequately

with its energy needs.¹⁰³ Like India, it too must resort to multilateral projects and coalitions to obtain foreign energy sources. So, even if the TAPI pipeline is built and flourishes, absent a larger change in the overall context, Pakistan is unlikely to support the larger visions of the New Silk Road. For those reasons, coupled with the fact that Iran is strongly urging Pakistan to join the collaboration and has even offered to finance construction of the IPI pipeline, the Pakistani government has decided to go ahead not only with TAPI, but also with the IPI pipeline. In doing so, Pakistan has essentially dismissed Secretary of State Clinton's threat of sanctions on Pakistan if it proceeded with this venture.¹⁰⁴

Iran.

In reality, Iran is not a lead player in the countercoalition. Although some Iranian experts are fully aware of the benefits they would derive from the New Silk Road project, they are obviously strongly opposed to the U.S. plan because of its all too visible effort to isolate Iran and to reduce the influence of Russia, not to mention China, in the region.¹⁰⁵ At the same time, Iran does have strategic interests in the IPI pipeline. Thus, Iran is collaborating with China and is prepared to set up a large refinery worth \$4 billion at Gwadar. In other words, Iran is integrating itself with China's larger Silk Road project.¹⁰⁶

CONCLUSIONS

As of this writing, there is not yet a clear sign of what will replace the ISAF military presence after 2014. If the United States is unable to develop a coher-

ent approach to Afghanistan and Central Asia after 2014, the Silk Road will remain what Johannes Linn, a former senior official at the World Bank and CAREC, called, “a vision and call to action rather than a well-articulated and organized strategy.”¹⁰⁷

Another recent assessment also speculates about the possible direction of U.S. strategic thinking regarding the region.

In the post-Afghan period, it must be considered that Central Asia may not be particularly vital to the U.S. strategic interest. A more nuanced approach, examining the potential merits and drawbacks from engagement with each country in this complex and ethically divided region will be important, and can help the United States avoid the pitfall where every foreign issue becomes ‘critical’ to the U.S. security interest, and leads to an inefficient setting of priorities and allocation of resources.¹⁰⁸

Although this prediction may prove to be accurate in the future, it would complicate matters, given that Central Asia does present a set of vital interests for India, a region where India can play a key role.

Perhaps of greater consequence is the fact that, given the widespread expectation of post-2014 chaos in Afghanistan, every regional actor is hedging bets and preparing for the worst. If a vacuum were to develop, it would inevitably be filled by a range of actors, with intensified competition among the great, regional, and local powers for influence in Central Asia. Given that both Moscow and Beijing believe that the United States is a power in decline, they may be inclined to take more aggressive actions than they would otherwise.

Such an outcome would prove to be counterproductive to the larger U.S.-India relationship, which is a strategic necessity to both countries, given their individual and mutual vital and important interests. In that light, either new resolve, a new infusion of resources, or new thinking is needed to sustain an effective and thus viable and durable joint U.S.-India strategy in the region. With respect to the latter, there is a compelling need for U.S. strategic leaders to avoid viewing Central Asia through a narrowly focused lens that is tainted by self-interest.¹⁰⁹ Instead, they should adopt a broad perspective, one that will enable them to continue their efforts to shape the region for the betterment of its inhabitants as well as for the attainment of Indo-American interests.

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CHAPTER 10

DISCUSSANT COMMENTS

Leif Rosenberger

Striking the right balance between conflict and cooperation goes to the heart of the International Relations (IR) field of study. As fate would have it, the papers given at this workshop by Dr. Richard Matthew and Dr. Stephen Blank are polar opposites in this dichotomy.

Blank comes from the classic “realism” school in IR. His assumptions reflect the worldview of Thomas Hobbes and the law of the jungle. His assumptions about IR also reflect balance of power concepts of Hans Morgenthau. The major states in the world compete against each other in a rigid zero-sum game for power and influence.

In this regard, Blank keeps score. Russia and China are huge monoliths reportedly winning “the Great Game” for power and influence in Central Asia. Blank says the United States and India are weaker monoliths in Central Asia that are struggling to catch up. Each country faces a security dilemma.

To be safe in the world, Blank says countries should try to become powerful economically and militarily. Countries should either compete in an arms race or ally with a powerful country. Political influence is used to gain access to energy and raw materials or to open doors for the exports of the great powers. Economic power is used to develop military power.

Matthew, on the other hand, has a different worldview. In his world, all the countries face common environmental threats. Climate change threatens planet

earth. Instead of seeking maximum economic growth at any social or environmental cost, countries should cooperate with each other and pursue socially and environmentally sustainable development.

REACTIONS STIMULATED BY MATTHEW'S PAPER

Now let us turn to Matthew's paper. He divides his paper on environmental security into three parts: a) historical development, b) the major areas of research and criticisms, and c) a short section on the application to South Asia.

In his section on historical development, Matthew discusses Thucydides and the conflict between Athens and Sparta. He says the first defining moment for environmental security occurs with the idea that self-sufficient societies are less vulnerable and more peaceful. A modern version of this would be the U.S. quest for energy independence. U.S. shale oil makes the U.S. less dependent on Mideast oil and better able to pivot to Asia. The populist version of energy independence is "no blood for oil." A more objective view would be that this quest for self-sufficient societies can degenerate into economic nationalism.

I would challenge the quest for self-sufficiency and point to the experience of France and Germany after World War II. Instead of each country pursuing economic nationalism, Jean Monnet fostered economic interdependence with the European Coal and Steel Community. Mutual security fears and hatred gave way to shared prosperity and peace. Today war between France and Germany is almost unthinkable.

The centerpiece of Matthew's historical development focuses on the theories advanced in 1798 by Thomas Robert Malthus, the English economist, who predicted mass starvation for mankind on grounds that populations will always outstrip the food supply, because food supplies grow arithmetically while populations grow geometrically. Malthus passed his legacy to neo-Malthusian scholars like Lester Brown, who pessimistically claim that the food shortfall in Africa and South Asia is merely the tip of the proverbial iceberg. They claim that food shortages in those regions are indicative of something far more ominous: the world food supply—the total amount of food available to all of the people in the world—is being squeezed. If they are right, humanity itself can ultimately be at risk.

Interestingly enough, rising grain production is not always used to feed people. In recent times, grain has been diverted to biofuel. Environmentalists who are worried about climate change applaud using biofuel because it means less fossil fuel and cleaner air. However, the move toward biofuel has caused food prices to rise. This is an important tradeoff: sustainable development in one area (cleaner air) may be having an impact on the global food supply, making food less affordable and development less sustainable for the global poor.

Even if a world food crisis is not imminent, we should ask ourselves whether trends have indeed invalidated Malthus's thesis, or whether they have merely transformed or deferred it. One thing is certain. Given that the population in 2035 could be about twice what it was in the 1990s, there will have to be a lot more grain available to meet the demand.

Most of the ways to grow more grain result from greater farm output, which can be increased either by developing new farmland or by making existing farmland more productive. The world food supply also benefits from reducing the demand for feed grain (e.g., reducing population growth) and by developing new sources of food. At the same time, there are many seemingly marginal changes in how the world manages farming that could substantially affect chronic regional shortages. Efforts to make better use of existing cropland, to reverse deforestation, to vest women with rights they now lack in some agricultural communities, to modify traditional farming practices, to reduce losses of each harvest to pests and decay—each and all could increase the amount of grain that is available each season for consumption by humans and animals.

Profound systemic change, such as was prompted by the principles of the Green Revolution, is more problematic. Biotechnology, once the hope of many agricultural specialists, may never rival the impact of the Green Revolution; but it is also probably too soon to write it off. Unanticipated breakthroughs, new theories, and proof that genetically altered food-stuffs do no harm to humans when consumed directly or through animal protein—all have the potential to stimulate quantum shifts in the global supply of food. Yet we have seen enough constraints to question anyone's forecast of a food cornucopia.

In the near term, strategists need to avoid the twin pitfalls of complacency about a world full of food and doomsday alarms about a global food crisis. What is needed from world leaders is a better understanding of the global food regime and its links to other regimes (i.e., energy and water), an appreciation of the relations between environment and security, and

a willingness to engage in an unprecedented level of cross-sector collaboration in the formulation of a long-term international food strategy. One consequence of failure could be resource-driven conflicts that might have been avoided had policymakers understood the nature and extent of the world food supply problem and taken appropriate steps to deal with it.

What is needed to avert that outcome is a comprehensive strategy that synthesizes diverse approaches to improving the growth, harvesting, storing, and distribution of the annual crop of grains, while prioritizing resources for the most promising areas of improvement. Thus, biotechnology, the sensible expansion of cropland, the responsible extension of the Green Revolution technology to neglected arable land, continued basic research into plant genetics, and smarter public policies all are important in this holistic approach. Curbing population growth and other demand reduction programs are also essential parts of any plan to stabilize the world food supply for the long term. None of these objectives will be easy to define or carry out; they all have the potential to affect profoundly the values, cultures, societies, and beliefs of the affected peoples.

When Norman Borlaug received the Nobel Prize in 1970 for his research leading to the Green Revolution, he warned that the new methods would provide only a limited respite, 30 years at most, in which governments could develop and carry out supply and demand policies for dealing with the world food supply challenge. As we move beyond the end of Borlaug's window of opportunity, the world is still groping for that strategy. Until we develop one, there will continue to be those who yearn for simple solutions to the complex problems of world food supply and demand.

The real danger is to relegate the world food supply to the backwater of strategic studies. Strategists need to understand that the world food supply is a global challenge that bears most heavily on peace and prosperity in the international system. World leaders have an unprecedented opportunity to move this global issue to the top of their agendas. If they fail, their successors may have to deal with the problem “when it comes to visit.”

In addition, Matthew cites theories connecting scarcity to conflict. He cites war between Israel and Jordan over water in the past. A more current example is the conflict taking place over water that flows from Afghanistan into Pakistan. The more the Afghans develop their country and use this water, the less water is available to Pakistan. But conflict over resources like water does not just occur between states. Conflict also occurs inside states between different sectors of the economy.

A good example of this conflict inside the nation-state is occurring today in Afghanistan. For instance, Afghan mining projects require vast quantities of water. However, Afghan farmers also need water for irrigation. Afghanistan also needs water for hydropower. In other words, there are tradeoffs among the competing uses for water.

While getting buy-in from competing local stakeholders is not easy, there is hope. In the United States, for instance, the states that compete for water benefit from the work of economists who can demonstrate their tradeoff analysis. They can show Afghan economists the diminishing returns when farmers go beyond trickle irrigation.

At the same time, sustainable development also needs to be financially sustainable. The cost of com-

pleting the economic development projects is not just limited to the technical costs. The real costs of mining require a 360-degree approach that includes community outreach and education and training of the future workforce on the front end.

If local stakeholders see the benefits of the projects for themselves, they will encourage this shared prosperity. Just as French and German businessmen buried the hatchet when they saw mutual benefit, local stakeholders who previously saw violence as the only option will now see a viable alternative. As peace breaks out around the projects, it will be possible to reduce the size of the Afghan police and military forces, thereby reducing the large budget deficit that the central government would otherwise have to shoulder. This net assessment shows how local and provincial progress can make things more affordable for the Afghan government.

Matthew also cites the Rio Earth Summit in 1992 and the United Nations Framework Convention on Climate Change (UNFCCC), funded in 1992 as new benchmarks for environmental security. He argues that these events coincided with the end of the Cold War and the damage that the Cold War did to the environment.

But 4 years later, there was still no consensus on something as basic to the environment as food security. Thousands of policymakers, bureaucrats, and environmentalists from 196 countries descended on Rome, Italy, for a World Food Summit from November 13-17, 1996. Whether they were technologists or those dedicated to modifying the behavior of food producers and consumers, they tended to fall into one of two polarized camps: the pessimists (latter-day Malthusians) and the optimists. Each group believed itself to represent realism.

Pessimists were alarmed about clear signs that the world is running out of food, characterized by images of people starving in Somalia in 1992. They asserted that the famine in Somalia was merely representative of the ongoing food crises in Africa and parts of South Asia. They pointed out that in 1983 and 1984, a million Ethiopians died in another terrible famine.

Optimists saw things differently. Their world generally faced a food glut; they paid their farmers handsomely not to grow food, but in order to avoid surplus. Their farmers had been frustrated as prices of agricultural commodities declined in the previous 15 years; they made the case that other lines of work were far more promising than agriculture. Throughout the conference, the two groups remained worlds apart.

Matthew also argues that there are regional differences when it comes to environmental security. He persuasively argues that South Asia has more than its share of environmental problems. There are also regional differences between Africa and China.

Food problems in Africa, primarily sub-Saharan Africa, are most often characterized by insufficiencies due to war, civil strife, flawed government policies, and poverty. The latter is defined as the inability to purchase the minimum amount of foodstuffs to sustain life, even in periods of relative plenty. Hence, world response to these conditions has taken the form of relief efforts to solve immediate problems, sometimes with little official regard for the long-term effects of the interventions on domestic agricultural markets.

In contrast, food problems in China tend to be different from those in Africa, in both form and scope. Whereas Sub-Saharan food crises have been with us in increasing numbers for several years and there are no imminent prospects for slowing the trend, China's

challenges lie mostly in the future. Its enormous and growing population has the potential to destabilize agricultural production throughout the world. Its growing affluence has begun to increase demand for meat products, a path that can be sustained only by increasing its production and importing grains. Whereas the plight of individual African states will have limited effect on the well-being of other regions, China's size and location make it inevitable that its claim to the wherewithal to feed its people in 2020 could indeed affect contiguous states as well as distant regions capable of producing grain surpluses.

In addition, Matthew says that the bulk of the environmental security research focuses on the first "key theme" — how environment factors lead to conflict. He cites:

Thomas Homer-Dixon who says resource scarcity contributes to civil war;

Colin Kahl who says resource scarcity leads to state failure; and

Indra de Soysa who says resource abundance in commodities such as diamonds and oil can be a curse and contribute to conflict.¹

Matthew says there is considerable criticism of the research that connects the environment and security.

Ole Waever and Dan Deudney dislike 'securitizing the environment.'

Dan Deudney also says that it's wrong to link environmental factors to the onset of violent conflict. Why? Deudney says countries tend to meet resource scarcity through innovation and trade rather than war.

Stephen Walt says security studies should not address the environment and should only focus on war.

Nancy Lee Peluso and Michael Watts are skeptical of simple models of causation.²

So what are we to think about the connection between resources like the world food supply and conflict? Clausewitz reminds us that:

the first, the supreme, the most far-reaching act of judgment that a statesman and commander have to make is to establish . . . the kind of war on which they are embarking; neither mistaking it for, nor trying to turn it into, something that is alien to its nature.³

That admonition applies equally to the strategist seeking to understand what motivates or deters other states in a time of relative peace. For a while during the oil crisis of the 1970s, food was sometimes called the green weapon, apparently on the assumption that the embargo of one commodity could be countered by the embargo of another. At the time, no one took the concept very seriously. Now, however, with the world's population half again what it was at that time, food – who has it, who does not – and the arable land from which it is produced, become legitimate strategic considerations.

Strategists need to explore aspects of world agriculture and suggests ways to examine and think about arable land and the world food supply, considerations that strategists are sometimes too quick to dismiss. Some support one or another of the two opposing views, because of folk wisdom or prejudice. Some believe that the “world is full of food”; others believe

that little can be done to avert starvation in Africa. Still others argue that the world food supply is not vital to U.S. national interests. Common to all views often is a lack of opportunities to examine the matter in depth.

To encourage the study of food and arable land as strategic assets, strategists need to address the supply of food worldwide, and to a lesser degree, the demand for it. They need to look at factors that determine the supply of food and at circumstances that can alter — for better or worse — the ability of producers to keep pace with demand. Most important, they need to examine the implications of success or failure to maintain a supply of basic foodstuffs that stays just ahead of the demand. Strategists need a clear, even if rudimentary, understanding of the forces that determine whether tens of millions of people will live lives of feast or famine. Such an understanding will help them shape national policy on matters with potentially unprecedented peacetime consequences.

REACTIONS STIMULATED BY BLANK'S PAPER

In contrast to the broad scope of Matthew's paper, Blank's paper is a bit more focused. His subject is the U.S.-Indian "Grand Design" for Afghanistan and Central and South Asia. While this U.S.-Indian Grand Design includes a strong military component, Blank provides a detailed case study of the New Silk Road.

The New Silk Road is an ambitious vision for a regional trade, transport, and transit network for Central and South Asia. If successfully implemented, the New Silk Road would boost trade and job creation. Blank gives lots of details on the upside. Unfortunately, he argues that this grand design is not durable or sustainable. That is because of all the constraints that prevent "sustainable development."

Blank says the most glaring obstacle is the war in Afghanistan. Sustainable development is difficult in a war zone. He challenges the optimism of the U.S. military and the Barack Obama administration. He says the situation will only get worse when the U.S. military draws down its forces between now and the end of 2014. He adds that fiscal problems and political gridlock in the United States are further constraints.

To make matters worse, Blank maintains that Russia and China are dead-set against the New Silk Road and arguably have the power and influence to thwart it. As if this was not bad enough, Blank says the geopolitical rivalries of the countries in Central and South Asia prevent economic cooperation.

At first glance, Blank's narrative appears persuasive. There is just one problem. Economic cooperation in the region is an overriding trend, not an aberration. In this regard, the Afghan-Pak Transit and Trade Agreement (APTTA) is a recent example of economic interdependence, which counters the critical voices in a few ways. First, the geopolitical experts said Pakistan would never agree to this pact. They were wrong. Blank marginalizes its importance by saying APTTA is only a bilateral treaty. But many international trade specialists argue that in a region as diverse as South and Central Asia, a bilateral trade agreement like APTTA is an essential building block or template for broader multilateral trade agreements in the future.

In Central Asia, the vast road network known as the Northern Distribution Network (NDN) that is used to supply nonlethal aid to our brave men and women in Afghanistan is another good example of economic cooperation. A few years back, almost all the agencies in the U.S. Government and Blank's stable of Central Asian "experts" rushed to judgment and said the NDN

idea “would never work.” They said the Chinese and Russians, who enjoy “overwhelming power and influence” in the region were “dead against it” and “would never allow NDN to happen.” It was a “naïve” idea. It would be a target of terrorism.⁴

Thankfully, General David Petraeus ignored this well-meaning but ill-advised pessimism from academe and instead listened to Colonel Ted Hodgson, the brilliant logistics specialist in the J4 at U.S. Central Command (CENTCOM). Hodgson asked,

What if the Southern GLOC (Ground Lines of Communication) closes someday? How are we going to resupply our troops without a viable Northern GLOC alternative? Airlift would be a budget buster.⁵

Fortunately, Petraeus bought Hodgson’s logic and was not bumped off course by the so-called Central Asian experts inside and outside the U.S. Government. As one CENTCOM official put it at the time: “It’s simple. General Petraeus got a 99-to-zero vote of confidence from the US Senate. That’s enough democracy for us.”⁶

The point is that Petraeus did what was right for our troops. Fortunately, he had enough courage to ignore the so-called experts. When the Southern ground lines of communication (GLOC) was closed, the U.S. military had the NDN as a viable alternative to use to resupply our troops. Why did NDN work and why is it a success story? It is because the NDN is all about commerce, not geopolitics. The Central Asian countries make money from the resupply routes as well as the retrograde of equipment leaving Afghanistan.

Another success story is the 420-kilometer transmission line linking Kabul (Afghanistan’s capital)

with neighboring Uzbekistan. Juan Miranda, Director General of the Central and West Asia Department of the Asian Development Bank (ADB) says that “for the first time in more than a generation” Kabul’s four million people can now enjoy the benefits of a stable source of electricity.⁷ This power line, completed in 2008, is one of the largest infrastructure projects ever undertaken in Afghanistan. The transmission line goes across some of the most challenging mountainous terrain on earth. Reliable, 24-hour electricity has been a strategic enabler for business development and job creation in Kabul. And as more jobs are created, there are fewer men joining the Taliban.

Kabul is now receiving a steady supply of electricity thanks to close economic cooperation with Uzbekistan, a country Blank says is the Central Asian country most hostile to economic cooperation. He also says there is no multilateral economic cooperation. But three major players in the funding and construction of the power line—the ADB, the World Bank, and the Islamic Development Bank—are all multilateral financial organizations. The United States and India, whose “grand design” Blank says cannot be implemented, were also involved in the power lines, as were Germany and Japan.

In addition, many of Blank’s so-called Central Asian geopolitical experts inside and outside of the U.S. Government warned against building the transmission line because it would “almost certainly” be a target of terrorism. However, for the last 5 years since the completion of the power line, there has been no terrorism attacks against the power line.

Why were the geopolitical experts consistently wrong? They do not understand shared prosperity. The ADB and the other multilateral partners took

the time to get buy-in from all the local stakeholders. Instead of just sending power to Kabul, power was shared with local communities between Uzbekistan and Kabul. Since these local stakeholders benefit from the electricity, they protect the power lines from potential terrorists. If local stakeholders see the benefits of the projects for themselves, they will encourage this shared prosperity. Local stakeholders, who previously saw violence as the only option, now see a viable alternative. As peace breaks out around the power line, it will be possible to reduce the size of the Afghan police and military forces, thereby reducing the large budget deficit that the central government would otherwise have to bear. This net assessment shows how local and provincial progress can make things more affordable for the Afghan central government.

Finally, Russia and China – who Blank says have overwhelming “power and influence in Central Asia” and will not allow economic development projects to happen – have done nothing to thwart these projects mentioned previously. Why did not Russia kill all this economic cooperation for the power line? Russia simply does not have the political and economic influence it once had over the Central Asia countries and the region. A good example of this is the Turkmenistan-Afghanistan-Pakistan-India (TAPI) pipeline. For many years, due to the influence of Russia, Turkmenistan was not willing to have their natural gas reserves certified by an international organization or allow any western companies to do business in the country. Gazprom was the only foreign company in Turkmenistan. In the last 2 years, the Turkmen gas reserves have been certified by the ADB (the gas certified is actually more than what the Turkmens were claiming) for the TAPI, and they are open for the Western companies to both explore and drill for gas.

Why did China not kill all this economic cooperation? China feels the Silk Road is theirs, and this is their backyard (both may be true). But China also knows they cannot do anything without American diplomacy and military. A good example is the Aynak copper mine, to which the Chinese state-owned company MCC has the rights. In order for MCC to excavate and transfer the copper, it requires a level of security that can only be provided by the United States, which supports the Afghan National Security Forces. In addition, a railway is required to transport the copper. Also recently, Indian Steel, an Indian state-owned company, got the rights to the Hagigak Iron Ore mine in the north of the Country. China and India have decided to jointly build a \$7.5 billion railroad for the transfer of the ore. It is the first project of this scale that China and India are jointly doing through their state-owned enterprises.

Finally, Blank is especially critical of U.S. foreign policy when it comes to the New Silk Road. As Chief of the New Silk Road Task Force at CENTCOM, I welcome any constructive criticism from Dr. Blank. We can always do better. But I do not think he appreciates the structural challenge we faced in addressing the Afghan economy. Second, he minimizes the difficulty of turning American foreign policy around and getting 35 U.S. Government agencies onboard. We did a lot of interagency coordination! Third, Blank is correct in raising problems associated with International Security Assistance Force (ISAF) scaling down. I will defer to General (Retired) John Allen, the former U.S. military commander in Afghanistan until recently, to rebut Blank's scholars on the readiness of Afghan military and police forces. Nevertheless, Blank does gloss over the all-important economic impact of the scale-down of ISAF.

Our first operating assumption was that the United States was not going to kill its way out of Afghanistan. Our second assumption was that there was no shake-and-bake solution for the Afghan economy. But there is reason for hope. The good news is Afghanistan has lots of potential wealth. It could be the Saudi Arabia of minerals. The bad news is Afghanistan is struggling to turn potential wealth into actual wealth. Afghanistan lacks what Massachusetts Institute of Technology (MIT) Professor Walt Rostow used to call the pre-conditions for economic take-off. Afghanistan is an isolated, land-locked country with an inadequate infrastructure. In other words, the fatal flaw in Afghanistan is poor market access. If products somehow get to the border, bottlenecks cause them to get stuck there. As a result, farmers have little incentive to increase their productivity or boost output. So we argued that we needed a regional and transcontinental trade, transport, and transit network with Afghanistan as the hub. The New Silk Road is the metaphor for this network.

Second, as stated earlier, Blank dismisses the difficulty of turning American foreign policy around and getting 35 U.S. Government agencies on-board. The Department of State initially thought such a regional and transcontinental network was too big. It tends to prefer country-specific activities that one ambassador in one country can oversee. Since nobody else would assume leadership, CENTCOM initially got out front. Needless to say, there was a lot of CENTCOM-led interagency coordination in the U.S. Government before U.S. Secretary of State Hillary Clinton embraced and called for a New Silk Road initiative in a speech she gave in Chennai, India, on July 20, 2011.

Third, Blank discusses the need to retain U.S. Government aid to Afghanistan's government. But

he minimizes the economic impact in Afghanistan of reducing upwards of 150,000 foreign military troops and 130,000 associated contractors. Foreign military spending created a bubble economy, and that war economy is now unraveling. Aggregate demand is collapsing. The U.S. Treasury initially came up with a prediction for the range of economic contraction. The best-case scenario was a 13 percent contraction and the worst case scenario was a 41 percent contraction. In any event, unemployment is likely to soar unless we can stem the tide.

In many ways, the economic collapse in Afghanistan is akin to the base closures in the United States. In this regard, my father used to be an apple grower in Groton, MA. The soldiers from Ft. Devins used to buy apples at his fruit stand. Then the U.S. Government closed Ft. Devins. In response, my father had to find new customers. The Afghan private sector faces much the same problem. It needs to find new customers. There is nothing comparable to the affluent buying power of 150,000 foreign military troops inside Afghanistan. But there is a huge middle class in both China and India waiting patiently for Afghan exports. In fact, Afghan fruits are world class in quality.

Finally, there are also pressing macroeconomic and international financial reasons why Afghanistan should boost exports. If one looks at the Afghan current account, which measures the flow of goods and services in its balance of payments, Afghanistan imports 17 times more than it exports. To put this into perspective, Mexico and Thailand were running unsustainable current account deficits of 8 percent of gross domestic product (GDP) prior to their respective financial crises in the mid-1990s. Afghanistan's financial situation, with a current account deficit of 45

percent of GDP, is far worse. One might think the U.S. Government would be working overtime to mitigate this financial crisis. Instead, an over-borrowed U.S. Government is lecturing the Afghan government on the need for “fiscal discipline,” economic reforms, and World Trade Organization entry. The United States finds it easier to sub-contract the financial crisis to the International Monetary Fund.

ENDNOTES - CHAPTER 10

1. Richard Matthew, “Environment and Security: Transnational Challenges, Transnational Solutions” Chap. 8, this book.

2. *Ibid.*

3. Carl von Clausewitz, *On War*, Michael Howard and Peter Paret, trans., Princeton, NJ: Princeton University Press, 1976, Book 1, Chap. 1, pp. 88-89.

4. Chapter author’s recollections of personal conversations.

5. *Ibid.*

6. *Ibid.*

7. Juan Miranda, “New Transmission Line Brings Stable Power Supply to Kabul for First Time in Decades,” Manila, Philippines: Asian Development Bank, May 25, 2009, available from www.adb.org/news/new-transmission-line-brings-stable-power-supply-kabul-first-time-decades.

SECTION 4

PROSPECTS FOR COLLABORATION IN THE U.S.-INDIA STRATEGIC RELATIONSHIP

Moderator: Mr. Brian K. Hedrick, Deputy National Intelligence Officer for South Asia, National Intelligence Council.

Presenter: Mr. Andrew Salamone, Research Fellow at the Center for Strategic Intelligence, National Intelligence University.

Presenter: Mr. Rahul S. Madhavan, Senior Manager (Policy Advocacy) Aerospace and Defense and Infrastructure, U.S.-India Business Council.

Author: Dr. Namrata Goswami, Research Fellow, Institute for Defence Studies and Analyses, New Delhi India, and currently Jennings Randolph Senior Fellow, United States Institute of Peace, Washington DC. (Unable to attend – her paper was summarized by one of the other Workshop participants.)

Discussant: Dr. Ivan B. Welch, Foreign Military Studies Office, U.S. Army Training and Doctrine Command Intelligence Support Activity, Foreign Area Analyst (Southeast and South Asia).

As documented by the presenters, the robust nature of the current U.S.-India strategic relationship has evolved somewhat unevenly since the middle of the 20th century. The contributors provide an excel-

lent summary of the factors which have influenced this growing relationship, beginning with Salamone's review of India's strategic culture followed by the descriptions and analyses of India's changing strategic environment provided by Madhavan and Goswami, respectively.

The authors do not specifically describe the U.S.-India strategic relationship as cross-sector collaboration because interactions between the two nations to date, for the most part, have not met the strict definition of this form of collaboration. Yet, aspects of several propositions offered by Drs. John Bryson, Barbara Crosby, and Melissa Stone are relevant to the developing U.S.-India bilateral relationship and appear throughout the three papers. Those relevant propositions are listed in Table 4.1 and matched with observations contained within the presenters' papers. These linkages demonstrate the strength of the cross-sector model and the potential to apply the model to a broader range of alliances, which reach beyond regional and national experiences.

Relevant to U.S.-India Bilateral Relations

Proposition 3: Cross-sector collaborations are more likely to succeed when one or more linking mechanisms, such as powerful sponsors, general agreement on the problem or existing networks, are in place at the time of their initial formation.

Goswami notes that early barriers to U. S. India collaboration include failure to reach agreement on problem definition or priority; the failure to purposefully nurture social and professional networks; and, failure to initiate sufficient joint programs aimed at fostering collaboration.

Table 4.1. Propositions about Cross-Sector Collaboration.

Proposition 7: Cross-sector collaborations are more likely to succeed if trust-building activities (including nurturing of cross-sector and cross-cultural understanding) are continuous.

Salamone excellently summarizes the influence of India's culture on the nation's strategic decisionmaking process. The failure of both countries, the United States in particular, to understand the ways in which cross-cultural differences result in varying strategic perceptions has negatively influenced bilateral relationships over time. Driven by divergent interests and needs, Goswami observes that foreign policy decisions on both India's part (growing ties with the Soviet Union) and the United States (alliance with Pakistan) did not engender trust when originally put into play. Aspects of these policies remain troublesome for the partners.

Proposition 16: Cross-sector collaborations are more likely to succeed if they build in resources and tactics for dealing with power imbalances and shocks.

Through his analysis of historical texts, Salamone instills in the reader a greater appreciation of India's perceived role in interstate relations. India's firm belief in the necessity of equal power relationships between partners to ensure successful collaborative endeavors is echoed in the works of Goswami and Madhavan. Goswami points out that one reason U.S. relations with India started off slowly was due to the initial U.S. perception of India as a developing nation, rather than a regional power or possibly global power contrasted with India's need to be recognized as an "equal" in all joint activities. To a great extent with regard to defense trade relations, India's need to find an acceptable position between principle and pragmatism as defined by Madhavan speaks to India's desire for equal and unfettered decisionmaking with its partner, the United States.

Proposition 17: Competing institutional logics are likely within cross-sector collaborations and may significantly influence the extent to which collaborations can agree on essential elements of process and structure as well as outcomes.

Both Goswami and Madhavan suggest that frustrations experienced by the United States and India associated with failures and delays in formalizing partnership agreements or implementing joint activities may be traced to their failure to understand each other's national political and public management processes and structures.

**Table 4.1. Propositions about
Cross-Sector Collaboration. (cont.)**

CHAPTER 11

FROM THE *NITISARA* TO THE *HITOPADESHA*: ANCIENT INDIA'S IMPACT ON MODERN INDIA'S STATECRAFT

Andrew Salamone

The India-U.S. relationship has undergone remarkable transformation over the past decade as New Delhi and Washington have steadily pushed to expand the depth and breadth of bilateral interaction. Official dialogues addressing topics ranging from the situation in Afghanistan, to the Global Commons, to cooperation on science and technology, agriculture, and energy are well established and offer fertile ground for the continued growth of the relationship between the world's two largest democracies.

However, despite the many convergences, as with any relationship, New Delhi and Washington occasionally find themselves frustrated by each other's actions and approaches to some foreign policy issues. These divergences in actions and approaches are explained by the differences in the strategic environment and realities both countries perceive themselves a part of: environments and realities that are shaped and perpetuated by each nation's respective strategic culture.¹

This paper argues that if the United States is to build the comprehensive relationship with India that it desires, a greater understanding of India's strategic culture is essential. It is meant to be a first step in exploring the tenets of India's strategic culture based on an analysis of ancient texts on statecraft and demonstrate their continued relevance in New Delhi's current foreign policy decisionmaking.

DEFINING STRATEGIC CULTURE

The definition of strategic culture for this paper draws on a combination of ideas from such scholars as Alastair Ian Johnston, Colin S. Gray, and David Campbell, as well as Colonel Jiyul Kim, author of a recent monograph on strategic culture for the Strategic Studies Institute of the U.S. Army War College.

Johnston's definition, first presented in his 1995 article entitled "Thinking About Strategic Culture," states that strategic culture consists of two parts. The first focuses on basic assumptions on the orderliness of the strategic environment, which includes things such as attitudes on war, nature of the adversary, and the ability of rulers to control the outcome if force is used. According to Johnston, this first component is deeply rooted in historical memory. The second component focuses on determining which strategic options are the most effective for dealing with current threats, based on the strategic environment.²

In a 1999 article, Gray states that:

strategic culture comprises the persisting though not eternal socially transmitted ideas, attitudes, traditions, habits of mind, and preferred methods of operation that are more or less specific to a particular geographically based security community that has had a necessarily unique historical experience.³ . . . It shapes the process of strategy making and influences the execution of strategy.⁴

Campbell states that strategic culture is

often based on the reproduction of narratives of a community's origins or formative years that serve to

constitute that community's identity and its relationships with other such communities.⁵

Finally, Kim contends that strategic culture is:

deeply rooted in the historical experience, memory of that experience, and collective values that lead to particular policy and strategy formulation. It both enables and constrains actions and reactions regarding strategic choices and priorities.⁶

Taken together, then, strategic culture for this article refers to the set of principles underpinning a nation's outlook and decisions on security issues based on that nation's collective norms, historical experience, and perception of its security environment. The central role history plays in the formation and propagation of strategic culture is the common thread linking all these definitions, and it is to that history that we will now turn.

THE RELIGIOUS AND HISTORICAL CONTEXT

The norms and principles underpinning India's statecraft that manifest themselves in its strategic culture are closely entwined with the region's religious philosophy, which, for the sake of this paper, will be referred to as Hinduism. This is with full acknowledgement that the term Hinduism is in and of itself problematic since Western scholars, theologians, and those labeled as neo-Hindus have all found it difficult to satisfactorily define what Hinduism is or is not. Religions are:

neither monolithic nor are they unchanging over time. They are historically variable, culturally figured and

reconfigured, and often encompass within themselves a bewildering variety of diverse and divergent doctrines, practices, texts, and leaders.⁷

This is particularly true for Hinduism, which is well known for its remarkable resilience, given its ability to absorb, accommodate, and adapt to outside influences. Hinduism, then, for the purposes of this paper, is best described as a culture, a way of life, and a socio-cultural system. It has no single prophet, church, or single authoritative text.⁸

Hinduism shaped Indian society by virtue of the fact that it controlled and ordered nearly every aspect of human life ranging from birth, marriage, occupation, and death. The workings of the state were no exception to this. Thus, individuals in the society, particularly those from the upper castes whose interests were served in the preservation of the existing social order, were enculturated in and perpetuated Hindu values, beliefs, and norms through a variety of means to include the numerous manuals meant to instruct kings on the proper conduct of statecraft that were written between the 4th and 10th centuries.

In general terms, the overarching concept underpinning the texts on statecraft is the responsibility of the ruler to act in a way that was in accordance with the concept of *dharma*. As with the previous discussion of Hinduism, the concept of *dharma* is equally problematic when considered from a western point of view. It is traditionally used to refer to any of three constructs:

[the] ideational order that underpins society and its institutions, an individual's own roles and duties that are partly intrinsic and partly based upon her or his place in that social order, and a sense of right and righteous-

ness. In contemporary times the word is also used for 'religion' in the Semitic sense of the term, even though Indic belief systems and faiths do not conform to the symbolic and institutional features of Semitic faiths.⁹

A key element of the social order embodied in *dharma* is the maintenance of the hierarchical caste system that structured society. Brahmans or priests occupied the top spot in the hierarchy and were the primary authors of the texts on statecraft, as well as the source of spiritual power. *Kshatriyas*, or warriors, however, were the source of temporal power and the rulers for whom the Brahmans, in their capacity as advisors, dispensed advice on the proper conduct of the ruler as an individual, as well as the state.¹⁰ Rulers were expected to conduct themselves as well as the affairs of the state based on the guidance set forth in the *sastras*, the Brahmanical literature describing the universal customs and laws of the world.¹¹

Kautilya's 4th century AD treatise on statecraft known as the *Arthashastra* is acknowledged as the embodiment of Indian strategic thought and, as such, scholars have already subjected the text to intense analysis. Less attention, however, has been afforded to analyzing the numerous subsequent texts comprising the body of literature known as *niti*, Sanskrit for the science of polity, that build upon Kautilya's work, particularly to determine whether concepts of statecraft evolved over time and manifest themselves in current Indian thinking.¹²

Thus, what follows is an analysis of three texts that came after the *Arthashastra*: the *Panchatantra* (believed to be from the 4th century AD), the *Nitisara* (written by Kamandaka between 500-700 AD), and the *Hitopadesha* (thought to have originated in the 10th century).

This is an admittedly short period in terms of India's history, but space constraints prevent an analysis of a greater number of texts from later periods. Even though these three texts cover a period of approximately 600 years, they exhibit striking consistency in the advice on statecraft offered to rulers across three themes: interstate relations, internal security, and economic prosperity.

Even more striking, however, is the fact that many of the concepts on the proper functioning of the state propounded in these ancient texts are present in the writings of modern practitioners of Indian statecraft. For the purposes of this paper, I have chosen to examine the speeches and writings of former Minister of Defense, External Affairs, and Finance Jaswant Singh and current National Security Advisor Shivshankar Menon. Singh and Menon were chosen not only because they have been intimately involved in the formulation and implementation of foreign and defense policy, but also because they are from the two main national political parties. Thus, a comparison of their views on these issues will illustrate continuity or change in India's approach to statecraft. While it is admittedly difficult to prove empirically that the ideas on statecraft present in these ancient texts in any way influence India's current foreign policy establishment, I contend that because these ideas are deeply rooted in Hinduism as a socio-cultural system, they have been transmitted across generations, aided by the religion's resilience and incorporation into India's national identity.

INTERSTATE RELATIONS

The *Nitisara*, written by Kamandaka, reiterates many of the themes found in Kautilya's *Arthashastra*. On the conduct of foreign policy, Kamandaka strongly advises rulers on the necessity of establishing allies or friends, which he reminds the ruler is one of the seven components of a kingdom. He states that "a ruler of earth should cultivate the alliance of monarchs stationed far off, of those who constitute his Mandala, of local governors, and also of the Foresters."¹³

Additionally:

A monarch should be cognizant of the degrees of difference among excellent, mediocre, and ordinary allies. The services, done by these three classes of allies, are accordingly excellent, mediocre, and ordinary.¹⁴

The *Panchatantra* and the *Hitopadesha* offer similar advice on the necessity of cultivating relationships with a wide range of neighboring states, though the guidance tended to be less prescriptive and based on practical examples rather than on theoretical constructs such as Kamandaka's lengthy discussion of the mandala system. The *Panchatantra* equates the cultivation of friendships with the acquisition of prosperity and therefore urges the ruler to establish friendly ties.¹⁵ These friendships should even include those the ruler deems weaker than himself; a point illustrated through the recounting of a tale in which an elephant king entrapped in a hunter's snare is saved by mice he had earlier befriended.¹⁶ For its part, the *Hitopadesha* reinforces the values of alliances and cooperation by presenting the ruler, or soon to be ruler, with a tale of collaboration between a deer, crow, mouse, and turtle to defeat a hunter.¹⁷

While the three texts are consistent in their advice regarding the necessity of friendships, they are likewise consistent in advising the ruler to approach these relationships with pragmatism and even a great deal of caution. Kamandaka states that “He (the king) should not openly take the side of any one of his allies, but should encourage a feeling of rivalry among them in securing his grace.”¹⁸ Kamandaka also tells the ruler:

never rush into an union either with a strong or a weaker rival king without sufficient cause or reason; for in such union there is danger of losing men, money, and munitions and of being treacherously treated.¹⁹

More important:

he should make friends even with his foes, if they become instrumental in his own aggrandizement. He should forsake even his allies, if they are intent on doing evil to him.²⁰

The *Hitopadesha* reinforces the wisdom of approaching friendships cautiously, warning the prince that:

foe is friend and friend is foe as our actions make them so. Friend and kinsman—more their meaning than the idle-hearted mind. Many a friend can prove unfriendly, many a kinsman less than kind.²¹

The *Panchatantra* builds upon this theme, stating that, “friends are foes and foes are friends as they mar or serve your ends.”²²

All three texts remind the ruler that war is one of the six expedients available for dealing with an un-

righteous enemy and the maintenance of *dharma*; a primary responsibility of a ruler. Nonetheless, the authors urge the ruler to carefully consider his actions before resorting to the use of force. Kamandaka notes that a:

solvent treasury and a good council are better than the strongest army. Therefore, a king of sound political knowledge should conquer his enemies by the power of counsel and treasures.²³

He goes on to say that “an intelligent and wise king should pacify a threatening foe by means of “gift or bribery.”²⁴ Additional passages discussing the utility of war urge the king to take a cautious approach to military action. Kamandaka states:

A wise king should wage only such a war, from which advantages may be derived both at present, and in the future. Territory, allies and wealth, these are the fruits of war; when by war the gain of these three is certain, then only may it be hazarded. When war has already come the king should pacify it by means of the expedients of policy.²⁵

The *Panchatantra* advises the ruler to make peace with rivals who are stronger or of equal power and to exhaust all other means before resorting to war.²⁶ Similarly, it notes that “victory is wisdom’s business,” continuing that success will come to the ruler possessing wisdom, not simply to those who possess swords.²⁷ The use of “shrewd devices,” likely a reference to deft diplomacy and political intrigue, is advised in both the *Panchatantra* and *Hitopadesha*, with both noting such a course of action is far superior to the use of brute force.²⁸

The advice these three texts offer on the subject of interstate relations was shaped by the political environment in which both the authors and rulers were living. Multiple kingdoms or states competing for power in the form of territory and material wealth, the necessity to adroitly cultivate or dissolve friendships as a hedge against losing power, and the ever-looming potential for war characterized the security environment during this time. The use of force was recognized as a legitimate tool the ruler had at his disposal, particularly if employed as a defense against unrighteousness, and rulers frequently turned to this option during this period. Nonetheless, the texts consistently warned the ruler that war should be a measure of last resort because of the drain on the wealth of the state and inherent uncertainty of its outcome.

Some of the notions underpinning the conduct of interstate relations that appeared in these ancient texts on statecraft are prominent in contemporary Indian philosophy and literature on these same topics. For example, while Jaswant Singh does not explicitly discuss the advantages and disadvantages of maintaining a network of allies or friends, his writings clearly indicate his belief that the international order is entering a period of uncertainty marked by the movement to a multipolar system. This multi-polarity, according to Singh, will require India to:

move towards cooperative coexistence, an equilibrium based on avoidance of tensions, which in turn will impart stability and then, finally, economic growth and international commerce acting as the great disincentives to discord or to conflict.²⁹

Expanding on his ideas of diplomatic engagement and cooperative coexistence, Singh states, “[W]e serve

the national interest when we engage the world on the basis of equality and mutual respect. Such engagement is the very substance of diplomacy.”³⁰ Implicit in these statements is the need to cultivate strong relations with a wide array of actors to ensure the nation’s interests are met, a concept appearing in all three of the ancient texts. Singh urges these bilateral relations to be firmly grounded in the concept of equality, harkening back to Kamandaka’s advice to eschew friendships with nations that are either weaker or stronger.

On the utility of military force in international affairs, Singh acknowledges that the nature of war has changed, stating that:

the ability of a nation, as in the past centuries, even in the early decades of this, and demonstrated perhaps for the last time in the Gulf War, to impose its will on another, to conquer, to subjugate or to even punish, has now been relegated as archival material.³¹

Therefore, Singh continues:

we believe, as part of our defense diplomacy, that war is no longer an effective, or even a viable instrument of diplomacy. Yet, despite this, and despite the very nature of war altering, challenges to the State will continue, even if in an altered form.³²

These sentiments parallel the *niti* literature in that they recognize military force is a necessary and legitimate component of statecraft, but believe all other means should be exhausted before employing it.

Singh’s remarks also address the issue of pursuing policies and action that are based on the concepts of righteousness and *dharma*, consistent themes appearing in the *niti* literature. For example, in his 1995 book

entitled *National Security: An Outline of Our Concerns*, he said the following with regard to a nation's strategic thought: "Civilizational, cultural, and integrals of faith sustain a nation's strategic sense and enable it to grow, to meet the challenge of altering circumstances, or fail."³³ Regarding the concept of national security, Singh defined it as:

above all the preservation of the core values of our nation; the political, economic and social well-being and preservation of our State, the inviolability of our territorial boundaries and the maintenance of national interests within the strategic frontiers of India.³⁴

Singh's references to "integrals of faith" and the "core values" of India harkens back to the assertion of the *niti* literature that the primary responsibility of a leader is to act justly and pursue righteous policies in line with the concept of *dharma*. Singh's defense of India's military action to expel Pakistani troops from the Indian side of the Line of Control in Kashmir during the 1999 Kargil incident reiterates this theme. In his 1999 speech entitled "Beyond Kargil," Singh stated:

It is a measure of the justness of India's cause that what I have cited above, as the irreducible minimums, found such a large community of countries standing up in support. Principally, let me repeat, it was because India's stand was recognized as just, thus it was acted upon.³⁵

The writings and speeches of current Indian National Security Advisor Shivshankar Menon echo many of the themes found in both the *niti* literature as well as those espoused by Singh. On the present security environment India is operating in, Menon noted that:

One is also reminded of the rich experience in our tradition of multi-polarity, of asymmetries in the distribution of power, of debate on the purposes of power (where *dharma* is defined), of the utility of force, and of several other issues with contemporary resonance. In many ways it is India's historical experience of poly-centric multi-state systems, plurality, and of the omnidirectional diplomacy and relativistic statecraft that it produced that is closer to the world we see today.³⁶

In an October 2010 speech to India's National Defense College, Menon stated that:

As we enter a world of multiple powers, with rapidly shifting balances, change alone is certain. . . . The challenges of a globalised world cannot be handled by twentieth century military alliances or containment strategies.³⁷

In an August 2011 speech to the Centre for Land Warfare Studies, he stated that India's long-held quest to maintain its "strategic autonomy" was grounded in its effort to avoid "external entanglements or outside restraints on our freedom of choice and action." In the same speech, Menon addressed India's imperative to ensure access to reliable sources of energy, asserting that this effort "requires a sustained cooperative engagement with the world." He said that India must:

use our strengths to create partnerships with major powers in a manner which would allow us political and economic space to grow. This will require us to strengthen relations with all the major powers of the world.³⁸

These comments reflect Menon's belief that India is operating in a security environment akin to the uncertain and transitory interstate system in which the authors of the *niti* literature found themselves. His comments on maintaining strategic autonomy and pursuing worldwide cooperative engagement again draws on the advice Kamandaka and the authors of the *Panchatantra* and *Hitopadesha* provided to rulers on the necessity and pitfalls of friendships with other states.

As with the *niti* texts and Singh, Menon agreed that the utility of force as an instrument of statecraft was changing and, while acknowledging its continued role, he said:

If change alone is certain, and if the utility of force in statecraft is itself changing in fundamental ways, it is all the more necessary that we return to the values in which the use of force must be embedded. Ultimately it is not just the logic of politics or technology but the values and purposes of the state and society that determine the choices that we make of the uses and nature of force.³⁹

Menon notes that:

war and peace are continuing themes in Indian strategic culture. While not celebrating war the culture treats defensive war as acceptable when good fights evil to secure justice. Indian strategic culture has been comfortable with this contradiction.⁴⁰

Menon's comments draw upon several themes found in the *niti* literature, namely the quest for justice, the belief that *dharma* should be a determinant of state policies including the use of force, and that force is a viable tool in interstate relations, even though its

usefulness is declining. He also urges rulers to approach decisions on the use of force with a great deal of introspection to ensure the ends justify the means and are concomitant with Indian values.

PROSPERITY AND INTERNAL SECURITY

The *niti* literature also offers the ruler advice on the acquisition of wealth and the maintenance of internal security, two issues authors such as Kamandaka believe are inextricably linked. Kamandaka notes that the treasury is the “mainstay” of a government and that proper instruction in the science of the loss and gain of wealth is an essential component in the education of a ruler, contending that “defect in the administration of finances” is a negative quality.⁴¹ Further, an ample treasury is not only necessary for dealing with “times of danger and for maintaining dependents,” but also for cultivating friends and allies, which he claims “come from prosperity.”⁴²

Along these same lines, Kamandaka observes that “men follow the king who has a solvent treasury and an efficient army.” Acquisition of this prosperity, according to Kamandaka, is “entirely dependent on the good will of the multitude,” a likely reference to the ruler’s subjects.⁴³ As such, he advises the king to devote significant resources to helping those of his subjects who are in need and for ensuring his ministers and the army are well paid. Promotion of foreign trade, including providing for the construction of adequate road networks, also is advised.⁴⁴

The advice the *Panchatantra* and *Hitopadesha* provide on the necessity of acquiring wealth is consistent with that appearing in Kamandaka’s work, but the authors take it a step further, buttressing their argu-

ment with explicit references to the likely consequences if the king should fail to heed their counsel. The treasury is referred to as the “king’s life” in the *Hitopadesha*, while the *Panchatantra* notes that the king’s subjects “form his wealth.”⁴⁵ The king is advised not to over-tax his subjects, provide gifts to keep the kingdom safe, and that “charity is the king’s greatest treasure.”⁴⁶

As with Kamandaka, the *Panchatantra* also exhorts the ruler to pursue foreign trade, noting that investments in this endeavor will bring significant returns.⁴⁷ Failure to keep the treasury well stocked, according to the *Panchatantra*, will result in the flight of both family and friends, which poses a threat to the ruler’s power since allies are considered one of the seven necessary components of a state. Similarly, the *Panchatantra* warns the king to avoid taking actions that might anger his subjects, advising his ruler to remember to “Beware the populace enraged: A crowd’s a fearsome thing: The ants devoured the giant snake: For all his quivering.”⁴⁸

For his part, Kamandaka recognizes that the failure of the ruler to nurture his subjects is likely to result in internal instability, primarily in the form of criminals bent on acquiring wealth through robbery and other unlawful means. Referring to these criminals as “thorns,” Kamandaka advises:

Anxious for preserving justice, and increasing his wealth by lawful means, a ruler of earth should visit those of his with chastisement, who would venture to stand in his way of government. Thus imputing criminality to the offenders, a king should, for the amelioration of his subjects and for pleasing them, weed out the thorns of his government.⁴⁹

He claims the preferred method is via conciliation with gifts and through deceptive means but does not rule out the use of force to accomplish this.

The emphasis on the related themes of economic development and internal security found in the manuals on statecraft are also readily apparent in the writings of Singh and Menon. For example, in *National Security: An Outline of Our Concerns*, Singh urges India's rulers to focus on promoting economic development and the acquisition of wealth, explicitly linking economic growth with the nation's security. He states:

Our choice is not between security or economic growth. It is really security through economic growth. We cannot choose one or the other because, being interdependent, we have to achieve national security through a much more dynamic and effective economic growth. It is really the enhancing of our total economic endeavor that has to be improved, accelerated, and better managed, for this alone can give the nation the kind of security that is its just and due destiny.⁵⁰

Singh also addressed the issue of the obligation of the state to its citizens, noting:

Should thereafter, the state conduct itself in such a manner that the Citizen either finds, or even perceives, that the State has failed in its commitments and obligations, then there is every likelihood of the Citizen withdrawing that allegiance. This manifests itself at various levels, and in various forms from the most mundane to the noble. It is on account of this failure that our grievance redressal systems clog. And even if they do not, but convey an impression only of it about the state's Insensitivity to the Citizen's aspirations (also expectations from the State), then, too, the citizen will tend to withdraw allegiance. It is because of this that India has witnessed periodic explosions of discontent in different parts of the country.⁵¹

These statements reiterate the symbiotic link between ensuring the grievances of the population are effectively addressed and maintaining the internal security vital for sustaining and broadening economic growth that is prevalent in the *niti* literature.

Menon mirrors Singh's pronouncements linking security with prosperity and reiterates the need for the state to provide for its citizens. In an October 2007 speech, he stated that:

the primary task of our foreign policy is to ensure an external environment that is conducive to India's transformation and development. Unless we have a peaceful and prosperous periphery we will not be able to focus on our primary tasks of socio-economic development.⁵²

In August 2011, Menon again reiterated these themes, noting that:

our primary task now and for the foreseeable future is to transform and improve the life of the unacceptably large number of our compatriots who live in poverty, with disease, hunger and illiteracy as their companions in life. This is our overriding priority, and must be the goal of our internal and external security policies.⁵³

These statements are reminders of the *niti* literature's emphasis on prosperity and ensuring the citizens of the state are well taken care of, primarily as a means of maintaining internal security, but also as a necessary part of cultivating interstate relations.

CONCLUSION

India's historical experiences and memory of those experiences have resulted in the formation of a unique strategic culture that continues to shape New Delhi's view of the world and its standing in that world. Striving for economic prosperity, maintaining internal security, and pursuing interstate relations based on the principles of equality, justness, and morality in a multipolar and uncertain strategic environment are central tenets of New Delhi's strategic culture and continue to influence decisions on foreign policy issues. Over the past few decades, these foreign policy decisions have largely centered on traditional state-to-state issues. As we look to the future, though, issues that transcend national borders such as climate change, nonproliferation, stability of the global economy, preventing the rapid spread of deadly diseases, and the demilitarizing of outer space are likely to become increasingly important and will require multinational solutions. Understanding the principles underpinning Indian strategic thought is an important first step toward developing a common framework from which New Delhi and Washington can work as equal partners to facilitate the type of global cooperation needed to address these pressing issues.

ENDNOTES - CHAPTER 11

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CHAPTER 12

PRINCIPLE VERSUS PRAGMATISM: THE EVOLVING STATE OF THE U.S.-INDIA DEFENSE TRADE RELATIONSHIP

Rahul S. Madhavan

The defense-trade relationship between the United States and India contains elements of principle and pragmatism. The Indian government has relied on the principle of nonalignment to guide foreign policy decisions since the beginning of the Cold War era. Reliance on this policy as a guide has given way over the years to both regional and global realities yet remains a touchstone for Indian decisionmaking. The pull between the principle of nonalignment and the need for pragmatic consideration and action by India on contemporary regional and global issues directly impacts the evolving defense-trade relationship between the United States and India.

India's deference to a nonalignment policy with regard to the acquisition of defense technologies is demonstrated by its drive toward diversified supply models across its military services and its highly politicized efforts toward increasing indigenous capacities to meet its own defense requirements. Its interests in increasing domestic capacity, capabilities, and competencies is revealed in the country's foreign direct investment (FDI) guidelines, which limit foreign direct investment to a cap of 26 percent.

Ironically, neither India's insistence on securing defense assets from a broad array of private international firms (through either direct commercial sales or national governments in the form of foreign military

sales) nor its FDI policy (which severely reduces any interest in private investment because of the real risk of giving up control of sensitive technologies) have impinged on the remarkable growth in sales volume between the United States and India. While the first foreign military sale by the United States to India occurred in 2001 with India's acquisition of a Raytheon radar system, the projected value of military sales from the United States to India for 2013 is in the range of \$12 billion to \$14 billion.

As important as sales volume growth has been since 2001, it is the change in sales mix that may be more telling about a shift in the U.S.-India defense-trade relationship. Over the last decade, the Indian defense establishment has moved from requests for items which meet strategic transportation needs to armaments with tactical strike capability. Although impressive, the progress to date has not been without issue. All firms involved in trade with the Indian government, including those located in the United States, have been frustrated by the extended turnaround time required to execute agreements.

The Indian government does not reward quickly; but in time they do reward trusted suppliers. With a growing Indian defense budget estimated at \$35 billion in 2013, the U.S. Government is affording the highest levels of attention to improving defense trade relations with India. A clear indication of this effort is the assignment of the U.S. Defense Trade Initiative with India to Deputy Secretary of Defense Ashton B. Carter.

In addition to government efforts, the private sector, through the U.S.-India Business Council (USIBC), is advocating for change in India's FDI requirements. The USIBC is calling for an increase in the foreign

investment cap from 26 percent to 74 percent. An investment adjustment of this magnitude is expected to facilitate greater collaboration between U.S. and Indian firms, leading to increased technology transfer as well as improved co-development and co-production opportunities.

Although it is too early to predict with certainty India's final position with respect to the United States on matters of defense trade, there are several drivers which may accelerate current trends toward a more balanced Indian position between principle and pragmatism. These include changing power dynamics within the region; increased strategic collaboration with the United States across a broad array of issues, including strategic defense initiatives; and, finally, Indian interest in increasing indigenous capacity, capabilities, and competencies in defense related development and manufacturing.

With regard to regional concerns, the ongoing turmoil and conflicts within and among the states bordering India are well chronicled. Of note, the growing and deepening relationship between Pakistan and China is of serious concern to India. The relationship between India's traditional nemesis, Pakistan, and China is evidenced by publicized technology transfers in defense and nuclear energy from China to Pakistan. Another example of the improving relationship is the extensive reliance of Pakistan on Chinese telecommunication systems and technology. Perhaps most illustrative of the growing partnership is the development of the port facilities at Gwadar, Pakistan. The port facilities have been financed almost entirely by the Chinese. With the completion of the port facilities, the Chinese now have direct access, via the Karakorum Highway, from China's western region of Xinxiang,

to strategically critical seaways, including the Strait of Hormuz.

Mindful of the power dynamics in South Asia, the United States has assertively courted the Indian government over the last decade. U.S. efforts are epitomized by a series of strategic dialogues beginning with the George W. Bush administration's "Next Steps in Strategic Partnership (NSSP)" agreement with India, which set up goals to strengthen cooperation on a number of issues, including civilian nuclear activities, civilian space programs, and high-technology trade. The Barack Obama administration has continued these discussions. In June 2010, U.S. Secretary of State Hillary Clinton and Indian Minister of External Affairs S. M. Krishna successfully concluded the first round of the U.S.-India Strategic Dialogue. Topics under discussion included counterterrorism, intelligence sharing, law enforcement, Afghanistan, expanded defense cooperation, nonproliferation, science, technology, and clean energy. In July 2011, Clinton and Krishna met for the second Dialogue, which resulted in the execution of formal agreements on numerous and varied topics, including counterterrorism cooperation, information sharing, cyber security, aviation safety, higher education, scientific cooperation, clean energy, and women's empowerment.

Finally, India's preoccupation with developing indigenous research and production capabilities in the defense arena has not diminished, despite its ability to secure its projected defense requirements from a varied array of global suppliers. The Indian government has established an ambitious goal to reverse the current defense sourcing ratio from 70 percent foreign sourced and 30 percent domestically produced, to a 30 percent foreign and 70 percent domestic balance

by 2020. Without significant support from a strategic partner, this transformation is not realistic, given the abbreviated time available to turn around India's problem plagued domestic defense sector.

To meet its future potential, India must prepare to manage real threats from regional powers in South Asia. Strategies to address these concerns include but are not limited to the selection and level of collaboration with allies and the development of domestic capacity to sustain superior military force. Driven by strategic and commercial incentives, the United States stands ready to support India across numerous initiatives including defense cooperation and trade. How India chooses to reconcile its desire for autonomy – reflecting its traditional nonaligned principle – with the real and practical opportunities to ensure its regional security and to jumpstart its domestic defense sector through meaningful collaboration with the United States, will ultimately define the U.S.-India defense-trade relationship.

CHAPTER 13

THE U.S.-INDIA STRATEGIC PARTNERSHIP: COMPELLING CONNECTIONS?

Namrata Goswami

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Relationships between states are not simply determined by the similarity of their historical experiences or their political systems, but also by common concerns, geopolitical realities, ideological moorings, power equations, social connections, and levels of cultural comfort. Quite notably, many of these determinants have contributed to a convergence in values held by the United States and India. Both nations successfully gained independence from British colonial rule. Since the time of Indian independence in 1947, both countries have espoused and supported democracy, individual liberties, freedom of the press, electorates, support for international organizations, and hope in human progress.

Ironically, despite those compelling similarities, the two countries initially differed with regard to their ideological moorings and their evaluation of power equations, which, in turn, impacted their respective analyses of interests. At the end of World War II, the United States emerged as one of the world's two superpowers. When India achieved independence, it was one of the least developed countries in the world. In those years, India relied on U.S. food aid in the form of PL 480 to feed its population. The United

States viewed India as a poor country with dim prospects. U.S. policymakers could not understand the thinking of leaders like Jawaharlal Nehru, the country's first Prime Minister, who aspired to make India a champion of ideals such as world peace, even as people within India were dying from poverty and malnutrition.

Differences in ideology and calculations of power equations informed the grand strategies that also served to separate the two nations. Nehru was adamant that India not become entangled in the Cold War machinations between the United States and the Soviet Union. Consequently, he was instrumental in forming the Non-Aligned-Movement (NAM) among a bloc of nations that sought to avoid direct involvement in the superpower rivalry and thus pursued an independent foreign policy agenda.

Meanwhile, the United States was searching for allies in Asia to counter the spread and influence of the Soviet Union. India, with its commitment to nonalignment, did not present an attractive option. Therefore, the United States turned its attention to Pakistan and entered the U.S.-Pakistan Cold War alliance, which in turn enlarged the space between the United States and India.

It was not until 1991, in the wake of the Cold War, that India embarked on fundamental economic reforms and felt a growing need to reach out to the global community for innovation, technology, and talent sharing. That change in orientation by India contributed to a somewhat more refined and closer U.S.-India relationship.

The relationship became stronger at the beginning of the 21st century, as both countries acknowledged common concerns over the threats of terrorism—

threats which dramatically and tragically surfaced on September 11, 2001 (9/11). Immediately following the attacks, India took the unprecedented step of offering U.S. aircraft refueling facilities on Indian soil, to support Operation ENDURING FREEDOM, which had been initiated by the United States against Afghanistan. This action was gladly welcomed by the George W. Bush administration and was favorably viewed by many people who held positions of power throughout all branches of the U.S. Government.¹

Since that time, the relationship between the two countries has progressively improved, as evidenced by the launch of the U.S.-India Strategic Dialogue in 2010. The United States and India are seemingly on a trajectory toward a stronger strategic bilateral relationship, with opportunities for engagement in joint military exercises and cooperation in agriculture, education, science, high-tech, and space.² This trajectory is likely to continue in the near to mid-term future: The Barack Obama administration has signaled its plan to “pivot” to Asia, and recognizes India as a key strategic player in the region.³

However, the United States has recently encountered some frustrations in dealing with India. These include the seemingly ponderous and convoluted workings of the Indian civilian bureaucracy. They also include the slow pace of economic liberalization, especially in the retail sector, which have been influenced by the sensitivities of several rurally based national politicians to needs of their domestic constituencies, rather than by any deep seated anti-Americanism.

Against this backdrop, this paper offers an overview of the U.S.-India strategic partnership through a historical lens and a present prism. To accomplish this, the paper is organized into four sections. The

first section provides a detailed review of U.S.-India bilateral relations during the Cold War, identifying factors which heightened tension between the two countries. The second section turns to the period from the conclusion of the Cold War to the conclusion of the 20th century, a time in which there were fundamental changes in U.S.-India relations. The third section concentrates on renewed efforts by the two countries to form a strategic partnership during the first decade of the 21st century. The fourth section of the paper outlines challenges to the developing U.S.-India strategic partnership.

U.S.-INDIA BILATERAL RELATIONS: A COLD WAR OF MISTRUST AND DISTANCE

From 1947 to the end of the Cold War, the relationship between India and the Soviet Union grew stronger; meanwhile, relations between the United States and India remained strained. A lack of bilateral communication between India and the United States, and misinterpretations on the part of each party regarding the military and diplomatic actions of the other, negatively impacted the two countries relations for more than 40 years. The tensions of that era have not yet been totally forgotten.

Three separate but interrelated sets of interactions contributed to the strained relationship. They included the formation and maintenance of the U.S.-Pakistan alliance; the lack of diplomatic engagement between the two nations; and the U.S. position on Kashmir. So, too, did India's pursuit of nuclear capabilities.

U.S. interest in Pakistan was influenced by its foreign policy goal of containment during the Cold War. Even as the Soviet Union pursued engagement with

nonaligned countries in Asia, the United States pursued alliances in the region to counter Soviet power and prevent the spread of Communism. One outcome was the U.S.-Pakistan alliance, agreed to in 1954.⁴ The United States supported the alliance with significant economic aid from 1954 to 1965; and Pakistan purchased about \$55 million in military equipment.⁵ In 1962, the United States substantially increased aid to Pakistan when that country further bolstered its ties with the West by joining the Southeast Asia Treaty Organization (SEATO) and the Central Treaty Organization (CENTO).⁶

Of course, the U.S.-Pakistan alliance, coupled with significant military and economic aid, was perceived by India as a serious threat, given the strained relations between India and Pakistan. The United States pursued an even closer relationship with Pakistan following the invasion by the Soviet Union of Afghanistan in 1979.⁷ U.S. engagement with Pakistan was again perceived as a threat from the perspective of India, as the United States provided aid to bolster Pakistan's military, therefore increasing that country's elements of power relative to those of India.⁸

In contrast to the relationship with Pakistan, throughout the Cold War, U.S. diplomatic engagement with India was thin and included only three state visits to the country by U.S. Presidents: Dwight Eisenhower in 1959; Richard Nixon in 1969; and Jimmy Carter in 1978.⁹ The apparent lack of interest by the United States in a bilateral relationship can be largely attributed to U.S. views about power in a bipolar international system¹⁰ and its perception that, despite Nehru's policy of nonalignment, India was siding with the Soviet Union.¹¹

Although the United States failed to maintain consistent open communications with India during those decades, over the entire post-World War II period, the United States consistently provided both economic and military support to India. From 1947 to 2010, the United States channeled a total of more than \$15.9 billion in direct aid to India, with roughly \$175 million of that amount in military assistance.¹² Of note, more than 90 percent of that \$175 million was provided to India from 1962 to 1966, in the middle of the Cold War.¹³ However, India did not always acknowledge or even interpret U.S. actions in a positive manner.

In addition, on various occasions, the United States either supported or assumed a neutral position with regard to Indian military engagements. Nevertheless, U.S. actions did not always play well with India. For example, during the 1962 war with China, despite India's nonaligned policy, Nehru requested that the John Kennedy administration send U.S. fighter planes to thwart Chinese aggression toward India.¹⁴ Although the United States responded in a positive fashion, the gesture did not create feelings of gratitude in India: simply speaking, Indian policymakers did not regard U.S. military assistance as sufficiently robust. As another illustration, in both 1965 and in 1971, when conflict erupted between India and Pakistan, the United States chose to cut military assistance to both countries, a significant move, given the U.S.-Pakistan relationship.¹⁵ However, any goodwill that was generated by the second of those two decisions was negated when, in the heat of the 1971 India-Pakistan war, the United States also deployed the USS *Enterprise* to the Bay of Bengal, a move that was interpreted by India's leaders as an attempt to deter them vis-à-vis Pakistan.¹⁶

The situation in Kashmir was another issue that created mistrust between the United States and India. Each administration of Harry Truman, Eisenhower, and Kennedy addressed this issue of contention between India and Pakistan, in order to prevent a divided Asia from being susceptible to Communist influences. The United States made several attempts to resolve the Kashmir issue within international forums, especially the United Nations (UN). U.S. efforts eventually culminated in a UN observer mission being sent into Kashmir to supervise a ceasefire.¹⁷ Despite those efforts, President Lyndon Johnson chose to buck the trend established by his predecessors and stay out of the internal matters of India and Pakistan; but when in 1965 he restricted food aid shipments and cut off military funding to both countries, he actually damaged the respective U.S. bilateral relationship with each partner.

The U.S.-India relationship was also impacted by the development of India's nuclear program, which began in the 1970s and led to testing of a nuclear device in 1974. In turn, that action prompted the United States to support restrictions on India. Little interaction occurred during the 1980s. U.S. foreign policy, with its emphasis on strengthening its relationship with Pakistan and fostering a more open relationship with China, reinforced India's continued perception of the United States as an untrustworthy actor.

U.S.-INDIA: POST-COLD WAR CONVERGENCE

Tensions between the two countries continued after the collapse of the Soviet Union, due to power dynamics and proxy wars during the Cold War period. Nevertheless, Indo-U.S. interactions increased as the

20th century came to a close. Throughout the 1990s, the United States attempted to re-engage India, in order to reinvigorate the U.S. supported policy of non-proliferation.¹⁸ Additionally, U.S. engagement efforts to diminish the escalation of regional crisis situations in the late-1990s also served to kick-start direct communication and interaction.

U.S. interests in the 1990s were characterized by a desire for increased interactions with India, coupled with a reluctance to improve relations due to India's aspirations to become a nuclear power. Thus, much of the U.S. engagement with India during this time period was mainly intended to restrict progress on India's nuclear program, both through diplomatic initiatives and by action to block the transfer of sensitive technologies. While the Bill Clinton administration had originally been keen to develop a strategic partnership, nuclear tests conducted by India in 1998 discouraged the administration and prevented a fruitful relationship from being cultivated.

In retrospect, India's 1998 nuclear tests affected the Indo-U.S. relationship in both a negative and positive way. Initially, the nuclear testing brought about a serious decline in Indo-U.S. relations, as the United States imposed sanctions and cut its aid to India – and by extension, that also resulted in a reduction in aid to India from international financial institutions.¹⁹ However, for India, there was no turning back. Ultimately, the United States recognized it could no longer prevent India from becoming a nuclear power, and that realization led the United States to slowly change its bilateral relationship with India.

A major turning point occurred in 1999, when the United States publically supported India during the Kargil War. This support signaled U.S. interest in forming a stronger U.S.-India partnership at the ex-

pense of elevating tensions with Pakistan. This new posture was formally announced by Clinton during his visit to India in 2000.

When President George W. Bush took office in 2001, he was keen to strengthen U.S.-India relationship, in order to counter a rising China and to combat Islamic extremism following the 9/11 attacks. However, he did not want to damage ties with Pakistan. Bush did manage to maintain bilateral relations with both countries, signing nuclear agreements with India and lifting the 1998 sanctions, while also backing Pervez Musharraf in Pakistan.²⁰ Those actions contributed to inherent tensions in the triangular relationship among the United States, India, and Pakistan, tensions that clearly reached back to the mistrust of Cold War era.²¹

A PUSH FOR ENGAGEMENT: THE U.S.-INDIA STRATEGIC PARTNERSHIP

The early-2000s represented countless opportunities for improved bilateral relations between India and the United States. The relationship was supported through various strategic agreements. In 2004, the two nations signed the “Next Steps in Strategic Partnership (NSSP),” which set up goals for strengthening cooperation on a number of issues, including “civilian nuclear activities, civilian space programs, and high-technology trade.”²² Additionally the two countries agreed to “expand dialogue on missile defense.”²³ On July 18, 2005, Bush and Singh issued a joint statement when the NSSP was implemented, and signaled future cooperation in areas including the economy, civilian nuclear energy program, nonproliferation, security, development, democracy, high-technology, and space.²⁴ This joint statement lifted nearly 3 de-

ades of nuclear moratorium by the United States against India. In 2006, the Henry J. Hyde U.S.-India Peaceful Atomic Energy Cooperation Act formally acknowledged India as a nuclear state and urged nuclear cooperation.²⁵ In the following 2 years, bilateral defense cooperation dramatically increased, when India purchased the USS *Trenton* in 2007 and C-130J military transport aircraft in 2008.²⁶

Furthermore, Washington and New Delhi have put into effect the U.S.-India Civil Nuclear Agreement of 2008, based on the Joint Statement of 2005 between Bush and Singh.²⁷ While Indo-U.S. relations were greatly strengthened under the Bush administration, analysts such as Kanti Bajpai argued that these ties were mostly conventional and that the United States and India needed to collaborate on a broader range of global issues in the future.²⁸

Significantly, in November 2010, Obama, Singh, and their respective high-level delegations met to affirm a global strategic partnership for the future. The two leaders committed to addressing global issues by holding regular high-level consultations on a number of topics, including UN matters (peacekeeping operations, UN Security Council, etc.), developments in East Asia, and Afghanistan.²⁹ They also agreed to engage in cooperation and coordination on issues associated with defense, space, high-tech sectors, clean energy resources, education, agriculture, elections management training, and capacity building to extend food security.³⁰

In July 2011, U.S. Secretary of State Hillary Clinton and Indian Minister of External Affairs S. M. Krishna met for the second U.S.-India Strategic Dialogue. A larger number of issues were discussed that year than ever before. Strategic consultations dealt with coun-

terterrorism, intelligence sharing, law enforcement, Afghanistan, expanded defense cooperation, non-proliferation, science, technology, and clean energy.³¹ New initiatives included the Central Asia Dialogue, East Asia Dialogue, West Asia Dialogue, and the Women's Empowerment Dialogue.³² Additionally, the two countries began collaborating on a food security program with Liberia, Malawi, and Kenya. They also launched a U.S.-India Dialogue on Open Government to create an open source platform for citizens to access government information.³³ Both parties reaffirmed commitment to the implementation of the U.S.-India civil nuclear energy cooperation agreement.³⁴ Overall, the second Strategic Dialogue culminated in the signing of agreements on the topics of counterterrorism cooperation, information sharing, cyber security, aviation safety, higher education, scientific cooperation, clean energy, and women's empowerment.³⁵

The most recent meeting of the U.S.-India Strategic Dialogue was held on June 13, 2012, in Washington, DC. As of 2012, the United States and India have together participated in 20 working groups and forums, and the Strategic Dialogue is composed of five "pillars of focus": "strategic cooperation; energy and climate change; education and development; economics trade and agriculture; and science, technology, health, and innovation."³⁶ Among prominent topics of discussion were consultations on Afghanistan, maritime security, a bilateral defense partnership, the civil nuclear initiative, technology and security, counterterrorism, and a new renewable energy partnership.³⁷

The 2012 consultations on Afghanistan were significant, especially as the two nations agreed to hold a trilateral dialogue with that country. Making progress there will continue to be a challenge, however, given

the historically complex relations between India, the United States, and an increasingly unstable Pakistan.

With respect to the bilateral defense partnership, both have supported the idea of increased military exercises and exchanges over the past 6 years. As a more tangible outcome, India has signed defense contracts with U.S. firms worth over \$9 billion.³⁸ Although the current focus on defense sales should not be undervalued, as noted later, steps must be taken to make the defense partnership “strategic.”

Additionally, the third round of dialogue consisted of a \$20 million partnership of technical assistance between U.S. Agency for International Development (USAID) and the Government of India’s Ministry of Power and Ministry of New and Renewable Energy.³⁹

Finally, the two sides also welcomed the release of the open-source web platform that they had agreed to in the Strategic Dialogue of the year before, representing joint technological advances that would bring the nations closer together.

THE CHALLENGES

Although links between the United States and India are getting stronger, significant challenges confront the strategic partnership: first, the role of regional actors in addressing key international issues; second, nuclear capabilities, as both countries have divergent goals in this respect; and third, several unresolved defense-related issues.

With regard to regional actors, one major point of contention is coordination between the United States and India on policy toward Iran; that is, India is reluctant to impose oil sanctions against Iran.⁴⁰ India tends to not endorse sanctions as a policy, as a result

of the negative effect sanctions have had on India in the past. Another challenge the two countries face is the instability of Pakistan, which is a mutual security concern. Continued U.S. support of Pakistani defense capabilities is still viewed by Indian strategists as a direct threat to India's security.⁴¹

The role that China plays in the region certainly cannot be ignored. Historically, China and Pakistan have had strong ties. Pakistan was the first country to recognize the People's Republic of China, and Sino-Pakistan relations were bolstered following the Sino-Indian war of 1962, when China and Pakistan signed a border agreement on disputed Kashmir territory.⁴² Over the years, China has tended to use Pakistan as a counter to India's power in the region, and Pakistan has relied on China to supply defense equipment to its military forces.⁴³ Furthermore, in light of recent developments, China will most likely seek to maintain a strong relationship with Pakistan in the future, in an effort to counter the rising influence of the U.S.-India strategic partnership. (Nevertheless, improved relations and coordination among all four countries would play well in international forums.) Finally, some elites within each country view a stronger Sino-Indian relationship as a counterbalance to possible U.S. global hegemony.⁴⁴ This could be an option for the future, but only if China and India are able to resolve their outstanding impasse concerning their border conflict.

The divergent nuclear goals of the United States and India serve as the second challenge to improving bilateral relations. The United States seeks the completion of the U.S.-India civil nuclear deal, yet India has not yet passed the legislation necessary to establish an "internationally compliant civil nuclear liability regime."⁴⁵ If this were to happen, it would open up the

possibility that the U.S. firms would invest in India's nuclear industry, further bolstering economic ties.⁴⁶

Finally, with respect to the defense partnership, there is discontent associated with the lack of military data sharing, and with "strategic" technology transfers.⁴⁷ The two countries do not yet conduct joint planning or joint strategic operations, which limits the potential of the strategic partnership. Indeed, in the absence of joint planning or joint operations on the ground, the partnership will remain essentially a diplomatic talk show with little real substance. Moreover, the absence of joint strategic planning also implies that the countries might have completely different assessments of global threats, and hence respectively different sets of plans to meet those threats.

CONCLUSION

In the past decade, the U.S.-India bilateral relationship has grown increasingly strong as the two nations have pursued mutually beneficial strategic initiatives. Ongoing success with existing endeavors and continued strengthening of ties will require the United States to support the role of India as an emerging leader in the international community, while at the same time remaining sensitive to regional dynamics within Asia. Positive progress will also be contingent on the ability of each nation to develop a deeper understanding of the other's political structures and dynamics, and greater patience with the other's bureaucratic process of strategy implementation.

Additionally, as India's power and influence in the Asian region rises, relations within Asia will continue to evolve in a dynamic fashion, particularly as China continues its rise as a global power. On the matter of

regional dynamics, the United States will have to be increasingly mindful of how its relations with Pakistan and China will affect its closer strategic relationship with India.

A realist perspective alone, however, will not explain relations among the United States, Pakistan, China, and India. The United States, as well as other countries, should not only look at India as a regional center of influence and a rising global power, but should examine India through a liberal institutionalist lens to appreciate the more central role it might play in international organizations. Consistent with that perspective, in 2010, the United States publically supported having India join the UN Security Council as a permanent member. For its part, India has historically supported UN actions, and has been the second largest contributor, behind Pakistan, of peacekeeping troops.⁴⁸ Furthermore, although India did play a leadership role in the NAM and although that movement still exists, since the end of the Cold War, the NAM has become less relevant to India's strategic thinking and today does not dominate Indian foreign policy decisions as it did in the past.⁴⁹

Nevertheless, the biggest challenge that both countries face at present is a lack of understanding of each other's political systems and democratic workings. As an illustration, India is unable to grasp the significance of congressional obstacles to agreements that a particular presidential administration may have penned with the Indian government. Meanwhile, the United States seems to be frustrated by India's slow moving parliamentary system and appears to take Indian refusal of U.S. defense contracts in lieu of others too personally, as was evident in the case of the India-France deal on the Medium Multi-Role Combat

Aircraft (MMRCA). Also, despite so many joint statements and collaborative efforts signed on paper, U.S. frustrations with India could grow due to the lack of Indian ministerial capacity and bureaucratic staffing to carry forward articulated objectives into ground-level working frameworks that can deliver substantive results.

Both sides must keep in mind that domestic policymakers play to their respective constituencies, as recent U.S. debates on outsourcing and H1B visas have indicated. As is seen from policy discourses on India in Washington, U.S. policymakers and think tankers fail to grasp the domestic constituencies of Indian politicians, which are often based in rural areas and might balk at too much excitement about deeper ties with the United States.

Hence, a bit of caution, patience and tolerance is required, perhaps on both sides. The best way for shaping attitudes lies with a greater number of societal interactions among individuals, so that Indian and American voters better grasp how the relationship benefits their lives on a daily basis.

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CHAPTER 14

DISCUSSANT COMMENTS

Ivan Welch

The papers and presentations proffered by the panel combined to point out the potential for cross-sector collaborations within the context of the U.S.-India strategic relationship. From the ancient philosophical underpinning of Indian political thought, through the coolly commercial considerations of a global economy, to a historical perspective of just how compelling the strategic connections are—insights from culture, economics, and politics were brought to bear.

In my comments, I will focus on the content and suitability of each paper for thinking about opportunities for cross-sector collaboration in the context of U.S.-India strategic relations.

ANDREW SALAMONE

Andrew Salamone artfully explained how the “norms and principles underpinning India’s statecraft” are “entwined with the region’s religious philosophy.” A common human cognitive coping strategy is to project one’s own intentions and understanding of circumstances into the analysis of another’s strategy or actions. So we, who have been raised in the West and educated in a milieu of post Westphalia political theory, project our constructs into an explanation of the motives of India’s leaders for creating policy within their own strategic culture. In contrast, Salamone lays out in convincing detail how Hinduism historically shaped Indian society and delineated the workings of the state in a culturally unique manner.

His focus is on the texts that are little known in the West and are called the *niti*, which he notes is “Sanskrit for the science of polity.” Using three historic texts, he lays out the basic principles of statecraft and leadership that have been developed and embraced in the Hindi-speaking world. Via a clear comparison of excerpts taken from the ancient texts and comments made by contemporary statesmen, Salamone shows how contemporary Indian political leaders are informed by this special perspective. Thus, in order to cooperate effectively with the Indian government, one must consider the historically rooted cultural antecedents that create their strategic culture.

This approach is essential to the concept of cross-sector collaboration. Each actor must consider the fundamental values and conceptual understandings of everyone involved in the ventures in question. Without the background knowledge of cultural factors such as religion, language, and social structure, meaningful collaboration will be difficult or impossible. It is clear in this paper that a prime component of cross-sector effort must be a mutual historical and cultural investigation of all stakeholders, with the intention of building an informed climate from which all “can work as equal partners” to reach mutually acceptable goals.

RAHUL S. MADHAVAN

In light of the geostrategic realities of South Asia, Madhavan effectively explained the potential for U.S.-India trade in the security cooperation field. His points regarding differences between U.S. strategic culture and that of India are insightful. The two nations share a history of striving for independence and defending democracy. Nevertheless, their respective experiences

since World War II have created a real divergence in mutual understanding. Now times are different. The past decade has shown unprecedented growth in government-to-government sales of defense equipment. Policy dialogues, ministerial visits, commercial forums, and executive focus groups have increased at an unbelievable rate.

Madhavan pointed to the need for identifying the critical issues that continue to affect a policy framework and practical reality for vigorous bilateral trade: each challenge may also be an opportunity. His explanation of how policy is currently being pulled between pragmatism and principle is a crucial insight. U.S. industrial needs and commercial interests do not automatically translate into the perceived security needs and social goals of India.

Madhavan emphasized the competitive nature of Chinese security and commercial interests in South Asia. His advocacy for U.S. business struck me as an echo of a popular adversarial sentiment toward the Chinese presence in the market place and diplomatic space. As to the goal of sustainable development, it seems India and China ultimately will cooperate more than compete as near neighbors in Asia. Both India and China have been consumers of Russian aviation and military technologies. Perhaps they will have equal appetite for U.S. defense products as well.

He reminds us of the foundational requirement of cross-sector collaboration: all stakeholders' moral principles and pragmatic economic needs must be addressed in a mutually beneficial manner.

NAMRATA GOSWAMI

Written by Namrata Goswami, "U.S.-India Strategic Partnership: Compelling Connections?" brought

into focus the historic contours of the U.S.-India relationship, which, in turn, helps one better understand present relations and to speculate about possible future dynamics.

She shows that the world of 1947 was a very different place for the new nation of India and for the new world power, the United States. The fall of an Iron Curtain across Europe held much more interest in Washington than it did in Delhi. During the Cold War that followed, while India sought out a strategic identity based upon national autonomy, the United States sought out treaty partners and alignments that could contain world communism. The outcome was decades of mistrust and distance.

The events in 2001 compelled the United States to rethink all of its relationships in South Asia. So the new millennium opened the flood gate for the many improved bilateral relations between India and the United States. A steady flow of widening engagements in several areas of mutual interest expanded. Of particular note was the fact that in 2006, the Henry J. Hyde United States-India Peaceful Atomic Energy Cooperation Act formally acknowledged India as a nuclear state in the international system and urged nuclear cooperation. The U.S. recognition of India as a bona fide nuclear state is a landmark in the relationship. Today the two countries have agreed to cooperate and coordinate on issues including defense, space, high-technology sectors, clean energy resources, education, agriculture, elections management training, and capacity building to extend food security: a far cry from the decades of mistrust and distance experienced between India and the United States.

Goswami's key insight points us to a critical aspect of cross sector collaboration: the biggest challenge that

U.S. and India face as of now is a lack of understanding of each other's political systems and democratic workings. Here she reminds us that mutual understanding of the historical realities that make up the partner relationship, are most important.

IMPLICATIONS FOR CROSS-SECTOR COLLABORATION

These papers and the panel presentations caught the structural essence of a way forward in the cross-sector collaboration experience. With a bold historical look at culture, Salamone points us clearly to the foundational requirement to launch collaboration. He shows that we must become aware and learn to appreciate the cultural perspectives of ourselves, our potential partners, and all participants in the quest. To gain insight into other's interests, needs, and fundamental requirements is the most critical starting place in our collaborative space.

Madhavan unabashedly and expertly plunged us into the economic realities consistent with each effort in the collaborate realm. We must establish values for the proposed actions, assets, and assessments that we are seeking and bringing into the give and take of negotiations. What will be our currency of exchange in a milieu of barter of intangibles, provision of real capital, and production of complex outcomes? What is required to establish a sustainable interaction that provides value for service and builds lasting relations of cooperation? What communications and transactional linkages are necessary for cross-sector collaboration? An approach cognizant of economic theory and practice is more robust.

Goswami provided an historical approach to the political landscape that must be explored and recorded. Past positions and performance cannot be ignored, and often may provide indicators for areas of concern or compatibility among collaborative actors. The principles of power, how it is manifested, and how it can be addressed are crucial in understanding the pitfalls and possibilities in cross-sector collaboration.

Now we have a basic framework of analysis to use as we make our way into this exciting realm of sustainable development via cross-sector collaboration. First, look to a personal and public education on the culture of ourselves and our partners. Second, seek to access and communicate the economic realities of the proposed relationships and combined actions. Third, consistently review the historical context of power sharing in the relationships. Once this process of self-awareness and mutual education is started, then project forward into the requirements to share power in this context of cross-sector collaboration.

SECTION 5

SUSTAINABLE DEVELOPMENT AS A NATIONAL SECURITY CONCERN IN INDIA

Moderator: Dr. Kent H. Butts, Professor of Political-Military Strategy, Center for Strategic Leadership, U.S. Army War College (USAWC).

Presenter: Ms. Dhanasree Jayaram, Associate Fellow at the Centre of Air Power Studies, New Delhi.

Presenter: Group Captain Krishnappa Venkatshamy, Institute for Defence Studies and Analyses (IDSA), New Delhi.

Discussant: Dr. Michael Beevers, Department of Environmental Studies, Dickinson College.

The papers of Jayaram and Venkatshamy focus on the relationship between environmental change or more expansively, human security and India's traditional national security concerns. Each paper offers observations and recommendations relevant to the workshop's cross-sector collaboration theme.

Jayaram's remarks on the politics of environmental change in India as they relate to national security hits on one of the key drivers of successful collaborative process – mutual agreement on the problem. The inability of India's strategic leaders to frame human security issues within the context of traditional security concerns has resulted in the failure to reach common agreement on problems within these overlapping policy arenas. This failure leaves key stakeholders without a clear understanding of the net benefits ac-

crued from participating in collective action and thus disincentivizes their participation.

Venkatshamy provides a sweeping commentary on India's relationship between sustainability and security at intrastate and interstate levels. With each sustainability topic reviewed, he advocates the use of cross-sector collaborations to solve stubborn problems. These recommendations range from leveraging public-private partnerships to tackle health and education challenges within India to forming tri-sector Indian alliances to collaborate with African counterparts for the purpose of capacity building in Africa.

Table 5-1 lists cross-sector propositions that best match with observations contained within the presenters' papers.

Proposition 2: Public policymakers are most likely to try cross-sector collaboration if they believe that separate efforts by several sectors to address a public problem have failed, or are likely to fail, and the actual failures cannot be fixed by a separate sector alone; or less dramatically, that no sector can address the presenting problem effectively on its own.

Jayaram and Krishnappa recognize that India navigates in an increasingly complex environment and both champion India's use of collaboration as a strategy for overcoming internal as well as external challenges. Krishnappa captures this sentiment in the opening statement of his paper,

Thus, in the coming decade, leaders in India's government, society, business, and military sectors will be confronted by a set of challenges that will have multiple causalities and will require responses at multilateral, inter-agency, and cross-sector levels.

Proposition 3: Cross-sector collaborations are more likely to succeed when one or more linking mechanisms—such as powerful leaders and sponsors; general agreement on the problem; existing networks; neutral conveners; requests for proposals, plans, projects, or technologies requir-

Table 5-1. Propositions About Cross-Sector Collaboration Relevant to Sustainable Development and Security in India.

ing collaboration; and consequential incentives favoring collaboration—are in place at the time of their initial formation.

As stated by Drs. John Bryson, Barbara Crosby, and Melissa Stone, general agreement on the problem is one factor that leads to collaborative success. Jayaram acknowledges that the failure of India's policymakers to arrive at a general consensus on a problem definition associated with human security will lead to continued negative outcomes for the nation. For example, the reticence of India's military to acknowledge environmental change as a determinant of national security is an underlying reason for the very limited involvement of India's military in cross-sector collaborative efforts to mitigate the negative effects of environmental change. This failure of the military to engage as a fully committed partner with public and civil society stakeholders leads to the continued degradation of the physical environment within the country.

**Table 5-1. Propositions About
Cross-Sector Collaboration Relevant to Sustainable
Development and Security in India. (Cont.)**

CHAPTER 15

BREAKING OUT OF THE GREENHOUSE: INDIAN LEADERSHIP IN TIMES OF ENVIRONMENTAL CHANGE

Dhanasree Jayaram

A Native American proverb very aptly puts it: “We do not inherit the earth from our ancestors, we borrow it from our children.” Nonetheless, while predatory humans have tasted success in their agenda of constructing an artificial paradise, they have ensured that continuation of life on earth itself is endangered. Today, humans are subject to unpredictable vagaries of environmental change, which have manifested themselves in a number of ways and at a much more frequent pace than in past decades.

Organizations such as the National Aeronautics and Space Administration (NASA), the Hadley Centre for Climate Prediction and Research, the National Oceanic and Atmospheric Administration (NOAA), and the Intergovernmental Panel on Climate Change (IPCC) have been actively monitoring developments in the climate domain for several years. The scientific community’s findings in terms of increasing carbon dioxide (CO₂) concentrations, rising sea levels, and accelerated melting of glaciers have opened the eyes of the international community to the problem of climate change. Similarly, the Indian Space Research Organization (ISRO), the primary space agency of the Indian Government, has found alarming impacts of climate change on the Himalayan glaciers, agricultural yield, and hydrology in India. Nevertheless, the process of reaching consensus over plausible solutions and implementing them is a long-drawn one.

SUSTAINABLE DEVELOPMENT

The *Brundtland Report* released by the United Nations (UN) in 1987 states, "Sustainable development is development that meets the needs of the present without compromising the ability of future generations to meet their own needs." The word 'needs' refers to the "essential needs of the world's poor, to which overriding priority should be given" within the context of "the idea of limitations imposed by the state of technology and social organization on the environment's ability to meet present and future needs."¹

The other important milestone in the discourse of sustainable development is Agenda 21 of 1992. The Rio (Earth) Summit produced the Agenda 21 document that outlined the need for and the path toward a "global partnership for sustainable development." What stands out in Agenda 21 is that it does not restrict itself to the environmental dimension of sustainable development; instead it pays equal attention to: socio-economic dimensions such as combating poverty; protecting and promoting human health conditions; children and youth in sustainable development; strengthening the role of farmers; and so on.² Therefore, it stresses the importance of integrating all the elements that constitute sustainable development under one umbrella, rather than giving any single dimension more priority than others.

Besides calling for the transfer of technological and financial resources to developing countries and the less-developed countries (LDCs), Agenda 21 places the onus on the UN to channel the efforts of the entire international community to achieving sustainable development. The concept of sustainable development

removes envisioned barriers between the environment on the one hand, and growth and development on the other. The vague definition also invites all the stakeholders to the table for discussion, policy formulation and policy implementation. Since Agenda 21 talks about sustainable development worldwide and not in one country, the basic needs of each country have to be defined. Some countries might place eradication or reduction of poverty above everything else, while others might demand appropriate technologies to deal with environmental problems. The role of industrialized countries in the North has also been ambiguously defined, except for their obvious "obligation" to share resources. That ambiguity reflects the fact that, while developing countries on various occasions called for the developed countries to change their lifestyles from consumerist to sustainable, to democratize institutions at the international, regional, national, and local levels in all countries, and to attain global equity, those calls were either ignored or struck down.

One of the major hindrances to the achievement of sustainable development at the international level is the lack of economic and social justice within and among nations. For example, the *Brundtland Report* clearly states that "environmental damage from global consumption falls most severely on the poorest countries and the poorest people, who are least able to protect themselves."³ This could imply two things: first, that poverty has to be tackled before environmental damage, as even poverty could be exacerbated by environmental change due to the loss of physical, economic, or psychological infrastructure; and second, that environmentally destructive acts of industrialized countries could be detrimental to developing countries.

What one tends to overlook is the fact that equity also needs to be achieved within industrialized countries. For any environmental policy to bear fruit, social and economic inequalities have to be addressed. At the same time, environmental degradation itself could exacerbate the existing social and economic tensions, thereby rendering the task of eradicating poverty and uplifting masses an uphill task. Thus, any government, including that of India, needs to address these issues holistically. India needs to focus on these very aspects and turn the debate in its favor.

AN EXISTENTIAL SAGA OF CONFIDENCE-BUILDING AND PEACE-MAKING SANS ENVIRONMENT

Climate change has been at the center of discussion since the 1980s, and climate change negotiations have—both justifiably and unjustifiably—become the fulcrum of debate surrounding environment and development issues. After the creation of the United Nations Framework Convention on Climate Change (UNFCCC), the Kyoto Protocol has probably been the most and only noteworthy milestone in the climate change negotiations. The political fault lines—between the developed and developing countries; among developed countries; among developing countries, due to differences in vulnerability; between the energy-deficient and energy-rich countries; and most importantly, between policymakers and scientists—have derailed negotiations from time to time, so much so that the Kyoto Protocol itself has failed to deliver the results that initially were envisaged. Indeed, the refusal of the United States to ratify the Kyoto Protocol has been one of the biggest setbacks in the history of international climate change policy.

In the early-2000s, India and China tended to have a common position on climate change negotiations. However, the bonhomie between India and China that was at its zenith at Copenhagen, Denmark (2009), waned slowly over the next 2 years. China's investments in "green" technology placed the country in a suitable position to adopt reductions targets, and, as one of the leading technology vendors, to garner maximum dividends from a lucrative global carbon market. Those developments increased concerns among leaders in India that principles which they strongly espoused, such as equity and climate justice, would be disregarded in negotiations about the international climate change regime.

The outcome of the 2012 Doha Climate Change Conference has paved the way for bringing India, China, and other emerging and developing countries into a legally binding emissions reductions regime that does not respect the principle of "common but differentiated responsibility" by 2020. Nonetheless, the implications for India may be somewhat different than those for China. Although the per capita emissions of greenhouse gasses of both countries are far lower than that of industrialized countries, China is the largest emitter in the world and India is not far behind, ranked in third place. However, China's aggregate and per capita emissions are far more than India's, and the former's per capita emissions could match that of the European Union (EU) by 2020-25, an outcome that naturally would put the onus on China to adopt internationally recognized legally binding emission targets. If, in the coming years, China were to ever subject itself to external scrutiny as its standing in the international security and governance architecture became stronger and stronger, then that might be a different situation altogether.

THE POLITICS OF ENVIRONMENTAL CHANGE, SUSTAINABLE DEVELOPMENT AND NATIONAL SECURITY

When the security implications of climate change was introduced as a topic of debate in the United Nations Security Council (UNSC), the subthemes that formed the core of discussion included migration, resettlement, sustainable development, poverty eradication, energy, adaptation, and so forth. Although many of the phenomena discussed were not directly linked to climate change but rather to a broader set of environmental factors, the West's insistence on including them in the debate led countries such as India to stress the point that other factors, such as the unavailability of resources, could lead to conflicts, even if they were not directly attributable to climate change.

Thus, one should regard climate change as a crucial component of a broader concept, that of environmental change. The time has come to pay equal attention to nonclimate change related issues such as urbanization, deforestation, groundwater depletion, pollution, and stress on the availability of resources, as each can impact the security of present as well as future generations. Furthermore, sustainable development encompasses environmental, economic, and social well-being. If any one of these variables is affected, ramifications would be felt in the whole system, and this in turn would have a direct bearing on the future. The environment is definitely not a constant, and environmental change has the potential to derail efforts quickly to achieve sustainable development. To delink anything that affects the security of the future generations from the contemporary secu-

rity architecture is absurd. Sustainable development is all about addressing the requirements for survival of future generations. That entails an assessment of the catastrophic impacts of environmental change on essential resources such as water, food, land, and so on. Therefore, environmental change is definitely a security issue. Mitigation of environmental change is possible only by following the path of sustainable development or as some would call it “smart development.”

The Ehrlich equation ($I=PCT$, where I is the total environmental impact, P is the level of population, C is the per capita consumption and T is the environmental intensity per unit of consumption)⁴ suggests a rather grim story of the enormous tension between sustainable development and environmental security.

According to the equation, one way in which environmental impact can be contained is by decreasing per capita consumption of energy ($C \times T$). There is a group of economists who agree that energy efficiency reduces demand over the course of time. They believe that energy efficiency essentially leads to reduction in wasted energy and that consumers should be expected to use lesser amount of energy to achieve the same level of utility. But, to counter this argument and thus to tell the grim story, various theories have been formulated. Among them is the Rebound Effect,⁵ which asserts that as the demand as well as the price of using a particular resource decreases, there would be a rebound in demand. Another is the Piggy Principle,⁶ which states that consumers would rather try to achieve a higher utility at the same expense.

Moreover, within the context of the Ehrlich equation, energy demand is only expected to increase with global population growth. Mere improvements in

productive efficiency, energy efficiency, waste management, and reduction in pollution through technological means might slow down the pace of environmental degradation, but only to a point.

Despite those basic tensions, the rationale for defining environmental change as a security issue remains contestable. On the one hand, to define environmental change as a potential threat to international peace and security is accurate, but to restrict it to interstate conflicts is not acceptable to many policymakers in the developing world, for whom addressing daily concerns at the micro-level is a much bigger and more relevant challenge than addressing international issues. On the other, to say that environmental change is a problem of developing countries and the LDCs with weak systems, and thus ignores the vulnerability of developed countries, would be logically and evidentially unacceptable in the context of recent catastrophes in the United States, Europe, Australia, and Japan.

It was only in the 1990s that the UN slowly began to pay an equal amount of attention to conditions within states. There was a popular belief that the UN should demystify the idea of sovereignty and address:

individual, political, and civil rights, as well as the right to basic provisions like food, water, health care, and accommodation. . . . The UN reinforced this new perception that pursuing justice for individuals, or ensuring human security, was an aspect of national interest.⁷

It also concluded that violation of individuals' rights could create fissures between states. The system of states remains paramount, yet there was a marked shift in the way international security began to be perceived.

Moreover, much of the skepticism connected to the security aspect of climate change could actually be eliminated if the term were replaced by “environmental change.” That would help overcome blind spots in international political discourse, such as those which have tended to dismiss the real threat of environmental change to human security and help explain why only traditional security concerns regarding developments in the Arctic are being addressed by the establishment.

Similarly, the mandate of the UNSC should be to discuss every environmental issue that impacts security and not just climate change. It has been alleged that the reason behind bringing up the issue in the UNSC in 2007 was to push a deal at Copenhagen, by pressuring countries like India and China to adopt emissions reductions targets, and the same happened in 2011 for a deal based on shared responsibility at Durban, South Africa.⁸ This is exactly the reason why the introduction of climate change in the UNSC has not been a welcome step from the perspective of a lot of countries in the developing world, especially the newly emerged and emerging states.

More broadly, forces that endanger the sustainability of a particular region or an entire country are bound to have implications for resource security. This in turn would affect national security in the form of both interstate and intrastate conflicts. To facilitate better understanding of complex issues, an agency providing policy guidance, such as the UN Commission on Sustainable Development (UNCSD)—established to oversee and advance the implementation of Agenda 21—has to be strengthened.

INDIA AT THE CROSSROADS OF A NATURAL QUANDARY

India has to take into consideration a multitude of highly interlinked factors while framing its local, national, regional, and international environmental change and sustainable development policies. The energy management policies of the establishment have more or less failed to make India self-reliant. Not only does India's development excessively and irrationally depend on imports of coal and oil, the least environmentally friendly sources of energy, but the share of renewable and nuclear energy in the energy basket is abysmally low at this point in time. With the launching of the National Action Plan on Climate Change (NAPCC) in 2008 and the signing of the civil nuclear agreements with several countries across the world, including the United States, this situation could well change; there are, however, many political, economic, and cultural stumbling blocks.

India has come a long way since the days when poverty eradication was the primary driver of the country's noninclusive sustainable development policy. For example, given the lack of environmental risk assessments, infrastructure projects associated with rapid urbanization in delta regions such as Mumbai (India's financial capital) face—and in some cases are already facing—acute problems such as flooding, storm surges, and so on. What could possibly save Mumbai and other cities in India is the decisionmaking system. India cannot afford to follow the path of its largest neighbor, China, which has always pinned its policies on control of the environment (reflected in its rampant dam-building exercises), rather than management of it. The adoption of an all-inclusive devel-

opmental policy that could augment India's adaptive capacity and assist its mitigation activities and would also enhance India's image as a leader in tackling environmental change globally will require enduring political will.

As of August 31, 2012, India's total installed renewable energy capacity stood at 26 gigawatts. The country has marked a significant jump in the share of renewable energy in its energy mix from 7.8 percent in 2008 to 12.1 percent in 2012. In 2011, the country's investment in renewable energy reached \$10.2 billion.⁹ By the end of 2022, total projected capacity is 38,500 megawatts (MW) for wind power; 20,000 MW for solar power; and 7,300 MW for bio-power.¹⁰ Though India has set foot on the path of increasing the share of renewable energy, it has a long way to go primarily due to the lack of infrastructure and public-private partnerships. The industry is now undergoing positive change with the entry of private parties such as Essar, Indiabulls, Reliance, Tata Power, Suryachakra, and Euro Group in the solar energy domain; and Suzlon, GE Energy Financial Services, and Greenco Group PLC in wind energy. Furthermore, instead of heavily concentrating on the possibility of deploying geo-engineering projects that may prove to be counterproductive, if India were to focus on natural carbon sequesters such as (planting) trees, and on various traditional technologies available in the country such as eco-friendly cook stoves or waste converters, then it could lead the world in the environmental and sustainable development arena. India has been a slow starter at the international level with regard to investing in green technology. Primarily due to economic, political, and ideological differences with the West, it has also been slow to reach out to the rest of the world for assistance.

ENVIRONMENTAL AND ECONOMIC POLICY IN INDIA

Sustainable development is closely linked to an individual-centric approach toward national security (based on governance) that gives primacy to social justice, equality, and democracy, values which are engraved in golden letters in the Indian Constitution. In India's environmental policy, primacy is given to justice, and sustainable development is considered to be ingrained in the Indian ethos. For instance, the practice of recycling is an institutional one in India that can be enhanced further by technology. However, Indian perception of sustainable development is more socially than environmentally inclined. The Indian policymaking bodies inadvertently point fingers at the highly resource-intensive lifestyles of industrialized countries. The dominant viewpoint—not only do these countries need to shift to nonconventional sources of energy but also need to revamp their preferences and behavior—continues to thrive.

India cannot afford to delink economic growth from energy use, even though it has a service economy, unless it goes back to the model proposed by Mahatma Gandhi for growth. Unless India grows, people's developmental needs cannot be met. In this light, statements made by key members of Indian environmental and sustainable development policymaking systems reveal that the establishment is not just skeptical, but to a great extent is paranoid about the Western driven debate on security implications of climate change. Although there is cooperation between India and the industrialized world at the highest levels, many believe the West is clearly trying to tackle

the strategic threat of the rise of India and China. They do not want a political agenda and economic schema similar to that which has characterized the World Trade Organization process to hijack debates about environment and security.

Perhaps the Government of India is yet to define sustainable development and human security and how interrelated they are. Social and economic layers of sustainable development could be fostered only if the environmental layer is given equal importance. Even when India talks about justice at the international level, one has to remember that any international policy that is based on the principle of equity at the global level should also be applied to the domestic level. If the per capita principle is applied to the greenhouse gas emissions in negotiations at the UNFCCC or discussions at the UNSC, then it should also be applied to the distribution and use of energy within the country; but in India, that is seldom carried out due to systemic failures and faults, including corruption.

In India, the current national security apparatus does not take environmental change or sustainable development into consideration while framing policies. On the one hand, national security itself is considered a sacred cow. On the other, human security is yet to find its rightful place in the national security agenda. The National Security Advisor (NSA) does not look into environmental security; that issue comes under the jurisdiction of the Ministry of Environment and Forests, which in turn has been completely averse to the idea of linking security with the environment. Furthermore, the Indian government does not want to be stampeded into action. It is not in a position to "sacrifice the present for the future."¹¹ Take, for instance, the views of the current NSA, Shivshankar

Menon, who separated zero sum challenges such as terrorist threats, espionage, and traditional military threats from non-zero sum challenges such as energy, water, and maritime security in one of his addresses. He derided the idea of “reducing” life to a “matter of security” by using terminologies such as “human security.” He also opined that “by strategic, we mean of long-term and primarily military significance” and that “not many of the non-traditional security challenges that we so blithely list these days actually meet the test of this definition.”¹²

Generally speaking, the majority of Indian policy-makers firmly believe that linking the environment to security concerns would only complicate matters. Therefore, the need of the hour is to concentrate on the responses to environmental change rather than the politics of it. This brings the debate to the conclusion that there has to be a balance and raises questions about the importance of a country’s leadership to the formation and fulfillment of visionary goals.

INDIA: THE ROAD TO BE TAKEN

India has to emerge out of its state of denial and illusions and deal with the security implications of environmental change. The loss of territory or the lack of freshwater in Maldives; the loss of agricultural or habitable land in Bangladesh; the drying up of River Indus; or the damming of River Brahmaputra by China would each impact regional security and therefore India’s national security. The Indian military itself is expected to face a crunch in terms of both energy and regional threats in the future, owing to environmental change which could affect their operations. The Western trend of separating development from the security

paradigm is not acceptable to India. The role of the UN in this entire discourse has also come under review. Could the creation of a fresh institution, such as the proposed World Environment Organization be an alternative to the host of initiatives of the UN that have proven to be a mixed bag, and, more importantly, to overturn an asymmetrical, hierarchical, and discriminatory international system?

India itself has failed to impress its ideas on the international community due to its obstructionist attitude and inability to accept a perspective that encompasses both development and security. India has also fallen short in terms of mobilizing the support of the majority of developing countries, including its own neighbors, on the issue of climate change, for various reasons. First, India has not reached a stage in which it could use environment as a strategy, due to a paucity of financial and technological resources. India seems to be in a weak position with respect to natural resources. Take water as a case in point: China treats water as a strategic commodity, as it is the source of most of the rivers that flow to South and Southeast Asia and thus has incredible bargaining power among the lower riparian countries, including India and its neighbors. The availability of other resources such as food would also be threatened by environmental change. In the future, countries would be forced to buy farmlands in other countries, as is being practiced by the majority of advanced countries, as well as upcoming superpowers like China. Second, the culture of think tank diplomacy is dormant in India, which makes the task of using environment as a strategy all the more difficult. In this context, the accountability and credibility of think tanks are of prime significance, since foreign intrusion in the name of the provision

of funds could harm national interests. Third, India has so far not been able to live up to the expectations of the other developing countries and the LDCs. Many African nations have openly declared their interest in Indian financing and green technology, but India is yet to act upon many a promise it has made in the past to these nations.

Before yet another unfair international system is thrust upon India, it has to secure its position as well as that of the other vulnerable countries that have serious environmental concerns. For example, China is not only carrying out polar expeditions to the Arctic but also claiming its share in the oil and natural gas deposits by labeling the Arctic as a common heritage. Thus, instead of toeing the line of the EU and calling for a declaration of the Arctic as part of the global commons (an approach that is never going to happen anyway as long as the United States and Russia exist on the map of the world), India should clearly declare its own self-interested policy and probably should use its extensive relationship with Russia to gain access to the Arctic.

The country's policymakers can join hands with the military and think tanks in order to give more credence to the revised outlook toward security. In the West, the military has taken the initiative to weave strong interlinkages between climate change and national security. It is high time that the Indian military delineates various aspects of national security that are associated with environmental change. There are certain aspects which come directly under the umbrella of the existing national security paradigm, including among others water security; safety and security of military installations; and migration. The military could then advise the Ministry of Environment and

Forests (MoEF) to deal with human security issues that could be triggered by environmental change. That would assist formulation of India's security and strategy policies both at the national as well as international levels. India could choose to be a leader by redefining its strategic and security paradigms and revitalizing its outlook toward the rest of the world.

ENDNOTES - CHAPTER 15

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CHAPTER 16

SUSTAINABLE DEVELOPMENT AND NATIONAL SECURITY STRATEGY FOR INDIA: 2020 AND BEYOND

Krishnappa Venkatshamy

Sixty-five years ago, a remarkable experiment in democracy and nation-building that has fundamentally altered the world order was inaugurated in South Asia. India, an economically deprived, continental-sized, vastly diverse nation-state resolved to meet its tryst with destiny dressed in democratic principles, secular thought, international fraternity, and a strong belief in universal ideals. In the years of Jawaharlal Nehru, its voice was heard and taken seriously in the councils of the world. It played a key role in the decolonization of Asia and Africa; the founding of international institutions; the peaceful resolution of international conflicts and disarmament; and the articulation concerns shared by post colonial communities in global forums. Since then, it has contributed to nation-building and peacekeeping efforts in the world, worked with other countries to end discrimination based on race, and offered its good offices for the pursuit of global justice and equity.

India has undergone multiple economic, social and political transitions in the last 20 years. Its economy has been radically transformed, and is one of only a few fast-growing economies of the world, with the potential to rise to the second or third largest economy in the world by 2047, the year in which India will celebrate its centenary. The successes of civil society groups in mobilizing public support have once again

demonstrated the power and resilience of democratic India's facility to negotiate conflict among different stakeholders through peaceful means.

Despite its numerous successes, India faces enormous challenges at domestic, regional, and global levels. Domestically, economic growth has not yet translated into the economic democracy envisioned by India's leadership. This disparity may accentuate pre-existing social and political tensions and thus result in a far more violent social order than that which India has had to contend in the first 6 decades of its independence. In addition, India's socio-economic situation makes some sections of society—lower income families, women, children, and the elderly—particularly vulnerable to violence.

The world is undergoing fast paced social, political, and economic transformations whose scale and speed are unprecedented in human history, including: an intense phase of globalization; a relative rise of new state powers such as India and China and a relative decline of the United States and Europe; an increase in the power of nonstate organizations; a rise in global population and income levels, which in turn is elevating demand for food, water, and energy; an emergence of concerns about planetary safety, caused by anticipated changes to climate; and a diffusion of technology that elevates the risk of high-end terrorism. Thus, in the coming decade, leaders in India's government, society, businesses, and military sectors will be confronted by a set of challenges that will have multiple causalities and will require responses at multilateral, interagency, and cross-sector levels.

The complex interplay of the domestic, regional, and global forces will frame the strategic calculus of India in the coming decade. While mindful of that

context, this paper will use as its point of reference India's domestic challenges, as well as efforts within India to achieve sustainability and security. It will also use that point of reference to selectively comment on aspects of India's external relationships with other agents in the global system.

COMPREHENSIVE NATIONAL SECURITY STRATEGY

The national strategy of any country should reflect a grand consensus based on cultural norms, historical experiences, contemporary imperatives, and aspirations for the future. It should encompass the integrity of territory; the safety of the people; the capacity for development; the promotion of values through peaceful means; and the pursuit of global peace in cooperation with other groups and states. The goal of such a strategy must be the creation of an enabling environment for the fuller realization of human capabilities — it cannot be envisioned through the narrow prism of nationalism or solely along lines terms dictated the state's elites.

An effective comprehensive national security strategy for India will depend upon its ability to promote the economic and social well-being of the people, which in turn can provide the resources required to pursue broader ends and ensure that the country maintains strong defense capabilities. India will face several short- to medium-run challenges to its sustainable development goals, including insufficient agricultural growth, which can lead to inflation; growing skill shortages; and the vagaries of the unsettled global economy. In the long run, environmental stresses and natural resource scarcities, particularly with respect

to energy and water, will pose serious challenges for policymakers.¹

In that light, India must take several internally focused steps: it must significantly reduce poverty and other social deficits; address domestic political violence through democratic methods; pursue reforms in political institutions in order to retain legitimacy and effectiveness in the eyes of the governed; sustain and reinforce conditions for economic growth; and convert India's demographic opportunities into a national asset.

To promote sustainable development, India must also take several steps regarding the external community. It must engage in bilateral relations and regional organizations; promote successful multilateral negotiations under the United Nations (UN) Framework Convention on Climate Change; strengthen energy security through diplomatic interventions and diversification of sources of energy supply; increase its share of global trade; tackle cyber security threats; and protect the global commons.

PROMOTING SUSTAINABLE DEVELOPMENT

Along with China, over the past decade, India has sustained the world's highest gross domestic product (GDP) growth rates – around 6 to 7 percent. India has also successfully weathered the global economic recession since 2008. Looking ahead, India will need to sustain a strong rate of economic growth in order to expand opportunities for employment and to enable the government to make public investments in education, health care, social welfare programs, capacity building, infrastructure development, and adequate military modernization.

India's population is expected to surpass that of China to reach 1.65 billion by 2025.² Leveraging the potential of the growing population in the coming 2 decades will depend on the availability of employment opportunities for the rising number of educated young workers. Factors such as health, education, and infrastructure will also determine India's success in continuing to transform the country, so that it can contribute to regional and global prosperity.

The key instruments for achieving inclusive development will be better performance in agriculture (at least 4 percent growth); faster creation of jobs in manufacturing; creation of appropriate infrastructural facilities in a widely dispersed manner to support both agricultural and manufacturing growth; expansion of rural connectivity, especially in the low income regions and the northeast; improved services in the areas of health, education and skill development; effectiveness and inclusion in social welfare programs; and a special focus on unique challenges faced by vulnerable groups and low income regions. These strategies must be complimented by transparent administration in order to maintain economic growth momentum.³

Urbanization, Sanitation, and Healthcare.

Urbanization in India is set to accelerate: while 30 percent of the population today live in towns and cities, within the next 20 to 25 years, another 300 million citizens are expected to migrate to urban areas. As urban populations increase, demand for key services such as water, transportation, sewage treatment, and low-income housing will increase fivefold to sevenfold in cities of all sizes and types. Unless measures are adopted, urban infrastructure and services will fall

woefully short of what is necessary to sustain prosperous and inclusive cities.

Several areas of focus are required to manage India's urbanization: inclusive cities, urban governance, funding, planning, capacity building, and low-income housing. India also needs to start a political process where urban issues are debated with the evolution of meaningful solutions in mind.⁴ Encouragement and investment must take place in initiatives such as the Jawaharlal Nehru Urban Renewable Mission (JNURM), which is intended to improve the infrastructure in 60-plus cities nationwide by delegating key responsibilities to city governments, mobilizing resources, and focusing on poverty reduction.

Another challenge confronting India is the provision of efficient and quality health care and sanitation facilities. By 2025, an estimated 189 million Indians will be at least 60 years of age—triple the number in 2004, owing to greater affluence and better hygiene.⁵ Even so, the vast majority of the country suffers from a poor standard of health, as the infrastructure has not kept up with the growing economy. Less than 40 percent of India's population has access to sanitation.

Despite having some excellent health care centers, nearly one million Indians die every year due to inadequate health care facilities: 700 million people have no access to specialist care, and 80 percent of specialists live in urban areas.⁶ Almost 50 percent of children in India are underweight, stunted, and not immunized. The under-5 mortality rate is 66 out of 1,000 live births, which is higher than the average of South Asia. A high proportion of the population, especially children, continues to suffer from diseases that are easily preventable. Maternal mortality rate still remains high at 230 per 100,000 live births. Only 50 per-

cent of women have access to antenatal care, and less than half of childbirths are attended by skilled health professionals.⁷

These average indicators do not reflect, however, the vast disparities between urban and rural, rich and poor, and between upper and lower castes. The poor state of health of the population and high private expenditure on it has an adverse impact on citizens' productivity and hard earned savings. Efforts must be strengthened to achieve the goals of the National Health Policy: increased allocation of public health investment in primary, secondary, and tertiary health sectors; gradual convergence of all health programs; mandatory 2-year rural posting before awarding the graduate medical degree; and decentralizing the implementation of health programs to local self-governing bodies by 2005.

Thus, building capacities in the system that would provide better health services at an affordable rate is not only a social necessity, but also an economic necessity. Attention must be paid to addressing social determinants that influence the provision of even basic entitlements.

Education and Skill Development.

By the end of this decade, 500 million people in India will be under the age of 25. Thus, education policy should be regarded as a key instrument of India's national strategy,⁸ since it lies at the core of promoting national security through development in the political, economic, technical, scientific, social, and environmental spheres. Education is also the foundation of a vibrant democracy where well-informed citizens exercise their rights and contribute to society.

Literacy is the basis of education and must be considered the minimum right and requirement of every Indian citizen.⁹ The 2011 Census shows that overall literacy rate increased from 65 percent in 2001¹⁰ to 74 percent in 2011.¹¹ Although access to education has improved substantially over the past decade, providing quality education and bridging the massive regional and gender disparities in literacy, education, and skill development remains a critical priority.

Disparities in the provision of education have left approximately 280 million of the Indian adult population illiterate. A large proportion of this number comprises young adults who should constitute the working age population in 2020. Demographers predict that India is projected to have the largest set of young people in the world in the coming decades. Increasing the proportion of working age population against the total population is expected to dramatically increase the country's savings rate. Hence, providing educational and employment opportunities to India's youth will promote social and economic development.¹² Empowering girls and women through education must be given greater attention. Studies indicate that increasing the level of women's market participation to match that of the United States would boost India's GDP by 4.2 percent a year.¹³

As the Planning Commission lays out in its Approach to the Twelfth Five-Year Plan for 2012-17, greater focus must be placed on strengthening the knowledge pyramid at the elementary, secondary, higher secondary, and higher education levels, and on vocational education and skill development as well. Measures must be developed to remove gaps in the implementation of the Right to Education (RTE) Act that makes quality elementary education a fundamen-

tal right of all children and seeks to achieve universal elementary education (UEE).

Universalization of secondary school education is necessary to complement UEE. Evidence from around the world reveal that secondary education helps in breaking the inter-generational cycle of poverty by providing huge beneficial impacts on health, raising the marriage age, reducing fertility rates, and improving child rearing practices.¹⁴

In India, the majority of new job openings have been created in the skilled-service and manufacturing sectors. The country therefore needs to provide the 12 million young people who join the labor force every year with the necessary skills, knowledge, and experiences that will give them access to better paying jobs.¹⁵ Toward this end, vocational training must, in consultation with industry, be integrated with existing academic curriculums so that students gain employable skills at the secondary level. Alongside those efforts, it will be necessary to ensure access to education for the growing number of students from rural and lower income groups who will be seeking secondary education in the next decade. With the majority of India's secondary schools under private management, these students will be unable to afford private secondary education. Thus, quality and access to secondary education must be dramatically improved. Models of public-private partnerships (PPP) in this sector must be explored.

Rising expectations, especially of the youth population, have raised demands for higher education opportunities. Higher education must be made more inclusive through efforts to improve quality and investment in more resources in order to enhance employability. India must also aim to create new universities

and enhance existing ones to attract the best quality students and faculty from across the world. India's advantage of widespread use of English as a language and low cost of living can enable it to become a global knowledge hub.

Employment Creation.

A key challenge for policymakers in this decade will be creating adequate jobs for an expanding workforce. Job creation will first require rejuvenation of the agriculture sector. Improved agricultural growth would lead to opportunities in fields such as agro-processing.¹⁶ Nevertheless, new job opportunities will still have to be created to absorb surplus labor from the agriculture sector, where many people are underemployed and underpaid.

The largest share of new jobs is projected to be in the unorganized employment sector; this sector currently constitutes 92 percent of the country's employment and hence must play a central role in any strategy for generating employment. Expansion of the manufacturing sector, especially in micro-, small-, and medium-sized enterprises, will be necessary for providing low-skilled or entry-level jobs.

Furthermore, small and medium enterprises (SMEs) also have the potential to be a catalyst to more sophisticated and secure job opportunities. In addition to being more responsive to the demands of rapidly changing technology and entrepreneurship, SMEs are also better insulated from shocks emanating from world trade and capital markets. They can thus play a crucial role in consolidating India's competitiveness in international markets.¹⁷ Since job creation will depend, in part, on the vibrancy of the private sector,

it will require companies to improve productivity and product quality to promote competitiveness and enhance job quality.¹⁸

Job creation will also depend on a host of government actions, including providing first class infrastructure, promoting industrial development, facilitating access to credit, and reforming laws that are unhelpful to labor as well as to industries. The challenge will be particularly difficult for those states within India which are less developed. To absorb the relatively largest upsurges in working age people, they will have to put in place measures that will help their populace gain skills, build the necessary infrastructure, and spur industrial growth.

Enhancing Innovation.

India has dedicated the next 10 years as a “Decade of Innovation” placing innovation as the key to inclusive security and growth.¹⁹ Global challenges relating to poverty, hunger, environment, health, education, communication, infrastructure, energy, and governance have been tackled in significant ways by technological innovations in the last 50 years. India has been a fertile ground for innovation, as seen by experience in the Agricultural Revolution, telecoms, information and communication technology (ICT) exports, space exploration, and atomic energy. These innovations have played a critical role in enhancing delivery of services, especially to the poor, and enabling access to improved goods and services.

India still needs more in the way of “frugal, distributed, affordable innovation” to create low-in-price but nonetheless safe, efficient, and useful products and services for people with low levels of income.²⁰ In

view of this, India needs to stimulate and strengthen the formal scientific and industrial system, as well as the innovation ecosystem, to develop solutions that will contribute to the country's security and development agenda. Strategies to achieve this include: 1) advancing basic research in areas of national interest; 2) incentivizing research and development; 3) improving governance in existing institutions; 4) encouraging collaboration between universities, centers of excellence, and industries; 5) creating a supportive financial system, especially for innovations aimed at better social outcomes; 6) facilitating flow of technology into developmental sectors including health, education, agriculture, energy, and water; 7) establishing networks for sharing best practices, and 8) establishing a balanced intellectual property rights regime.²¹ Furthermore, incentives need to be put in place for research and development in key strategic issues such as low-cost health care, low-cost housing, clean water use, efficient energy use, and rural development.²²

ENSURING BETTER GOVERNANCE

India's economic transition has been accompanied by an increasingly educated population with growing awareness and assertion of rights, and a vigilant press and civil society have necessitated improved governance in the country. In recent years, government has been riddled with problems. Poor access to government programs for improving livelihoods and security of the population has rendered initiatives ineffective. Pervasive corruption threatens to fray the moral fabric of society and to undermine the legitimacy of government initiatives in the eyes of the public. The political transformation just noted will have a profound impact

on government in the coming decade. Interventions on many fronts will be required to tackle multidimensional challenges. Broad reforms are required through decentralization and people's participation, improving efficiency, transparency, and accountability.

Strengthening the Rule of Law.

The three wings of the Indian Government—the executive, the judiciary, and the legislature—now operate alongside a press and civil society empowered by the Right to Information Act. This has brought about unprecedented transparency in the functioning of government agencies, thereby promoting a stronger and more resilient democracy. However, public perception indicates that additional reforms still need to be undertaken for more transparent and more accountable functioning in each of the three wings.

Toward this end, effective police reforms are an essential step toward strengthening public confidence in the Rule of Law. Most police forces have an inadequate number of police personnel and are insufficiently equipped with modern communications systems and independent functioning capabilities. Investigative wings need to be separated from regular police forces as has been implemented in several states so far. Additional investments need to be made for setting up modern systems and processes and improving e-governance through increased use of ICT.

Tackling Corruption.

Increased public awareness of government processes and operations, especially owing to a vigilant electronic media, has brought corruption to the fore-

front of governance issues facing the country. A rise in value of scarce resources such as minerals and land, and the allocation of these resources on a discretionary, nontransparent manner, has increased the likelihood of corruption. In 2010, Transparency International placed India 87th among 178 countries on the Corruption Perceptions Index. It is evident that corruption has become prevalent enough to be causing economic cost to the country.

Specific measures to prevent corruption and manage its consequences must include the following. First, allocation of scarce natural resources must take place through a transparent, nondiscretionary process such as competitive auctions or fair regulatory systems. Second, a National Public Procurement Act that has been recommended for India and is in line with international practice in several countries should be adopted in order to minimize corruption associated with government contracts. Third, there must be a greater focus on preventing corruption in the citizen-government interface and promoting timely and citizen-friendly public service delivery. Fourth, there need to be reforms in agencies and state governments that implement policy, since delivery of services takes place through them at the grassroots level.

The use of ICT will help boost effectiveness of government schemes that have generally been affected by corruption. The individual identification card project launched in 2010 and led by the Unique Identification Authority of India is expected to address rigging of elections for state offices, and to address corruption within subsidy and poverty alleviation programs, such as the Mahatma Gandhi National Rural Employment Guarantee Act.

The quality of governance must be assessed through audits of citizen satisfaction with public services conducted by independent organizations. Yet other institutions need to be established to investigate and deliver justice to those involved in corruption.

Leveraging Public-Private Partnerships.

India's future economic growth will require an adequate infrastructure for power generation, roads, ports, airports, and railways. In the recent path, private sector funds have been channeled to projects through public-private partnerships (PPPs). This could be expanded to the education and health sectors. In these undertakings, selection of private actors must be done through a transparent and competitive process.

ADDRESSING STRUCTURAL PROBLEMS IN THE SECURITY AND DEFENSE SECTORS

India's security threats in the 21st century are primarily unconventional and asymmetric. However, the force structures and military modernization under way are more attuned to conventional warfare than toward countering insurgency and terrorism.²³ Force structures and doctrines ignore the threats on the ground.²⁴ Adding to this problem is the absence of a clearly articulated national security strategy. This strategic vacuum has led to a perpetual cognitive gap among different stakeholders in the security establishment. Consequently, the three services have different views on national security interests and their respective roles.²⁵ Their plans are more equipment-centric than capability-centric and are not always subject to cost-benefit analysis.²⁶

The problem is that the current defense structure is one where politicians enjoy power without responsibility, bureaucrats wield power without accountability, and the military carries out its responsibility without direction.²⁷ In the present setup, Service Chiefs are both Chiefs of Staff as well as Commanders of their forces. Thus, they combine the functions of long-term planning with command functions. As the command role assumes greater importance, the role of long-term and operational planning naturally suffers. Again for the same reason, the Chiefs of Staff Committee has been neither able to provide single-point military advice to the Defence Minister nor been able to formulate joint planning and doctrines. The Defence Minister therefore relies on his own secretariat, staffed with a generalist bureaucracy that lacks sufficient expertise. This makes it difficult for the Ministry of Defence to arbitrate between competing and often parochial interests of different services.²⁸ Furthermore, separate regional commands for different services are out of tune with contemporary warfare requirement of integration.²⁹ This institutional setup is cumbersome, inefficient, and wasteful.

Three simultaneous steps are required in the process of overhaul. Staff and command functions need to be decoupled, as both cannot be simultaneously carried out. Then, in order to integrate the headquarters with ministry, a Joint Chiefs of Staff (JCS) should be created. The chairman of the JCS will be the primary and senior-most military adviser to the Prime Minister and the Defence Minister. This will ensure the much needed integrated planning, interservice prioritization, and jointness in the entire gamut of activities, ranging from doctrine to training. The operations must be under the responsibility of integrated theater

commands or thematic commands—such as space, logistics, and training, among others.³⁰

To assist in planning for joint forces, there needs to be constant monitoring of larger geopolitical and technological trends. The Minister of Defence (MoD) should have an interdisciplinary strategy unit under a senior Indian Administrative Service officer as an attached office. This unit would work in close coordination with the Integrated Defence Staff (IDS), Ministry of External Affairs (MEA) Policy division, the Department of Internal Security, the Ministry of Home Affairs, and the National Security Council. It should also reach outside the government to seek expert opinion on various issues. Besides keeping the policymakers and armed forces informed about international developments, it would conduct futuristic projection of threats and challenges in the short, medium and long term, and examine whether India's defense structure and capabilities are adequate to meet the same. It should also be able to conceive research and collaboration with universities, think tanks, scientific establishments, and the private sector.

Besides these structural reforms, there is also a need to focus on quality. Training of officers should go beyond operational realms to incorporate diplomacy, area studies, peace and conflict studies, anthropology, and other relevant social sciences.³¹ This is vital considering the potential for military diplomacy as India continues to expand its footprint. Furthermore, a specialized bureaucracy in national security affairs should be created. These officers must be posted across different ministries that deal with national security, such as Home Affairs, Defence, Finance, External Affairs, and the National Security Council Secretariat.³² These qualitative measures would be likely to bridge the

gap in perceptions between the civilian and military establishment.

Defense Innovation and Development.

In maintaining its strategic autonomy, India needs to improve its defense production and innovation capabilities, for a country that does not develop and produce its own weapons platforms would be strategically weak and will not be able to claim true strategic autonomy.³³ Over the last 5 years, India has emerged as the top defense importer in the world. Despite professing self reliance, India has not achieved success in indigenous development of its defense requirements.³⁴ Though offset policies are in place to promote Indian industries, very few agreements have been realized. There has hardly been any attempt toward collaborative venture on technology creation and development. This is not tenable in the long run. Rising dependence on imports invalidates the concept of strategic autonomy and fundamentally questions the assumption that defense and development are complementary to one another.

The new Defence Procurement Policy clearly articulates the need for a domestic defense industrial base. There are opportunities for the MoD to leverage its position to strike unique and innovative partnerships, both industrially and politically, to negotiate for more generous technology transfer and to create a globally competitive defense and security industrial base.³⁵ Going beyond procurement policies, the government must also lay down a larger strategy to identify the critical areas of technology and provide the guidance that needs to be in place for industry. The armed forces also have a key role to play. Service headquarters

could work with the government in evolving the right strategies to develop the national military capabilities and critical technologies.³⁶ These measures could have positive spillover on civilian development.

INTERNAL SECURITY

India's economic transformation over the decades since its independence has resulted in millions being lifted out of poverty. But the uneven spread of development combined with anxieties arising from the heterogeneity in India's religious, caste, ethnic, and linguistic groupings has led to significant regional and social imbalances resulting in numerous cases of domestic unrest. Four major challenges will confront the state and put India's formative ideas to test. They are Maoism, insurgencies in the northeast, prolonged crisis in Kashmir, and domestic terrorism.

Maoism.

The most serious internal security problem India faces today is from left-wing extremist groups that adhere to Maoist ideology and are present in about 20 states and more than 200 districts. Their objective is to overthrow an exploitative system through armed struggle, starting at the village level. Over time, the Maoists have come to establish themselves in areas that lack a strong administrative presence. The killings of civilians and security forces have increased over the last few years, despite a multipronged approach announced in 2006. State governments have been unable to conduct security operations or implement development schemes, owing to incapacity, lack of coordination, and lack of political will. Even as attacks on

security personnel have intensified, the Maoists have begun to establish liberation zones which are no-go areas for administration representatives. Moreover, Maoists thrive not just because of their hold on territory, but due to local support, mainly in marginalized areas. While in some states they have helped the landless to take hold of government lands, in others they have led the *Adivasis* (aboriginal peoples) to occupy forest lands.

Countering this, the “greatest internal security threat” to the country will require effective implementation of protective laws in favor of the *Dalits* (untouchables) and *Adivasis*, better coordination between different programs, and extension of *Panchayati Raj* (a form of local governance structure) to the secluded areas.³⁷ The last measure is the most vital, as it empowers local people, creates accountability, and promotes participatory development. At the same time, improving the strength and capacity of local police and reforming the criminal justice system are critical to reducing the influence of the Maoists. Since left wing insurgency is a symptom of a deep rooted socio-economic problem, there cannot be quick solutions. The Integrated Action Plan (IAP) for areas impacted by the militants, intended to allow for faster implementation of public infrastructure projects and services, must be reviewed and implemented.³⁸

Insurgencies in India’s Northeast.

Partition of the subcontinent created a new geopolitical reality for the northeast. For the most part, the division—which only provided for connectivity via the narrow, 27-kilometer-wide Siliguri corridor—detached the northeast region of India from the rest

of the country, in geographic, political, cultural, psychological, and commercial terms. Over time, insurgent groups split into factions, leading to internecine warfare. In the last decade, militancy has considerably declined due to various ceasefire initiatives and flexible measures taken by the government.

The *North East Vision 2020* recognizes the aspiration of the people in the region to chart their own course toward a secure and prosperous life, by laying out a strategy with six interdependent components that emphasize empowerment, rural development, leveraging comparative advantage, infrastructure development, capacity building, and a framework for private sector participation.³⁹ Treating the northeast as a vibrant economic hub and as the gateway to bordering nations and to Southeast Asia will require India to refashion its border policy. This would enable the northeast states to play a pivotal role in India's engagement with its near and extended neighborhoods, would contribute to regional security and economic cooperation, and in turn would result in greater global security, connectivity and prosperity.

The Kashmir Issue.

Governance issues and political differences have resulted in decades of instability in the Kashmir Valley. Militarization of the region has led to negative reactions from local populations, as seen in the protests by women and children on the Valley's streets in the summer of 2012. To earn legitimacy among the Kashmiri population, Indian policymakers should formulate a new political strategy to manage differences and anxieties on all sides.

The priority should be toward demilitarizing the Valley, to allow for less restricted movement of people. Furthermore, incentives in place for armed forces involved in anti-militancy operations should be balanced with clear accountability mechanisms to safeguard human rights. The other issue linked to the issue of Kashmiri identity is autonomy. Though autonomy for the state is not a panacea by itself, it should be granted to the extent possible within the limits prescribed by the Constitution. Legitimate grievances of populations in Jammu and Ladakh need to be addressed, to promote harmony among the three regions of the state. Finally, it should be realized that the people of Kashmir have not accepted the division of their state. It is therefore imperative that the peace process with Pakistan should be sustained in consultation with the Kashmiris, in order to soften the line of control and facilitate freer movement of families.

Domestic Terrorism.

Unlike the situation of the late-1980s and the initial years of the 1990s, terrorism is no longer confined to Kashmir. While some recent attacks on domestic soil suggest to some the possibility of a proxy war from across India's borders, the majority have been carried out by domestic groups who seem to be reacting to earlier communal incidents and perceived injustices against minorities. Some recent incidents point to the disturbing phenomenon of Hindu extremism. Those Hindu groups are disenchanted with what they regard as government appeasement of minority groups associated with jihadi organizations.

Counterterrorism strategy in India has to take into account the diversity of sources of terror strikes.

Against this backdrop, India's counterterrorism approach has been oriented to the short term. A strategy to counter terrorism must be informed by long-term predictions.⁴⁰ Hence a prerequisite for counterterrorism strategy must be a periodic comprehensive net assessment of terrorism threats facing the country. This would include the nature and scope of the threat as it exists and as it is likely to evolve; domestic and foreign groups posing the threat; the ideologies, motives, and grievances driving these groups to resort to terrorism; and a forecast of their capabilities, evolving tactics, and possible future targets.⁴¹

This assessment cannot, however, be carried out without effective local policing, which again leads to the importance of police reforms. Second, the strategy has to be holistic: it should be community based and should be able to draw upon the support of all political parties. It should also provide for a close interaction with the private sector, to benefit from its expertise and capabilities.⁴² Third, the strategy has to address the issues of intra- and intergovernmental coordination. Fourth, the effectiveness of intelligence agencies has to be improved substantially, through being more open to ideas and information from expertise outside of the government.⁴³ Fifth, international cooperation is vital to countering terror networks that take advantage of globalization in order to secure funds, arms, and personnel. The most important element of an effective counterstrategy would be to remove the conditions that are conducive to growth and spread of terrorism.⁴⁴ This would entail removing the perception of neglect and injustice by focusing on creating equal opportunities and protection of human rights. Sixth, counterterrorism strategy must also involve civil society. Research on terrorism has concluded that famil-

ial and social networks are sources of indoctrination and recruitment. A collective sense of injustice and victimhood has been found to be a primary driver for individuals to pursue terrorist activities. Policy frameworks for counterterrorism need to factor in the legitimate grievances of minority communities and devise region-specific development measures aimed at the community. The state, within the limits of secularism, should facilitate and encourage community led de-radicalization programs. Unless fault lines in the society are identified and addressed, terrorist groups will continue to create pressures to invest in anti-terror capabilities that will divert the resources of the Indian state.

REGIONAL DYNAMICS

India.

India's growth and development cannot be decoupled from that of its South Asian neighbors. Progress and prosperity can be sustained only if nations work together to leverage their complementarities. Within the region, six of India's neighbors rank among the top 25 dysfunctional states in the world.⁴⁵ India has had to manage tricky bilateral relationships with Pakistan, China, Afghanistan, Bangladesh, Sri Lanka, and Nepal. Security challenges arise from sub-national ethnic movements, secessionist movements and insurgencies, new ethnic groups, and religious conflict.⁴⁶

The emphasis for India in the coming decade has to be on development and stability of the region through a combination of security cooperation and economic integration. The growing economic interdependence in Asia is an opportunity for the whole region.

Pakistan.

Pakistan is undergoing tremendous upheaval, with religious extremism adding to existing social and political instabilities. Any strategy to deal with the problem of Pakistan must be based on analysis of the domestic political situation in that country. Pakistan's founding vision of a modern state in the Islamic world is bound to nudge the country toward moderation and democracy. In this period of uncertainty for Pakistan, India should adopt a prudent strategy that combines vigilance, confidence building, and empathy along with diplomacy with other powers that have stakes in Pakistan's stability.

Nevertheless, Pakistan has indicated genuine desire for pursuing peaceful engagement with India as was demonstrated by recent successful diplomatic visits. A breakthrough in economic relations is also possible as Pakistan moves toward granting Most Favored Nation status to India. To promote confidence building at the political level, India must expedite talks on all outstanding issues. For example, given that water has become a critical issue over the years and Pakistan has anxieties as a lower riparian state, the "Future Cooperation" section in the Indus Water Treaty should be further elaborated to pursue integrated river basin management. Other opportunities for engagement include trade negotiations, people-to-people contacts, and quiet engagement on intelligence cooperation and on Afghanistan. To change the strategic calculus of Pakistan, India should also bilaterally engage all states that exercise meaningful influence on the country.

Bangladesh.

Bangladesh is important to India in ways that are not often realized by casual observers, and in recent years the relationship between the two countries has grown stronger. The domestic and regional foreign policies of Bangladesh impact the security of the northeast and eastern states of India, as well as that of the entire country. For example, India will not be able to rein in insurgent groups operating in the northeast without the help of Bangladesh.⁴⁷ For its part, Bangladesh, as a lower riparian state with a massive population, depends on India for water availability and management. Thus, India must work with West Bengal so that progress is achieved on proposed water sharing agreements.⁴⁸ Other politically sensitive bilateral issues of concern include migration and terrorism by extremist groups.

China.

China has demonstrated at various levels that, despite the competition and even rivalry that is inherent in the relationship between the two great civilizations, it values cooperation with India in order to secure its own economic and security interests. Hence, India should not view the rise of China as a zero-sum game. Furthermore, given the bilateral partnerships that India has been forging with immediate neighbors, fears that China will encircle and threaten India are unfounded. While full-scale war between the two countries is highly unlikely, India must have robust defense capabilities to deter any instance of Chinese aggression; but an effort by India to match Chinese military capabilities would needlessly divert resour-

es from India's economic and social programs. In the coming decade, India should certainly attempt to re-energize border talks.

Water is an area which causes deep anxieties in India. India, as a middle riparian state, should bring along other countries to create a combined position for a regional agreement on water with China. Embedding this issue within a regional framework can provide pathways out of dispute escalation on this vital issue.

When it comes to climate change and the environment, there is a large degree of convergence in the Indian and Chinese positions. As developmental states, both countries are concerned that their right to develop not be constrained by any pressures from the developed world to limit their respective greenhouse gas emissions. Nevertheless, in international negotiations (such as those at Copenhagen, Denmark), India and China have an opportunity to be far more constructive players. Instead of simply forming coalitions intended to counter Western advocacy of binding commitments and inspection regimes on emissions, they could partner on an innovative Indo-Chinese engagement, one that recognizes that climate change and the environment are global problems with particularly damaging effects for the developing world.

In both countries, problems of poverty, deprivation, ill health, and inequality require urgent solutions; this must be the primary focus of policymakers and mandarins in both the countries. India and China have "together been prosperous and powerful before and could be so again in the future."⁴⁹ Owing to their size and shared histories, both countries have a mutual obligation to humanity to together give the world new perspectives on a new world order, which

will ensure peace among nations and justice among people, equity and prosperity for all, freedom from fear and freedom from want, a world where we live together in peace and harmony.⁵⁰

Indian Ocean.

The Indian Ocean is the artery for India's linkage with the rest of the world, as 77 percent of India's trade is carried out through the waters abutting both the sides of peninsular India. As India's economy grows, dependence on these waters will exponentially increase. These waters are vital for the rest of the world as well. The Indian Ocean accounts for half the world's container traffic, and 70 percent of the total traffic of petroleum products passes through it.

Though it has become the center of global economic activity, it is a very volatile region. The region is rife with pirates, criminal networks, and terror groups. This has led to a quantum jump in the number of extra-regional forces in the Indian Ocean. India has no interests in a power game; but it does have a vital stake in the evolution of a stable, open, inclusive, and balanced security and cooperation architecture that precludes domination of the sea lanes of communication by a single nation. This would need to be a consensus-based process, where all the stakeholders who have a legitimate presence in the region make their respective contributions to regional security.

Maritime security, however, cannot be sustained with an exclusive focus on military instruments. It has economic, political, and social dimensions as well. India needs to frame a comprehensive strategy for the Indian Ocean Region that places emphasis on capacity building and development assistance for the poor lit-

toral states. India must also revive the Indian Ocean Rim Association for Regional Cooperation (IOR-ARC) by committing more resources toward promoting it as a stabilizing force in the region.⁵¹ Besides maritime issues, the organization could provide huge economic and developmental benefits to poorer countries in the region. In addition, climate change will come to impact the rim countries in the coming years. This necessitates extending the mandate of IOR-ARC to include climate change and other environmental issues.

West Asia.

In West Asia, India has close relationships with almost every country, including Iran, Israel, and the Gulf Cooperation Council (GCC) states. Each relationship has a complex history of competing interests. For example, India's relationship with Iran warmed through the 1990s; however, relations have deteriorated between the two since India's two votes at the International Atomic Energy Agency (IAEA) in 2005 and 2006 to refer Iran's nuclear dossier to the UN Security Council, the launching of an Israeli spy satellite by India in 2008, and Iran's public support for anti-India protests in Kashmir in 2009 and 2010. The Iran-Pakistan-India (IPI) gas pipeline project was effectively suspended following multiple security concerns.

India's relations with the GCC countries reflect vital national interests, since they are a major energy source and a home to millions of Indian expatriates. Saudi Arabia is the dominant actor in the GCC, and of the utmost importance to India. It is home to Islam's holiest shrines, and thus has special significance to the more than 160 million Muslims in India. In addition, it is the world's largest oil supplier and is an influential

player in Pakistan's politics.⁵² Since the Delhi Declaration of 2006, the relationship between both the countries has progressed well, cutting across sectors.

Russia.

Russia historically has assisted India in times of crisis and been a reliable partner that has helped strengthen India's key capabilities in the defense, nuclear energy, and space sectors. Despite an evolving international context, a strong, democratic, modernizing, and friendly Russia continues to be in India's interest—that is true on its own merits, and as well given the taut relationship between India and China.

Looking ahead, India should enter into a high-tech partnership for the 21st century with Russia that goes beyond the defense sector to include the civilian sector. Joint ventures marrying Russian research and development with Indian industrial enterprises could lead to the establishment of high-tech industries in India. New joint scientific projects should be launched with the aim of producing patentable, marketable technologies, so as to move away from traditional paradigms.

India should also seek to intensify cooperation in the energy sector. Russia is preparing to explore resources in the Arctic Region, as it expects the northern route to be opened due to climate change, which will create access to enormous stocks of new energy resources. While Russia is not actively looking for foreign stakeholders, it will be in need of cutting-edge technology for resource extraction. In light of its pressing energy requirements, India should attempt to leverage its partnership with Russia to participate in future projects. Thus, India should give Russia great-

er access to its domestic energy and defense sectors and propose innovative ideas for mutually profitable partnerships in other arenas. Meanwhile, India must promote technological innovations in its own energy sector, in order to present attractive options to Russia.

India should seek to establish an education partnership between the two countries. India could offer scholarships to hundreds of young Russian students to study in India, possibly in return for spots in Russia's excellent science institutes for Indian students. India could also consider setting up an Indian business school in Russia. This would garner enormous goodwill and forge contacts with a new generation of talented young Russians.⁵³

Africa.

Africa is regarded by many observers as India's neighbor, despite the separation imposed by the Indian Ocean.⁵⁴ Prime Minister Nehru believed that the independence and prosperity of India would be incomplete without that of Africa. The relationship between these two historic partners has been marked by empathy, mutual support for self-determination and development, and a shared vision for an equitable world order. Although relations in the immediate aftermath of the Cold War stagnated, India over the last decade has come to give due priority to its relationship with the continent. India's relations with Africa have been centered on development assistance, economic interests, energy and security cooperation, and people to people contacts.

Going forward, India needs to deepen its engagement with the specific goal of fulfilling Africa's needs and aspirations in accordance with its capabilities and

interests. A powerful triad, including India's government, private business, and civil society sectors, can take the India-Africa relationship to a new level of strength and vitality in this decade.⁵⁵ India's engagement in the continent should prioritize capacity building in Africa. As Africa moves on a democratic path to development, India's state institutions and civil society organizations should exchange experiences in democratic governance, inclusive development, and rule of law with their counterparts. Insofar as economic engagement is concerned, India could consider establishing a special purpose vehicle to pursue strategic investments and business opportunities, especially in sectors such as mining, infrastructure and agriculture.⁵⁶ At the same time, mechanisms have to be in place to ensure adherence to corporate responsibility norms.

European Union.

The European Union (EU) has, despite its own economic difficulties, much to offer India on matters of science and technology, local governance, and social welfare. India needs to embark on a sustained and simultaneous engagement of the major pan-European bodies and individual European governments. Economic engagement must be diversified and expanded. Although the EU is India's largest trading partner, in recent years there has been a decline of the EU's share in India's imports and exports. Barriers to flows of trade, intellectual property, and immigration have impeded realization of full potential. India and the EU could do more to leverage their synergies in technology development and application, especially in the realm of energy. India could also benefit from coop-

eration with Europe on matters of regional or local governance, urban management, and social welfare. As Europe is set to face increasing health expenses due to demographic factors, it could cooperate with India to find low-cost solutions in health care.

INDIA'S STRATEGIC RELATIONSHIP WITH THE UNITED STATES

Over the past decade and half, India and the United States have converged on many issues. Bipartisan support in the United States and support from the two main political parties in India have led to a wide constituency for building truly strategic ties between both the countries. The relationship has been marked by more than state-to-state ties.

Shared values and interests have led to deep people-to-people relations through a growing and successful Indian Diaspora and business collaborations. India has benefited greatly over time from the support of the American government and its people. Although both nations' conceptions of security, war, and other issues vary, cooperation on vital areas such as science and technology, agriculture, and education have been strong through societal interactions and horizontal linkages between different government agencies. In the 21st century, India and the United States will have increasingly common interests in managing global commons, planetary sustainability, and bringing about an equitable and a democratic world order.

Bilateral relations between India and the United States cover five levels – bilateral, regional, continental, global, and planetary. Bilateral issues have come to be dominated by economic partnership, technology development, and security issues, including defense

cooperation. India has tremendous interest in the U.S. economic recovery. It will remain one of the top export destinations for Indian goods and services. The United States will also continue to be one of the primary sources of foreign direct investment to supplement domestic investment in India. It is therefore in the interest of both nations to cement their economic ties by moving forward on a bilateral investment treaty and a free trade agreement. India also needs the assistance of the United States to manage a leapfrog jump in technological development. More attention must be given to strengthening initiatives that promote cooperation between organizations—both public and private—in education, scientific research, and innovation. The Indian Diaspora, which numbers 2.5 million people, is greatly involved in the U.S. public and private sectors, and should be leveraged to achieve common ends.

Cooperation on sustainable development will be the bedrock of Indo-U.S. strategic partnership. Both countries are energy dependent and would like to move toward a global economy that runs on fuels that are clean and green. They are also concerned about dwindling food supplies that have the potential of igniting conflicts in many parts of the world, especially in the Indian Ocean region. Equally important, resource competition is also something that concerns both countries. Those concerns will require both countries to closely work with other partners in developing clean technologies, promoting renewable energy, and setting norms for resource acquisition.

Both countries share interests in enhancing human security and a renewing the global order, which entail reducing poverty; universalizing education; providing skills; addressing gender imbalances; ensuring accessible and affordable health care; improving agri-

cultural productivity; bridging the digital divide; and so forth. Furthermore, the trend in today's world—contrary to advocates of the Beijing consensus—is the spread of democracy in hitherto authoritarian states. This tendency provides a great opportunity for the two great democracies to work together on building institutions in those societies. India and the United States will have to deepen their discussions about a global order that is based on democracy; economic openness and liberalism; cultural tolerance; social inclusion; and respectful international engagement. As the two countries cooperate on many bilateral, regional, global, and planetary-level issues, they will sustain what has been called the “defining partnership of the 21st Century.”⁵⁷

DEVELOPING INDIA'S CAPACITY FOR ENGAGEMENT

Considering the multifarious engagements India will have with international actors and the fact that the landscape of international politics includes more than interstate relations, the country must reorient and restructure the diplomatic corps.⁵⁸ First, India's growing role in creating a regional security architecture, its procurement in the coming decade, and its increasing military-to-military interaction with many strategic partners will require integration of military and diplomatic instruments of power. In particular, India's diplomatic and defense agencies should work in unison.

Second, India's diplomats must cognitively adjust to an evolving form of governance in which multiple agencies and multiple actors disrupt the monopoly of Ministry of External Affairs (MEA) in engaging

with the world. In this context, the MEA should strive for coordinating efforts among different ministries, state governments, the private sector, and civil society. MEA officials should be open to the expertise of media, think tanks, business chambers, and universities to boost its soft-power capability. There should be an institutionalized dialogue mechanism with these entities.

Third, in terms of capacity, the MEA, as well as missions abroad, are currently understaffed. With just more than 700 diplomats, India cannot do full justice to its increasing engagement with the world.⁵⁹ The expansion of MEA must be expedited. In the process, the MEA should formulate ways for lateral entry into its ranks of professionals from the defense forces, think tanks, academia and the private sector.

GLOBAL CHALLENGES

Global issues that are bound to have substantial impact on India's comprehensive security are global financial and economic crises; cyber security; climate change; energy security; global governance; nuclear proliferation; international terrorism; and an evolving world order.

Global Governance.

The global financial crisis of 2008 has had profound impact on the geo-economic landscape of the world. Three years later, economic crises and political stalemate in the United States, EU, and Japan are threatening to undo the recovery that has been made so far. India, though a primarily domestic driven economy, has export sectors such as textiles, gems, and jewelry

that are huge employment providers. Further slowdown in the markets in the West will have enormous social and economic implications for India. While contingency planning is required, the test for India as an emerging economy lies in its ability to influence structural and normative reformation of global economic governance.

More broadly, India traditionally has viewed the UN as an important instrument for maintaining international peace and security. India should persist in its efforts to work with like-minded nations to rejuvenate and reinvent the UN: no other organization has evolved with a legal framework to address today's interconnected human problems based on equality and justice. It also has a role to play in promoting inclusive growth within and across nations.

However, many multilateral mechanisms have emerged in the international system. For example, the G-20 has gained prominence as it more accurately reflects the current distribution of economic power in the international system. In the past year, it has begun expanding in to other areas like food security and climate change. India must take steps to link the G-20 to the UN⁶⁰ so that the latter is not undermined. In the process, it should seek closer cooperation with friendly nations such as Singapore and South Korea that are already working in this regard. In the near future, India should produce a blueprint on comprehensive reform that will enable the UN to play a more effective role in shaping a peaceful and prosperous world order.⁶¹

Cyber Security.

The interconnectivity that has been brought about by advancements in ICT has revolutionized the interactions of the government, scientific, educational, and commercial communities. The IT infrastructures increasingly support the functioning of critical national capabilities such as power grids, emergency communications systems, financial systems, and air traffic-control networks.⁶² Furthermore, a majority of India's weapons, network-centric systems, and equipment are digital. The operational stability and security of information infrastructure has thus become vital for security of the country. India is among the top five countries in terms of attacks by hackers, organized criminals, and state actors. In the coming years, attacks will most likely become more frequent and dangerous.⁶³ Cyber security thus must be one of India's national security priorities.

A strategy to promote cyber security would have the following objectives: preventing cyber attacks against the country's critical infrastructure; reducing national vulnerability to cyber attacks; and minimizing damage and recovery time from cyber attacks.⁶⁴ Given those objectives, there are four strategic focus areas.

First, a cyber security assurance framework must be created to improve existing infrastructure and practices in critical sectors, including defense, finance, energy, telecoms, and transportation. In the process, organizations would be required to adhere to national security compliance requirements.

Second, a national cyber alert system should be set up for identifying and responding to cyber security incidents. This would entail establishing public-

private architecture for performing analyses, issuing warnings, and coordinating response efforts; and augmenting the capabilities of the Computer Emergency Response Teams (CERT) of the armed forces.⁶⁵

The third focus area includes promoting a comprehensive national awareness program, increasing the efficiency of existing training programs, and eliciting support from the private sector for professional cyber security certifications.

The fourth vital area is domestic research and development to build cost-effective and tailor-made indigenous security solutions, develop expertise, and avoid imported equipment that might be a veiled security threat.

Going beyond those focus areas for the country, India, as a key stakeholder, will have to work with other partners to formulate a global cyber security treaty to make the entire cyber space safe and peaceful.⁶⁶ India should work to ensure that such a treaty does not limit itself to state actors but binds all non-state actors and private individuals in making the world free of cyber threats.

Energy Security.

India faces enormous challenges in securing its energy needs. The surge in economic activity, rise in income levels, and increase in population has resulted in a rapid growth in energy demand. By the end of 2025, India's energy use is expected to expand by 400 percent over current levels.⁶⁷ Besides the challenge of meeting demand, there is also the social imperative of ensuring inclusive access to energy. India's developmental objectives are complicated by its import dependence, especially from politically volatile regions,

and by global pressure to contain carbon emissions. In that context, a clearly defined energy strategy should encompass securing access to energy from different sources, introducing major reforms at utility companies to promote efficiency, and the development of pathways leading to a low carbon economy.⁶⁸

India cannot do this alone; it will need international partners and coalitions. While it must engage in sustained cooperation with West Asia, Africa, and Southeast Asia for hydrocarbon supplies, it must form robust partnerships with oil dependent nations—including the United States, the European nations, and China—to learn best practices and develop clean technologies and alternative sources of energy. The private sector should take the lead in exploring such partnerships and securing financial resources through different multilateral channels. While India needs to play a larger role in emerging governance structures and mechanisms in the energy sector,⁶⁹ it must also ensure that its own interests and concerns about transparency and competition are adequately reflected.⁷⁰ In order to provide a clear sense of direction to all stakeholders, the present structure in India, which includes a separate ministry with responsibility for a single type of energy source, has to give way to an integrated institutional framework; i.e., perhaps in the form of a unified energy ministry.

Climate Change.

There is now an overwhelming scientific consensus on human-induced climate change in which the average temperature of the planet is steadily increasing due to greenhouse gas emissions, mainly from industry and transportation. A 2 degrees centigrade

increase is likely by 2040, beyond which significant negative effects such as desertification, flooding, extreme weather events, and disease are expected. For India and South Asia, the deleterious effects of climate change will be felt on multiple fronts and will include decreased precipitation in some areas, increased frequency of droughts, enhanced morbidity and mortality due to spreading tropical diseases, and adverse effects on livestock.

Most of these effects are predicted to be gradual and incremental rather than sudden. Nevertheless, for India's neighbors, specifically Bangladesh and Maldives, the damaging effects are projected to be quite severe. Maldives is vulnerable to total submergence, while Bangladesh will face saline intrusion, flooding, and other extreme weather events. India, the dominant state in South Asia, will be expected to aid its neighbors under these threats. Clearly, climate change is both a development and a security issue for India—both internally and in terms of managing its neighborhood.

India and China historically have formed and led effective coalitions in climate change negotiations. Their strategy has been defensive, resisting binding targets and safeguarding their right to economic growth. Recently, Indian strategy has begun to shift. Leaders are admittedly frustrated by their inability, in conjunction with other developing countries, to prod the developed countries, especially the United States, to make meaningful cuts in emissions. Nonetheless, given that sustainable development is the core objective of India's national strategy, in the coming decade and beyond, India recognizes it must take steps to help promote the health and survival of millions of sub-continental residents, and the well-being of the planet generally.

International Terrorism.

India must remain strongly committed to tackling international terrorism. Domestic and cross-border terrorism linked to local and transnational terrorist groups has resulted in the loss of lives and material resources of the country. Toward this, India is Chair of the Security Council's Counter Terrorism (1373) Committee (CTC), and the 1566 Working Group must strengthen efforts on counterterrorism. As early as 1996, India proposed a draft for the adoption of a Comprehensive Convention on International Terrorism (CCIT); this has remained a key objective for India. The 1267 regime against al-Qaeda and the Taliban must be used as key instruments for the international community to fight against terrorism.

FINAL COMMENTS

In today's interdependent world, India's security has many components. Sharp divisions between internal and external or traditional and nontraditional are no longer valid. Political cohesiveness, economic strength, and an equitable society are important in defining the security concerns of India. At the same time, India's geographic location, size, demography, economic strength, defense capabilities, and rich heritage makes it an influential player on the global stage. While exaggerated notions of strength and influence are to be eschewed, the impact and implications of India's role in the international system are real, which in turn brings regional and global responsibilities. This informs the imperative of formulating a security doctrine and institutionalization of policymaking.⁷¹

The most important and durable element of India as a modern nation state is its “commitment to democracy conjoined with a commitment to the deeper values of pluralism and liberalism.” India is the world’s largest functioning democracy; every Indian election – the largest exercise of its kind in the world – celebrates the freedom of choice that powers the idea of democracy. The success of India’s efforts to preserve these values is a validation of its underlying philosophy. India’s model of democratic practice based on the deeper virtues on which the nation was established – an ability to combine individuality with mutual regard, intellectualism with a democratic sensibility, conviction with a sense of fallibility, ambition with a commitment to institutions, and hopes for a future with due regard for the past and present – has great relevance in a world that wants to move toward inclusive and equitable growth and that celebrates plurality.⁷²

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CHAPTER 17

DISCUSSANT COMMENTS

Michael D. Beevers

The papers by Dhanasree Jayaram and Krishnappa Venkatshamy presented at the Workshop address a difficult and complex topic—sustainable development as a national security concern in India. The topic not only deals with a multifaceted and dynamic country that defies neat characterization but also centers on two controversial and ambiguous concepts—sustainable development **and** security. With this in mind, I begin my comments with an overview of the definitional and conceptual challenges. I then examine each of the papers. Finally, I suggest ways to reframe the debate from a focus on **whether** sustainable development is a national security concern to more precise discussion of **how** global change may alter India's ability to develop sustainably and in ways that make both development and security more inclusive.

SUSTAINABLE DEVELOPMENT AND SECURITY

Sustainable development has helped to transform assumptions about the goal of development and specific paths that are required for a country to develop. The conventional emphasis of development was industrialization and modernization, and the economic and political blueprint required to make “developing” countries into “developed” countries. Development was understood, more broadly, to be a prerequisite for a deeper transformation in the behavior of states, which brought with it a higher likelihood of world

peace. Many have argued that this understanding of development was at best too narrow and, at worst, too downright naive.¹ Development viewed in terms of economic growth and income per capita erroneously suggests that growth and income are the only requirement for human well-being. As Amartya Sen has noted, one's functional capabilities in terms of substantive freedoms, access to resources, happiness and fulfillment, and opportunities within a society are all factors that determine one's human development.²

Emerging with rhetorical force from the *Brundtland Commission Report*, sustainable development altered our understanding of what development is, or perhaps should be—despite there being over 100 “definitive” definitions of the term.³ While the often repeated definition of sustainable development is “development that meets the needs of the present without compromising the ability of future generations to meet their own needs,” the term more explicitly denotes an integration of ecological, economic, and social concerns.⁴ Sustainable development is a delicate balance between growing levels of economic growth, the preservation of nature and social equity, participatory democracy, and intergenerational and intragenerational justice. The meaning of sustainable development has been debated *ad nauseum* for over 2 decades, but the value of the idea is that it helps render visible issues traditionally hidden from discussions of development, including:

- What should be sustained? (Earth's life support systems, natural environments, communities);
- In relation to what? For how long? At what scale?
- What is to be developed (economies, societies, people)?⁵

Sustainable development as a concept cannot be detached from notions of security. The ideas enshrined in the 1948 United Nations (UN) Charter that people should have “freedom from fear” (security) and “freedom from want” (development) point to this—although during the Cold War, the first idea dominated. The 1994 UN Development Program (UNDP) Human Development Report sought to expand the notion of security from “national security,” focused on political and military aggression, to “human security.”⁶ The report defined human security as “safety from chronic threats such as hunger, disease and repression” and “protection from sudden and harmful disruptions in patterns of daily life,” including homes, jobs and communities.⁷ Threats to security, according to the report, exist at “all levels of national income and development” and as such, strong national security did equate to improved human welfare. This rhetorical shift has succeeded in bringing attention to “unconventional” security issues like food security, economic security, health security, environmental security, and political security.

Any discussion of security operates on a continuum of positions as to what **security is** and **to whom security is to be provisioned**. Likewise, any discussion of sustainable development operates on a parallel continuum about **what is to be sustained and developed, for whom, and for how long**. Our own evolving views, and events in the world that shape these views in real time, ultimately influence where we fall on the security and development continuum, and we bring to the table assumptions about policy priorities and responses. For example, is strong national security a prerequisite for enabling sustainable development? If this is the case, then priorities will

lean more toward traditional security challenges since it is assumed that, without stable peace in a region or protection from terrorist attacks, sustaining development and the economic and environmental priorities will be impossible. Or indeed, is “human security” a precondition for sustainable development?⁸ In this case, addressing food and water security – or, indeed, health and education – is deemed a primary security challenge because the state’s role is not just to ensure state security but to “protect the vital core of human lives in ways that enhance human freedoms and human fulfillment.”⁹ This is not to suggest that strong and stable states are not required for development but that a more integrated approach may be necessary.

The definitional and conceptual issues alluded to earlier present challenges to policymakers even when priorities converge. Sustainable development can bring about discussions of anything from health and education, to green energy and public-private partnerships, to climate change and international environmental agreements. Sustainable development also incorporates things like capacity building and shared technology transfer. In short, almost everything fits under the umbrella of sustainable development, or can be wedged in to fit. So, how does one articulate a policy agenda when we talk in sustainable development generalities where social, economic, environmental, and cultural priorities are intertwined and where spatial (local, national, regional, and global) and temporal (5 years, 20 years, 50 years, etc.) scales are important? Even if we can agree on the relationship between sustainable development and security (which I have argued is hard to do) – then we need some consensus on policy priorities. Where does one start?

IS SUSTAINABLE DEVELOPMENT A NATIONAL SECURITY CONCERN IN INDIA?

The question as to whether sustainable development is a national security concern in India is not a new one. Scholars, policymakers, activists, politicians, and commentators alike have been debating this for decades. The Indian economy has grown significantly since the 1990s (measured in gross domestic product), life expectancy and literacy have increased, and agricultural yields have improved tremendously.¹⁰ However, growth itself has not eliminated poverty, and inequality remains a significant problem.¹¹ Enrollment rates in schools have grown, but education remains the country's great "unequalizer," and malnutrition rates are extremely high.¹² Political divisions are also widespread even though it remains the largest democracy on the planet. In terms of the environment, India is the fourth largest consumer of energy, with coal and oil accounting for about 70 percent of total energy consumption.¹³ This should not be surprising, given the country's tremendous economic expansion in recent years. India, which failed to sign the 1997 Kyoto Protocol, continues to see significant CO₂ emissions annually. The country also contains some of the worst urban air pollution; and land degradation, deforestation, and a lack of clean water remain a problem.¹⁴

Jayaram and Venkatshamy both acknowledge India's substantial progress and, I think, elicit a sense of hope for the ability of the country to tackle its enormous political, social, environmental, and economic challenges. However, there is also apprehension based on the perception that the next decade or so will help determine the country's sustainable de-

velopment path and hence establish a course for the country's security. In this way, the authors identify improvements in sustainable development—which both define by using the Brundtland Commission definition—as likely to be consequential for Indian security going forward. Similarly, both authors suggest that traditional notions of security are insensitive to the issues India faces in a globalized world and that institutionalizing this reality will not only permit the country to build a more sustainable future, but also allow it to play a leadership role internationally. In this sense, the authors agree that sustainable development is not only good for human security, but that without meeting the security needs of the population, national security objectives and interests will not be met. Both Jayaram and Venkatshamy single out “political will” and the “preoccupations of India’s leaders” (perhaps with the nudging of civil society organizations) with the responsibility for a “grand opportunity.” Still, there is a difference in emphasis that comes through in both papers.

Jayaram focuses on the “unpredictable vagaries of environmental change,” particularly climate change that places India in a national quandary. This national quandary mirrors the quandary of sustainable development writ large, in which the quest for economic growth competes with that of environmental protection and the use of carbon-based energy resources. Jayaram argues that, while India’s development has given primacy to economic growth and social justice, environmental considerations still lag behind. This is the result, she argues, of a dominant narrative among the political class that continues to blame the West for the world’s environmental woes and lacks the will to suggest that India’s own resource use—as well as that

of other developing countries like China—may now be part of the problem.

Jayaram also argues that another reason why there has been a failure to adequately connect environmental change to security is a reluctance of the security establishment to take seriously security implications of environmental change, or the idea of human security, more broadly. This reluctance stems from a deeply entrenched national security posture that views the environment as a distraction that would complicate matters. For example, taking the threat of environmental change seriously would take India's eye off of Pakistan or China, terrorist threats, or even competition for energy resources in the arctic. Jayaram finds a deep suspicion among the military that environmental issues driven by the West will give China a potential advantage. As Jayaram insightfully notes, Indian policymakers would rather make politics out of the environment than actually responding to environmental change itself.

In closing, Jayaram argues that India has an opportunity to turn the environmental debate to its favor. For one, sustainable development, which emphasizes social, economic **and environmental** factors, is closely linked to India's own value system and set of priorities (e.g., justice, equality, and democracy). Second, refusing to acknowledge the security implications of climate change in India and among its neighbors makes the country more, not less, vulnerable to national security threats. Finally, by continually claiming to be victims of Western consumption and by obstructing climate negotiations, India decreases its ability to take advantage of economic opportunities linked to climate change (i.e., Indian investments in green technologies) and political opportunities to take an international leadership role.

Jayaram's paper is unquestionably helpful in moving discussion forward, particularly with regards to Indian political and military leaders that seem reluctant to elevate environmental change to the level of a security concern. But I, for one, would have liked her to take the argument one step further. For example, what are some pressure points at which attitudes of the political class can be shaped in ways that acknowledge the security implications of environmental change? What agents of change—be they sponsors or champions—might form the networks or coalitions of cross-sector collaboration that might bring about a higher profile for environmental change, and make the connections between security, environment change and development tangible? What coalitions or cross-sector collaborations get in the way? What opportunities exist for using the environment, and climate change in particular, as a pathway to help build regional or global cooperation, trust, and confidence? These are questions for further analysis.

Rather than the more fine-grained view offered by Jayaram, Venkatshamy focuses on “complex interplay of the domestic, regional, and global” forces and challenges that will frame a sustainable national security strategy in the years to come. Venkatshamy defines national strategy as one that integrates a society's long-term goals with short-term imperatives, national needs with the interests of other societies and states, and material interests with values and traditions of the past; and that strives for security without threatening others; believes in progress coupled with caution that is informed by contemporaneous material and human conditions; and, finally, harmonizes means with ends. Any national strategy requires a grand consensus within Indian society, based on

“cultural past, historical experience, contemporary imperatives, and aspirations for the future.” As such, a national strategy requires attention to national security (i.e., territorial security and protection) as well as human security (i.e., developmental needs and human empowerment).

Venkatshamy takes a very pragmatic approach by arguing that, first and foremost, Indian security must ensure territorial integrity and sovereignty through robust defensive capabilities and military posture without which sustained economic growth, reduction of poverty, and other sustainable development issues, including environmental ones—agricultural growth, energy, and water issues—will be impossible. External aggression by India’s neighbors or insurgencies and terrorism, for instance, could pose a serious threat to Indian development. Venkatshamy understands well that exaggerating national security threats for political reasons can result in unbalanced priorities and that without proper checks and balances, a quest for absolute security for some can lead to absolute insecurity of others. But, he argues, an adequately equipped military and system of defense is a prerequisite to sustained growth and well-being. Moreover, changing climatic conditions and frequency of natural disasters, among other things, will require strong Indian defense forces well into the future. As Venkatshamy notes, however, threats to Indian security are expanding in kind and will be primarily unconventional. Therefore, Indian security will require innovative and flexible strategies within the Indian defense forces and defense establishment. This is well and good, but as Jayaram notes, the security establishment has thus far been unwilling to incorporate unconventional threats linked to environmental change.

Venkatshamy asserts, quite compellingly, that achieving sustainable development requires national security as a prerequisite. But at the same time, the author suggests that national security can only be achieved if the population benefits from the economic growth through improved employment opportunities, health, education, capacity building, welfare programs, and infrastructure development. With this in mind, he puts forth a detailed sustainable development strategy, which includes a laundry list of issues that need to be addressed, including not only things like education, health and sanitation, and employment creation, but also addressing corruption and ensuring better governance.

Whereas Venkatshamy argues fluently that national security and sustainable development cannot be separated in any national security strategy, likewise he suggests it is impossible to de-couple India from its neighbors and the international community. Addressing India's security challenges—whether conventional or unconventional—will require substantial diplomacy and cooperation. For instance, the perceived threat from China and Pakistan could be addressed by constructive communication that identifies areas of mutual benefit. Likewise, strengthening sustainable development outcomes related to food security or green technology, or global challenges like nuclear disarmament, climate change, or energy security, will require substantial global engagement.

What one should learn from Venkatshamy's paper is that in a globalizing and ever-interdependent world, there are many moving parts, and change is inevitable. As he notes, "divisions between internal and external, or traditional and non-traditional are no longer valid." Security is the sum total—or perhaps

precarious balance—of military capability, political cohesiveness, economic strength, and an equitable society. The author notes with insight that in today’s world, security requires robust international engagement tempered by patience, moderation, balance, and maturity.¹⁵

I, for one, am sympathetic to the author’s recurrent theme that India’s security challenges, while certainly reliant on sustainable development, are complex and not easy to forecast. However, it also raises questions. First, the paper is devoid of agents and actors. In the world of complexity that Venkatshamy highlights, how do decisions in India get made? If the author is calling for shifts in how we understand the nature or breadth of security in India (and that is not immediately obvious from the paper), where do these shifts in thinking and learning spring from? Where does the “push,” so to speak, come from to act upon any of the things that the author deems crucial to a sustainable security strategy? Does it emanate from the top down or do changing ideas about security and development trickle up from below? Are there previous examples in India that highlight the mechanisms and processes by which change occurs? This is not clear. Second, I would challenge the author to chart a way forward. We know that establishing **priorities** in this arena is complex and often contentious, but how do policy-makers balance, for example, industrialization and growth with decreasing environmental quality? How does one balance economic growth and social equity? The path to sustainable development, such that it is, requires trade-offs and it would help to acknowledge this and dig into a few examples.

A WAY FORWARD?

I want to suggest several ways forward or perhaps introduce a different way of thinking about the issue of sustainable development and national security in India. First, I would argue that the discussion should not be whether sustainable development is linked to security (it obviously is!) but rather **how do we prioritize development that is less harmful to the environment and fairer to the people, and hence improves prospects for human and national security?** Both authors acknowledge that global changes are creating vulnerabilities that make certain groups of people insecure in ways that ultimately make sustainable development more difficult. Vulnerability frameworks, for example, can help us link environmental change to risks, hazards, impacts, and resilience of certain groups, sectors, regions, or communities.¹⁶ Other frameworks go a step further to underscore how global change, in the form of environmental modification and globalization, interact in ways that present unique challenges and opportunities for certain groups, sectors, regions, and communities.¹⁷ Such frameworks direct us to ask important questions: Who and what are vulnerable to environmental and human changes underway, and where? How are these changes and their consequences attenuated or amplified by human and environmental conditions? What can be done to reduce vulnerability to change? How can more resilient and adaptive (hence more secure) communities and societies be built?¹⁸ But beyond these questions, these frameworks give us an analytical tool to devise metrics and begin drawing up policy responses that can be directly related to decisionmaking. At a Workshop devoted to leadership and cross-sector collabo-

ration, such a framework suggests where energies/synergies can be best targeted. For example, how can human capital be developed? How can new economic structures or livelihood strategies be developed? How can we assemble the organizations to solve it? Is it best addressed via cross-sector collaboration?

Second, both authors prioritize the importance of engagement, cooperation, and diplomacy. One might ask whether environmental issues, in particular, might offer some direct opportunity to shape national security. The environment can be a catalyst for peace by altering “the strategic climate by transforming mistrust, uncertainty, suspicion, divergent interests, and short time horizons that typically accompany conflictual situations.”¹⁹ Whereas the high politics of border issues or nuclear disarmament operates under a zero-sum, high-risk logic, environmental issues are characteristically low risk, and can help create levels of trust, reciprocity, transparency, and cooperative gains, especially at the regional scale. I am not suggesting this is the only issue, but in February 2013, Pakistan’s Ministry of Climate Change released a document to cope with climate change through adaptation and mitigation measures. The document reportedly focuses on “development sectors such as water resources, agriculture, human health, disasters, and energy.”²⁰ Climate change will affect India and Pakistan alike, and this opens up a real possibility that a dialogue (low-level delegations, at first) over adaptation and mitigation measures may be a catalyst for better relations.

ENDNOTES - CHAPTER 17

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3. World Commission on Environment and Development, *Our Common Future*, Oxford, UK: Oxford University Press, 1987.

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5. Sanjeev Khagram, William C. Clark, and Dana Firas Raad, "From the Environment and Human Security to Sustainable Security and Development," *Journal of Human Development*, Vol. 4, No. 2, 2003, pp. 289-313.

6. United Nations Development Programme, *Human Development Report*, Oxford, UK: Oxford University Press, 1994.

7. *Ibid.*

8. Kwasi Nsiah-Gyabaah, "Human Security as a Prerequisite for Development," Richard Matthew *et al.*, eds., *Global Environmental Change and Human Security*, Cambridge, MA: MIT Press, 2010, pp. 237-259.

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10. Government of India, *Sustainable Development in India: Stocktaking in the Run up to Rio+20*, New Delhi: Ministry of Environment and Forests, 2011.

11. *Ibid.*

12. *Ibid.*

13. *India's Economic Growth Is Driving Its Energy Consumption*, Washington, DC: U.S. Energy Information Administration, April 2013, available from www.eia.gov/todayinenergy/detail.cfm?id=10611.

14. *India: Green Growth—Overcoming India's Environment Challenges to Promote Development*, Washington, DC: The World Bank, 2013.

15. V. Krishnappa, "Sustainable Development and National Security Strategy for India: 2020 and Beyond." Chap. 16 of this volume.

16. Billie L. Turner *et al.*, "A Framework for Vulnerability Analysis in Sustainability Science," *Proceedings of the National Academy of Science*, Vol. 100, No. 4, 2003, pp. 8074-8079.

17. Robin M. Leichenko and Karen L. O'Brien, *Environmental Change and Globalization: Double Exposures*, Oxford, UK: Oxford University Press, 2008.

18. Vulnerability is defined as "the degree to which a system, subsystem, or system component is likely to experience harm due to exposure to hazard." Turner *et al.*

19. Ken Conca, "The Case for Environmental Peacemaking," Ken Conca and Geoffrey Dabelko, eds., *Environmental Peacemaking*, Baltimore, MD: Johns Hopkins University Press, 2002, pp. 1-22.

20. Editorial, "Climate Change Policy," *The Express Tribune*, February 28, 2013, available from tribune.com.pk/story/513419/climate-change-policy/.

PART II:

**CASE STUDIES OF CROSS-SECTOR
COLLABORATION**

CHAPTER 18

CROSS-SECTOR COLLABORATION TO PROMOTE SUSTAINABLE DEVELOPMENT

David M. Sarcone

Dr. Rajesh Chakrabarti, Executive Director, Bharti Institute of Public Policy and Clinical Associate Professor, and **Mr. Santosh Srinivas**, Associate Director, the Wadhvani Centre, India School of Business, Case Study: “Bharatiya Yuva Shakti Trust (BYST).”

Ms. Lalitha Vaidyanathan, Managing Director of the consultancy FSG, Case Study: the “Global Alliance for Improved Nutrition (GAIN).”

Ms. Julie Vastine, Director, Alliance for Aquatic Resource Monitoring (ALLARM), Dickinson College, Case Study: “Insights from Pursuing Community Engagement to Promote Sustainability.”

Mr. Todd H. Camp, Director, Corporate Social Responsibility, The Hershey Company, Case Study: “Sustainability Initiatives in Ghana.”

Dr. Khanjan Mehta, Director, the Humanitarian Engineering and Social Entrepreneurship (HESE) Program at the Pennsylvania State University, Case Study: “Self-Employed Women’s Association in Gujarat, India.”

The five cases presented in this part all document examples of cross-sector collaboration. The examples demonstrate the richness of this organizational form,

given the variations of the reported collaborations across a number of key parameters. These differences include the purpose for the collaboration; the organization championing the initiative; the composition and roles of key stakeholders; the communities targeted by the collaborations; and the outcomes achieved by each of the partnerships.

Drs. John Bryson, Barbara Crosby, and Melissa Stone caution in *Proposition 26* that, “the normal expectation ought to be that success will be very difficult to achieve in cross-sector collaborations.” Despite their differences, each collaborative documented in the case studies does share one characteristic in common—each successfully achieved its goal. Their overall successes may be attributed to favorable “linking mechanisms” combined with each of their abilities to design effective processes; manage contingencies; and assess outcomes and manage accountabilities.

Table 18-1 lists a few propositions from the paper presented by Bryson, Crosby, and Stone, and matches them with successful collaborations described in the various case studies. The observations are not comprehensive in nature but do provide a sampling of those which may be most illustrative.

Proposition 3: Cross-sector collaborations are more likely to succeed when one or more linking mechanisms—such as powerful leaders and sponsors; general agreement on the problem; existing networks; neutral conveners; requests for proposals, plans, projects, or technologies requiring collaboration; and consequential incentives favoring collaboration—are in place at the time of their initial formation, and consequential incentives favor collaboration.

The value of existing networks is evidenced in the work of the Humanitarian Engineering and Social Entrepreneurship (HESE) staff. Two of the program's notable successes, the Affordable Greenhouse Project and the Mashavu Community Health Project, were supported in both instances by the Children and Youth Empowerment Center (CYEC) and their local networks in Kenya. ALLARM relies on its existing relationships with other technical service providers operating in Pennsylvania to identify and connect with communities who have generally agreed upon environmental risks and are seeking assistance.

Proposition 5: Cross-sector collaborations are more likely to succeed if they have committed, able sponsors and effective, persistent champions at many levels who provide formal and informal leadership.

Lakshmi Venkatesan's remarkable efforts to develop and grow the Bharatiya Yuva Shakti Trust (BYST) with private sector support (Escorts Group, Tata Group) clearly represent an example of success driven by an effective, persistent champion supported by able sponsors.

Proposition 9: Cross-sector collaborations are more likely to succeed if they use a combination of deliberate and emergent planning, with deliberate planning emphasized more in mandated collaborations and emergent planning emphasized more in nonmandated collaborations. At some point, however, emergent planning needs to be coupled with formalization; too much emergent planning can undermine collaboration success.

The use of deliberate planning is illustrated by ALLARM. The service provider insists on the completion of a comprehensive monitoring plan by community representatives as one of the first steps in a six-step process to ensure the protection and restoration of local waterways.

Proposition 10: Cross-sector collaborations are more likely to succeed if their planning makes use of stakeholder analyses, emphasizes responsiveness to key stakeholders, uses the process to build trust and the capacity to manage conflict, and builds on the competencies and distinctive competencies of the collaborators.

**Table 18-1. Propositions About Cross-Sector
Collaboration Relevant to the Case
Study Presentations.**

The methodical and deliberate attempt to understand stakeholder issues and needs and assess local distinctive competencies is exemplified by the process employed by the HESE team as they worked to validate the Mashavu community health concept.

Proposition 11: Inclusive processes are needed to produce inclusive structures that in turn foster inclusive practices. All other things being equal, both inclusive processes and structures facilitate effective collaboration (another virtuous circle).

As presented in the ALLARM case study, the formation of the Potter Marcellus Task Force (PMTF) documents the purposeful effort of the county commissioners to include in the collaborative process all interested stakeholders regardless of their view on the future of gas drilling in the county.

Proposition 18: In order to be effective, collaborations must manage the many roles of technology as a facilitator of collaboration, and as nonhuman actors capable of providing solutions, affecting policies and politics, altering public perceptions, and stimulating internal organizational changes.

The role of technology as a nonhuman actor capable of providing solutions is evident in each of the case studies. Sustainable development initiatives advanced through the use of technology include food production, food preservation, food availability, health care access, and education. A comprehensive example of a technology application to increase the resilience of a community is provided in the description of Hershey Company's "Learn to Grow" initiative.

Proposition 25: Cross-sector collaborations are more likely to be successful if they have an accountability system in place that tracks inputs, processes, and outcomes; use a variety of methods for gathering, interpreting, and using data; and have in place a results management system built on strong relationships with key political and professional constituencies.

The United Nations initiated Global Alliance for Improved Nutrition (GAIN) program incorporates as an intrinsic part of their program's process an agreed upon performance measurement system designed to incentivize accountability and measure progress toward meeting the stakeholders' mutual goal of alleviating malnutrition at a global level.

**Table 18-1. Propositions About Cross-Sector
Collaboration Relevant to the Case
Study Presentations. (Cont.)**

CHAPTER 19

CASE STUDY 1: FORGING COLLABORATIONS TO NURTURE ENTERPRISES: THE JOURNEY OF BHARATIYA YUVA SHAKTI TRUST

Rajesh Chakrabarti
Santosh Srinivas

We were one of the first [nongovernmental organizations, NGOs] to be driven by industry linkages.¹

Lakshmi Venkatesan,
Founding Trustee and Executive Vice
President, BYST

THE CONTEXT

India has witnessed impressive economic growth since the landmark liberalization reforms initiated in the early-1990s. However, the sustained economic success of the last 2 decades has still not managed to percolate to the larger sections of the society. According to the latest Multidimensional Poverty Index, of the 650 million poor people in India (53.7 percent of the population), 340 million are in extreme poverty (28.6 percent of the population).² Unfortunately, the vast majority of the afflicted are youth. This is evidenced by the fact that unemployment rate among the youth (15-24 age group) is five to eight times that of people aged 30-34.³ More so, 90 percent of those employed are in the informal or unorganized sector where the quality of employment is disconcerting.⁴ Further aggravating this is the fact that the real wages have declined in a majority of recent years in the country,

shrinking the purchasing power of wage earners.⁵ It is against the backdrop of the limited success of the state interventions and isolated impact of private and civil society sectors in breaking the three vicious cycles of poverty, youth unemployment, and informality that the Bharatiya Yuva Shakti Trust (BYST) was founded in 1992 by Lakshmi Venkatesan.

At a conference organized by BYST, M. Hamid Ansari, the 14th Vice President of India, stated:

Social capital in our country is critical to human capital formation, economic performance of firms and superior performance of some social groups and geographic regions.

He continued:

While education has facilitated a relatively wider access to opportunities for entrepreneurship, those from under-privileged, minority and marginalized communities continue to confront what could be called the 'glass ceiling of entrepreneurship'.⁶

Breaking this "glass ceiling" by supporting the disadvantaged youth in their entrepreneurial pursuits has been BYST's credo since its inception.

THE BEGINNING

The Entrepreneur.

For Lakshmi Venkatesan, family background could not have been any more privileged. When she was born, her father, R. Venkataraman, a lawyer by profession, was already a well-established figure both at the state and center levels, having held key portfo-

lios such as industry, labor, power and transport. That was just the beginning of a stunning and dignified career that reached its peak in 1987 when he became the eighth President of India. But the family's deeply held values did not let any of the special privileges affect Lakshmi's upbringing. Instead, Lakshmi was brought up in an environment where a range of themes such as culture, spirituality, poverty, and social service were often debated. There was a particular fascination in the family to find and discuss innovative solutions for societal ills.

Perhaps a quest for scientific solutions inculcated in Lakshmi by her father led her to pursue dual master's degrees from the United States—one from Florida State University in 1974 in nuclear physics and another from New York University in systems engineering. Thereafter, her decade-long career as a systems engineer in AT&T Bell Labs began. As one of the very few women engineers in the company, she was often invited by universities across the United States to inspire and mentor female students to take up engineering careers. Working on research and having the opportunity to mentor many young women was immensely exciting, she recounted, "I always wanted to do something for, by and with India."⁷

In 1988, she quit Bell Labs and worked as a consultant on technology transfer assignments in the Indian context. "At that time many of my friends and relatives thought that the idea was completely crazy," she recalled.⁸ The new role gave her a deeper understanding of the issues and challenges confronting Indian businesses, particularly small and medium enterprises (SMEs). But all along, the increased understanding of the societal and institutional challenges of the country only served to fret her more. "You put me anywhere,

and by nature I will always find some idea to pick up and run with it. In a way, I was a poor employee at Bell Labs because I was always doing things that were outside of the box. Fools rush in where angels fear to tread. I do that all the time.”⁹ But for Lakshmi, a missing piece to embark on her true calling was yet to be found.

A Princely Inception.

In April 1990, Lakshmi accompanied her father on his state visit to the United Kingdom (UK). The lunch at Buckingham Palace with Prince Charles, who was seated beside her, could not have been more opportune. Casual conversations soon veered to the Prince’s Youth Business Trust’s (PYBT) developmental model that had sought to marry humanism of the welfare state with the efficiency of capitalism. When Charles shared the anecdote of how the mentoring support offered by the Trust had made a millionaire out of Muhammad Dattu, a person of Indian origin, in a short span of 6 years, the missing piece for Lakshmi became evident. She finally chanced upon an idea with immediate relevance in the Indian context and with a potential to create many more Muhammad Dattus in that country. She reminisced:

This [youth unemployment issue] seemed like a familiar dinner table conversation at home to me. And to him [the Prince] since this [youth entrepreneurship model] had never gone outside of UK and since I was showing enormous interest, it pulled in him the possibilities of something getting done in India. Over the next few days, the Prince and I got a chance to discuss the idea several times, and I received a lot of material about how the PYBT was run.¹⁰

Getting the Private Sector Leaders on Board.

Lakshmi was not one to waste time once she had decided on the idea. In 1990, P. Murali, the Former Secretary to the President of India, writes to her:

During our meeting it was suggested that after you return to Delhi we could hold a tea meeting to which those who have signified their consent to serve on the Boards could be invited and the concept as well as modus-operandi for fund collections could be discussed in detail. In the meantime, both Mr Baig [Former Director, Tata Sons] and I will be unofficially approaching all these gentlemen to secure their consent to work with us.

He continued:

Both Mr Srinivasan of Bank of India and Mr Baig are very optimistic of the outcome and sanguine that the requisite funds to form an initial corpus of Rs 3 crores [approximately \$0.6 million] would be forthcoming and that we could be in a position to kick off the pilot project by February 1991.¹¹

Upon returning to Delhi, Lakshmi decided to bounce the idea off the private sector. Through her personal networks she assembled a group of top business leaders known for strong developmental inclinations, and sought their thoughts on setting up BYST. H. P. Nanda, who had pioneered corporate social responsibility (CSR) way back in 1970s at his Escorts Group – an Indian multinational engineering conglomerate – was one of the first to enthusiastically champion the idea of BYST. At his suggestion, Lakshmi approached J. R. D. Tata, former chairman of Tata Group, also an

Indian multinational conglomerate. Lakshmi recollected that, even at 86, he was ever more enthusiastic to take on the role of Founding Trustee and Chairman of the Trust.

He [JRD Tata] wrote to me that he loved the idea because I was not coming to industry for them to write a cheque, but because I was coming to them for 'know-how'. The concept of mentoring and the concept of giving back impressed him. He related to his personal story in the 1970s when two young engineers came to him asking for advice and not looking for a job in Tata. When they came back to him after they were a success with a small business, he said he realized what difference the one hour of mentoring had made in their life. So he was personally committed to the BYST idea.¹²

Soon Mantosh Sondhi, a former Industry Secretary, was also convinced about the idea. In 1991, with three illustrious trustees on board, Lakshmi established the BYST office in the house of Zahid Baig, Former Director of Tata Sons. As Lakshmi noted:

I must say for me it was not important to start 'my organization' on 'my turf', any more than HP Nanda wanted to be Chairman, but suggested JRD [JRD Tata]. We were all happy to have things work. And the more people who knew how to make things work were involved, the better it was.¹³

With the subsequent backing from the Confederation of Engineering Industry, a nonprofit industrial association that later became the Confederation of Indian Industry (CII), the office was shifted to what became the CII premises in Delhi. CII also extended administrative and logistical support to the Trust. After a successful pilot, BYST was officially launched in 1992 by Prince Charles.

After Tata's death in 1993, Mantosh Sondhi took over as Chairman of the Trust. Rahul Bajaj, Chairman of Bajaj Group, one of oldest and largest conglomerates of the country, joined the Board of Trustees. Since the inception, the Board of BYST has come entirely from the private sector. With a Board comprised of such top business leaders of the country, the credibility, legitimacy, and access to networks, funding, and mentors was not a major concern. Lakshmi recalled that idea:

When you especially begin with so many well-placed, high-level people, one would expect to have a grand vision for the whole country or otherwise it is not worth their time. The blessing of it was that these people were prepared to start something small and watch it grow because it was a good idea. That these people of high-place industry did not think it was not worth their while unless it was a nation-wide impact was to me a wonder.¹⁴

THE LAUNCH

Inspired, Not Cloned.

Some funding became available, enough to work on the initial steps but never enough to take the eyes off the till. The UK Government's Overseas Development Administration (ODA) also offered funding support subject to the condition that \$60,000-\$70,000 a year was raised during the period 1994-97.

From the pilot, it became evident that the PYBT model had to be considerably adapted to the Indian context, as Lakshmi explained.

We never from the beginning saw this [BYST's support] as a means to self-employment. That was the UK model which was working with youth who had difficult records—drug addict records or prison records—and who were in the unemployment chain for a long time. But our measure was employment creation. The model that we got from the UK was just an 'idea'. We could not transfer it in toto to the Indian environment.¹⁵

In retrospect, the prevailing poor educational levels, skill inadequacies, information deficit, and socio-cultural barriers to entrepreneurship implied that BYST would have to adopt outreach, counseling, and training. Mentoring would need to be reframed to fit India's revered *guru-shishya parampara*, a traditional relationship of spiritual mentoring between teacher and disciple. Access to affordable finance for entrepreneurs was another critical missing link in the Indian scenario. "When we started off we had no funds. We approached banks and even went to public sectors but got no support," recounted Lakshmi. This lack of institutional support meant that the Trust had to take on the onus to fund the grassroots entrepreneurs, as stated in a letter written at the time to Lakshmi from H. P. Nanda.

As for the decision of the Trustees, we have to make request to the financial institutions for contributing to the Corpus Fund specially IFCI, IDBI, UTI, LIC and leading bankers. The suggestion was also put up that with the liberalization, the foreign banks should be requested to contribute generously to the Corpus Fund.¹⁶

BYST raised funds to advance loans of up to \$1,000 to eligible entrepreneurs through its own funds.

In 1994, the Escorts' rural development arm came forward to support BYST in reaching out to grassroots entrepreneurs in the rural Haryana region. With infrastructure, outreach, and mentoring support offered by Escorts, BYST opened its first rural branch in Faridabad. But with very few stories of successful entrepreneurs around that period, simply outreaching and offering support to aspiring entrepreneurs were not enough. Entrepreneurship had to be celebrated. This planted the idea of instituting an award in recognition of entrepreneurial achievements at the grassroots. Most appropriately, the award was named after the late J. R. D. Tata, who was described by the current Vice President of India as "one of the most iconic business personalities of India who nurtured initiative, innovation and entrepreneurship in his personal, professional, social and national interaction."¹⁷ The Tata Group came forward yet again with donation support for the award. Subsequently, considering the possible misuse of one \$2,000 award by selected entrepreneurs, the Trust decided on three awards of \$1,000, \$600 and \$400.

Securing a Foothold.

"In some sense, we were the earliest to bring about our own 'virtual incubators' into the country, which was way back in the early 1990s,"¹⁸ said Lakshmi with a sense of achievement. The model slowly began to strike chords from unexpected quarters. One such call for partnership came from Diageo, the world's leading spirits and wine company. Since the 1980s, the Diageo leadership had seen making positive contributions to local communities through strong CSR as critical to their success. Tomorrow's People Trust, a charitable

enterprise set up by Diageo leadership in 1984 in the UK, had become, as Geoffrey Bush, Former Corporate Citizenship Director at Diageo, puts it “a vital link in a national network of employers, government initiatives and community support groups, working together to help people defeat long-term unemployment.”¹⁹

In 1994, UDV India, a subsidiary of Diageo, was set up in Mumbai. Deepak Roy, UDV’s Managing Director, was well aware of challenges the subsidiary would face in those initial days of economic liberalization when the country was wary of foreign-owned companies. So for UDV India, partnering with BYST seemed strategic and timely. The Indian subsidiary helped BYST set up its third regional center in Pune with a funding assistance of £80,000. But Diageo over the years had understood that CSR was not just about charitable giving. Geoffrey Bush made that point.

To create these conditions [being successful in the long-term], a company needs to be in tune with societies and communities in which it makes its living. This means that developing, a range of relationships with shareholders, employees, consumers, governments, public health authorities, the environment and community and interest groups.²⁰

The Indian subsidiary provided additional assistance with its staff volunteering their time and expertise on activities such as entrepreneur selection, counseling, mentoring, and facilitating connections with other potential local partners.

In recognition of this work with BYST, Diageo received the Rio Tinto Award for Long-term Commitment in 1997. This partnership inspired American Insurance Group (AIG), an American multinational insurance corporation, and the Keep Walking Fund

(KWF) to support BYST in launching two more regional centers: one in Hyderabad in 1998, and the other in rural Maharashtra in 2001.

The success of BYST in leveraging linkages with industry is evidenced by the fact that nearly 80 percent of its operating cost comes from the private sector, along with some funding from the government.

Engaging Mentors: Collaborating on Knowledge.

In light of early progress, Ajay Joshi, the Chairman of Strategy Committee of BYST Pune, offered observations about BYST:

By bringing on board the Indian corporate sector in all aspects of its operations— financing, project evaluation and review, training and mentoring—a model is created for corporate executives to accept their social responsibility.²¹

But within a few years from its inception, BYST had realized that in order to be effective and scalable, it needed support from beyond large businesses. Lakshmi recounted:

When we spoke to grassroots entrepreneurs, we realized that their body language and actual business language were so completely removed from anything that these people [mentors from the corporate partners] taught that we knew we needed some translators or mentors from those roots.

This meant that BYST had to reach out to SMEs within the same locality as that of aspiring entrepreneurs. She continued on:

So we took a very proactive role. We went and spoke to Rotary clubs, Lions clubs and places where you could find the SME crowd, rather than higher-end businesses, and appealed to them to mentor. Right from the beginning this was one smart thing we did – to find the mentors who would understand the language of these grassroots entrepreneurs.²²

Over the years, BYST has engaged not just Rotary and Lions Clubs, but also local industrial estates and business associations to source mentors (see Figure 19-1 for BYST Partnership Pledge). As a consequence, a majority of the more than 3,000 mentors in the BYST network now come from the SME segment. Lakshmi noted the importance of explaining the value proposition of mentorship to the SMEs:

We broke the paternalistic mould of CSR. We said you [mentor] help an entrepreneur to become like you. In doing that we said your takeaway is you will better understand what it really means to start a business in grassroots level. This will help you understand the capabilities, capacity and needs of those entrepreneurs, and therefore tomorrow, in your own world, you can outsource and build up a better value chain. So from the beginning it was always a quid pro quo.²³

I pledge to make sincere efforts to encourage and assist at least one youngster within the next 1 year to take up entrepreneurship. I shall do my best to uphold the spirit of entrepreneurship.

Source: Company Documents.

Figure 19.1. BYST Partnership Pledge.

Reaching Out.

Lakshmi described some of the strange experiences they had at the outset of the initiative. She recalled one such incidence in 1993, the initial days of BYST's branch in Chennai:

We were addressing a gathering of 300 technical vocational education students. We described what we do and asked how many of them would like to setup their business. And all 300 hands went up. Wow, what a mighty source, we thought! One of our first entrepreneurs who had taken a loan from us was later asked to explain what it meant to start a business. His mentor who had come along described [his] own experiences. At the end we asked again how many would like to be an entrepreneur. And only three hands went up. So we realized that looking at and finding a 'fire in the belly' was not easy.²⁴

To effectively outreach to entrepreneurs with promising potential, BYST began partnering with local nongovernmental, educational and vocational institutes. On a noncommercial basis, the local partners typically assist through jointly organizing awareness camps, assignment of staff as volunteers, and promotion of BYST through their networks. For sourcing of entrepreneurs, conducting business ideation events, pre-screening and counselling of applicants, BYST offers an honorarium to the partner—\$1 for each business idea form submission, and \$1 for every applicant screened and counseled.

THE SCALE-UP

Adapting the Model.

Building on success stories of one entrepreneur at a time, BYST itself had begun taking many entrepreneurial steps to overcome the barriers along its way. One such challenge confronted the Trust in rural Haryana. Outreaching in the hinterlands was challenging as the potential entrepreneurs were spread across a vast expanse of land. But expecting the rural aspirants to periodically meet up with mentors at central urban locations was unreasonable as the costs and difficulty of travelling were daunting during those days. The experience of meeting the mentor in plush offices also seemed unpleasant and perhaps intimidating to some aspirants. Lakshmi recounted:

In 1994, we had no clue what we were going to do in rural Haryana, because the one-on-one model [of mentoring] was not going to work. So we had to invent the mobile mentor clinic.

In the mobile mentor clinic model, which has continued to this day, six mentors with varied functional and sectoral expertise travel together once a month to designated village clusters to mentor the entrepreneurs at their doorsteps. On a given day, this group is expected to mentor four to six entrepreneurs.

Another aspect that called for customization was the approach for soliciting promising businesses which BYST could support. The typical business plan template approach widely used elsewhere during those days was not useful at the grassroots levels. In 2000, BYST launched Business Idea Contest (BIC), a unique

bottom-up approach for scouting potential entrepreneurs from rural areas. BYST hugely publicized these contests through local CSR arms of its corporate partners, NGOs, educational institutions, *gram panchayats* (local self-governments) and fairs. A media buzz was usually created around BICs by inviting high-profile guests for inauguration and award ceremonies. While only the best three ideas in each contest were awarded, all the business ideas considered viable were offered support from BYST.

In the first BIC held in 2000, more than 800 business ideas came from nearly 100 villages. In 2009, a BIC was conducted in Kovalam, a beach town in Tamil Nadu, to encourage tsunami affected villages to take up entrepreneurship as an alternative to employment. The contest was held in partnership with the International Labour Organization (ILO), State government of Tamilnadu, and Standard Chartered Bank. An overwhelming 750 tsunami affected youth participated in the contest.

Bank as Another Collaborator.

Historically, financial institutions in India, particularly the banks, have been very wary of lending to micro, small, and medium enterprises (MSMEs). Information asymmetry, higher transaction cost, absence of collateral, and higher incidence of sickness have resulted in this poor flow of credit to the MSME sector. For BYST supported enterprises, which ranged from handicrafts, furniture making, catering, and desktop publishing to electronic components and engineering, access to finance was even harder owing to the very socio-economic profile of the entrepreneurs and grassroots nature of the businesses. Through its

own funding support of up to \$1,000, BYST attempted to break its entrepreneurs' vicious cycle of discriminatory barriers, unlevel playing fields, and poor growth. However, the demand for affordable credit for fixed assets and working capital far outstripped BYST's capacity. Although the Government of India launched the Credit Guarantee Scheme (CGS) in the year 2000, it took several more years for BYST to convince banks of the need and viability of lending to its entrepreneurs.

In 2007, BYST entered into partnership with Indian Bank (IB), a state-owned financial services company headquartered in Chennai, to provide loans amounting to \$2,000-\$10,000 under the Government's CGS. The interest was negotiated to a range between 1 percent below to 1 percent above the Benchmark Prime Lending Rate (BPLR). While BYST was responsible for sourcing entrepreneurs, Entrepreneur Selection Panels (ESPs), comprised of nominated members from the bank's regional branch and BYST regional centres in a 60 to 40 ratio, were entrusted with evaluation and selection of eligible applicants for the loan. The selected entrepreneurs were provided mentoring support for a minimum period of 1 year at a nominal service charge computed as a percentage of the sanctioned loan amount. The loan financing, administration and recovery were the responsibility of the bank.

As of 2010, under the BYST-IB partnership, loans amounting to over \$0.5 million were disbursed to 60 entrepreneurs. The BYST-IB Excellence Award was also instituted to recognize successful entrepreneurs. In a BYST-IB Excellence Award ceremony, M. S. Sundara Rajan, Former Chairman and Managing Director of Indian Bank, said the following:

I am looking forward to extending this [BYST-IB] partnership to other regions in course of time and am keen to in-build the targets of loans under this scheme in my annual business plan from 2010 to ensure reaching more numbers.²⁵

Such a positive assurance from Rajan, who was then ranked as one of the most powerful chief executive officers in the country, meant that broader constituency of collaborators was perhaps becoming a reality.

In order to better serve the financial needs of its entrepreneurs in the northern regions of the country, BYST in 2008 entered into a similar partnership with Bank of Baroda (BOB), the highest profit-making public sector bank in India. Similar ESPs and Excellence awards were christened under the partnership. The BOB provided loans more competitively at 1.5 percent to 3 percent below the BPLR.

As of 2010, the BYST-BOB partnership had supported 150 ventures with investment of over \$1.76 million. S. P. Agarwal, General Manager, SME and Wealth Management, Bank of Baroda stated:

I am confident that this model will not only help the identified customers of the bank but also keep a watch on any difficulty faced by them. Time is not far when such models would include risk and reward sharing in such endeavours between the existing partners.²⁶

The bank has taken proactive steps to publicize BYST's services through posters at branches and monthly newsletters. It has also been sensitizing its retired officials to take up ownership. Anu Aga, Director of Thermax and Board member of BYST, commended: "If all the banks start thinking in the way Bank of

Baroda thinks, then problem of unemployment especially in the disorganized sector could be reduced to quite a big extent."²⁷

In an interview, highlighting the BYST-Bank partnership, Helen Gale, Research and policy manager at the Youth Business International (YBI), talked about financial arrangements.

The crux of this financing option is the combination with BYST's non-financial support, compulsory in order to access the banks' loans. The non-financial support spans training, mentoring, networking and further financing referrals for the entrepreneurs. Loan repayments rates are on average 95 per cent, and, as a result of the joint offering, BYST was able to support 500 young entrepreneurs per year, compared with 100 prior to the establishment of the partnerships.²⁸

While this partnership helped BYST by taking away its portfolio risk, the banks also benefitted by an additional customer base whose risk profile was better understood and whose default rates were much lower.

Subsequently in 2010, Small Industries Development Bank of India (SIDBI), an independent financial institution supporting the growth and development of MSMEs, came forward to support BYST entrepreneurs in Chennai and Hyderabad. As of today, 22 entrepreneurs in the Hyderabad region have each received up to \$10,000 of funding through this partnership scheme.

Devising New Models.

As many of the grassroots entrepreneurs supported by BYST matured, the need for an additional

capital infusion in the range of \$100,000 to \$200,000 for growth became evident. The prevailing debt and equity providers were not catering to the demands of high-potential and high-risk enterprises. This seeded in BYST an idea of setting up a micro-equity fund. The Trust reached out to International Financial Corporation (IFC), the World Bank's private sector investment arm, for the know-how about creating such a fund. One of the challenges in designing the fund was that, unlike other venture capital funds, this micro-equity fund for grassroots enterprises could not realistically expect to generate an eventual return through typical realization channels, such as initial public offerings (IPOs). That led those involved to study Eastern European models, among others, which helped them to eventually devise a \$5 million fund that could take a share of invested enterprises' profits or revenues in the form of royalties. Through this fund, BYST was also keen to explore if mentors could be incentivized by providing them an option to take a share in the enterprises they support.

In 2007, the BYST Growth Fund, with a fixed life of 10 years, was piloted, and in 2008, the fund was formally launched with \$2 million contributions from IFC, SIDBI and high-net-worth individuals (HNIs). IFC gave a grant of \$0.5 million for developing the concept and \$0.2 million technical assistance for setting up the fund. SIDBI contributed an additional \$1 million. But with BYST clearly not intending to divert from its core philosophy of supporting grassroots enterprises through continuous innovations and new collaborations, the fund management had to be outsourced. Lakshmi emphasized the importance of the fund:

The Growth Fund was perhaps one of the cases where they [BYST Board] got involved in a much deeper mode because it was the first of its kind in India. We were looking at ways in which we need to set it up so that it works, and if we have third-party partnerships what the roles and responsibilities should be so that it won't in any way hamper our [BYST] brand due to non-performance.²⁹

As of August 2012, the fund management was outsourced to Ventureeast, which has invested in seven grassroots ventures, five of which were from the BYST pipeline.

NEW PATRONAGES

Mentor Chapters.

As BYST's model evolved, so did the mentor's active involvement and pivotal role in both strategic and operational activities of the regional center. In order to maintain the quality of mentor networks and keep them motivated, many processes were developed by BYST. Lakshmi described the critical role of mentors:

One other process that I am very happy we set right in the beginning is that we would never recognize a mentor as a 'good mentor' for themselves. It was always the pair. We recognized performance of the 'entrepreneur-mentor' pair. You will think that this is obvious; it is not. Many mentoring programmes that we have seen since, and programmes that had existed overseas, always gave the award to the best mentor. Who is the best mentor – who talks a lot, who meets more often, who goes by some kind of a bureaucratic process set? We said no. They [entrepreneur and mentor] must be

indelibly and intricately linked to each other. So the entrepreneur and mentor was one and the same entity. And that built a bond between entrepreneur and mentor. To this day we follow it. Once again my board was responsible for inspiring this to happen.³⁰

Another process that was introduced in this direction was the 'mentor chapters,' a formal group of local mentors similar to the Rotary Club chapters. Aside from facilitating counseling, selection, mentoring, and monitoring of entrepreneurs, each chapter was responsible for shaping the strategic plan of the regional center, facilitating linkages with local organizations, bringing together and developing individuals as mentors, and conducting outreach programs in local industrial areas, companies, colleges, and training centers.

"This year [2009] we also have a great task of stabilizing our chapters, putting our systems and standard operating procedures in place," noted Lakshmi in a BYST newsletter. As of 2010, BYST had 25 mentor chapters across the country. The mentor chapters over the years have built many strategic linkages with local academic institutions, industrial associations and industrial estates. In 2009, for example, the BYST Mentor Chapter of Faridabad, Haryana, signed a Letter of Cooperation (LOC) with Faridabad Chamber of Commerce and Industry (FCCI) for sourcing mentors. The same year, the mentor chapter of Shirval, Maharashtra, signed an LOC with Anatrao Thopte College for sourcing entrepreneurs.

A code of ethics, code of conduct, and grievance and complaint procedure was also instituted by BYST for effective functioning of the chapters. In order to accomplish the various objectives, BYST created com-

mittees at each regional center—Strategy, Mentor Counselling, Mentor Selection, Technical Evaluation, Entrepreneur Selection, Mentor Advisory and Mentor Business Development. Each of these committees drew members from various sectoral experiences and functional expertises. The BYST Hyderabad Strategic Committee 2012-13, for example, draws its 15 members from varied SME verticals and NGOs.

Student Pipeline.

As BYST worked with academic institutions across the country such as Jawaharlal Nehru Technological University (JNTU) in Hyderabad, Guru Nanak Educational Society in Chennai, and Acharya Narendra Dev College in New Delhi, to turn job seekers in the student community to job creators, it realized the potential the student community offered as mentors to grassroots entrepreneurs. A student mentorship program would not only help sensitize the students toward the needs of grassroots entrepreneurs and build a pipeline of student mentors, but also provide them an experience of starting and growing a venture.

In 2012, BYST partnered with Indian Institute of Planning and Management (IIPM) and D. Y. Patil Institute of Management Studies (DYPIMS) on the student mentorship program.

The Ultimate Collaborator: The State.

Over the years, BYST has partnered with many central and state government machineries that support entrepreneurship. Media Lab Asia, an organization set up by the Department of Electronics and Information Technology of Government of India,

is one such partner that leverages BYST's rural networks to disseminate knowledge of some advanced technologies.

"In Hyderabad, BYST has tied up with the Commissionerate [of Industries], DICs and NI-MSME to outreach to new entrepreneurs," explains Puneetha, staff at BYST Hyderabad regional center.³¹ The National Institute for Micro, Small and Medium Enterprises (NI-MSME), an organization of Government of India, frequently calls upon BYST to provide orientation and trainings session to its international participants. District Industries Centres (DICs), a state government agency mandated to support entrepreneurship, refers many aspiring entrepreneurs to BYST centers for obtaining counseling, mentoring, and financial support.

In order to raise awareness of the legislative process and to influence the national entrepreneurship and MSME policy agenda, BYST has also been consciously engaging young parliamentarians through interactive sessions. Recently, its board members, mentors, and entrepreneurs had an interactive session with influential young parliamentarians in New Delhi.

However, it was not until recently that BYST entered into a larger strategic partnership with government. In 2012, it was invited by the Government of Assam to promote entrepreneurship in the state. Speaking at a Youth Entrepreneurship Development Programme organized by BYST and CII, Tarun Gogoi, Chief Minister of Assam said:

One of the reasons for growth of insurgency in the region is unemployment. It had [sic] also led to other social problems in the region and growth of industry and business opportunities can curb the problems.³²

Under this partnership with the government, BYST receives funding of \$1 million over the 5-year period 2012-17.

Going Global.

Though BYST's model was inspired by the UK model of PYBT, it had within the first 4 years made many adaptations based on its grassroots experience. The success stories from the initial pilot with select entrepreneurs in 1991, and from thereafter, were proof of BYST's contextualization efficacy. In 1994, BYST shared its model and best practices with South Africa. Subsequently, it helped Mauritius and Canada in 1996, Sri Lanka in 1998, Bangladesh in 1999, Philippines and China in 2003, and Nepal in 2004 to set up similar youth entrepreneurship development programs in their countries.

BYST was also one of the founding partners of Youth Business International (YBI), a global network of independent nonprofit initiatives helping young people start and grow their own business and create employment. Through YBI, many developing countries have approached BYST for support in setting up youth business initiatives in their respective countries. In 2003, at a business community lunch in Mumbai, His Royal Highness (HRH) Charles, The Prince of Wales remarked:

BYST is now making a real impact on the growth of new enterprises by young people in India and has become an important partner of both my Youth Business International and my IBLF [International Business Leaders Forum] as we develop similar models around the world. It is a fine example of corporate citizenship in action.

In 2004, BYST signed a Memorandum of Understanding (MoU) with Instituto Negocios da Juventude do Brasil in the presence of visiting Brazilian President Luiz Inacio Lula da Silva. Recently, senior delegates from China and Singapore visited India to understand BYST program.

BYST is also a designated country partner of Global Entrepreneurship Week (GEW), an international initiative founded by the Kauffman Foundation and Enterprise UK in 2008. As a host organization, it is responsible for building a network of partner organizations and supporters to run events and activities during the GEW. With 74 partners and 70 activities, BYST has reached more than 11,000 participants through such GEW campaigns. With GEW active in 88 countries, BYST has gained global visibility through this partnership. In 2011, the World Fashion Organization (WFO) joined GEW to organize a fundraising event with partial proceeds going to BYST. The corporate partners of BYST have also benefitted from GEW campaigns. In 2009, for example, as part of the GEW campaign, BYST organized a counselling session for Escorts Group's vendors in rural Haryana.

Today, BYST is also part of other global networks, such as Youth Employment Policy Network (YEPN), a task force formed by United Nations Development Programme (UNDP), ILO, and World Bank. It is also one of the collaborators of the Global Youth Innovation Network (GYIN), established by UN International Fund for Agricultural Development (UNIFAD) and Phelps Stokes.

SUCCESS

Recognitions.

Many BYST supported entrepreneurs have won awards at regional, national, and global levels. So far, 17 grassroots entrepreneurs of BYST have won the Citi Micro-Enterprise Award that was instituted by Citi Foundation in 2004.

Ramu Uyyala, who had to discontinue studies to take up a job as a machine operator in a plastics company to support his poor family, could not have imagined that he would travel to Edinburgh, Scotland, one day to receive the Entrepreneur of the Year Award 2008 from YBI. At the global level, BYST's entrepreneurs, apart from Ramu Uyyala, have bagged the People's Choice of Award in 2010 and Woman Entrepreneur of the Year in 2012. Viswanathan Lakshmanaswamy, who has been mentor with BYST for more than 16 years, won the Mentor of the Year award in 2012.

International forums.

BYST has also been invited to many international forums to share its best practices in tackling youth unemployment through entrepreneurship. In 2004, BYST participated in the Expert Group Meeting and Youth Roundtable organized by UN and Youth Employment Network (YEN). It represented India in the G-20 Young Entrepreneur Summit in Toronto, Canada, in June 2010. In the subsequent year, it was invited to an international workshop hosted by the Government of the Republic of Benin. T. L. Viswanathan, Chairman of the Strategic Committee of BYST Chennai, offered a reflection:

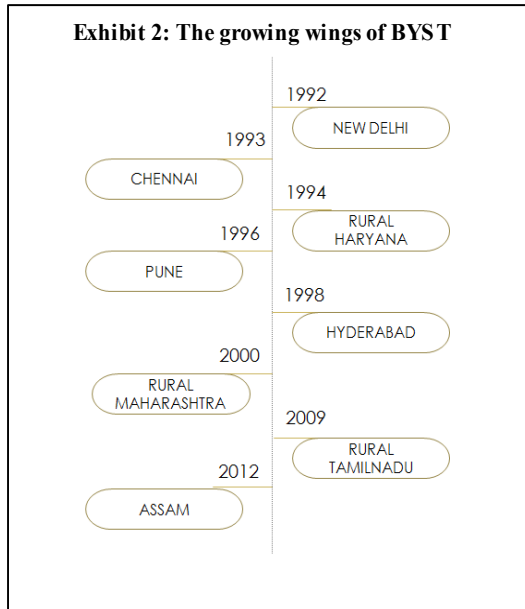
Global Conference on Youth Entrepreneurship was a unique experience. Meeting up and exchanging views along with trading best practices with representatives of almost 40 countries was very beneficial. The icing on the cake was winning the global 'YBI Entrepreneur of the year 2008' award by Ramu Uyyala of BYST amidst global competition.

In 2013, BYST will be representing India in the Global Entrepreneurship Congress.

CONCLUSION

In nearly 2 decades of its existence, BYST through its eight regional centers (see Figure 19-2) and a network of 3,000 mentors has outreached to more than 75,000 youth across the country, supported more than 2,217 ventures with loans amounting to over \$8 million, generating over 22,000 jobs and a turnover of more than U.S.\$68 million (see Figure 19-3). The Prince of Wales lauded them:

It seems to me that a critical role that business can play in society, and where it has unique credentials, is in enterprise development for young people. I couldn't be more proud and delighted that the Bharatiya Yuva Shankti Trust (BYST) has gone from strength to strength since my last visit 11 years ago [1992]. Remarkable progress has been achieved, with the support of the CII and Indian business leaders, and through the enthusiastic and inimitable determination of Lakshmi Venkatesan.³³



Source: Company Documents.

Figure 19-2. The Growing Wings of BYST.

Exhibit 3: BYST Impact Factsheet

Youth outreached	75,00
Mentors	3,000
Ventures supported	2,600
Women run business	30%
Venture success rate	95%
Employment generated by ventures	26,000
Turnover of ventures	> US\$ 92.0 million
Loans disbursed to venture	> US\$ 9.2 million
Loan repayment rate	95%

Source: Company Documents.

Figure 19-3. BYST Impact Fact Sheet.

Given the loan repayment rate of 95 percent and enterprise success rate of 95 percent, the model has proven its efficacy. “Every U.S.\$1 that the YBI Indian member, Bharatiya Yuva Shakti Trust, lends to young entrepreneurs is multiplied 10 times in the turnover of the businesses they support,” noted YBI.³⁴

But BYST seems far from content today. Even with an established model, BYST is finding the scaling up of its operations across the country challenging. Dealing with government bureaucracy for starting up is still a major bottleneck, discouraging many grassroots entrepreneurs. Considerable efforts are still needed to sensitize and convince every concerned government institution at the local level. Lakshmi voiced lamentations:

We [BYST] have not changed the landscape enough because the problems we face in 2011 for start-ups are not a whole lot different from what we faced in 1992. There are still no incubators. Other than the bank loans, there is no real micro-equity or alternative forms of financing in tune with what has happened in the world for grassroots level entrepreneurs. There are still thirty seven different types of regulations needed for a young start-up. I think we as BYST really have not made the impact by making a fundamental change in the fabric of entrepreneurship. If it hasn't happened so far, something is wrong.³⁵

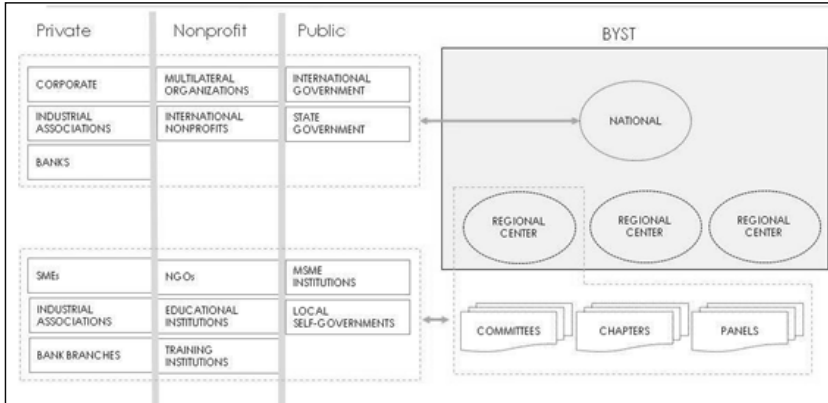
Some challenges in strategic partnerships are certainly unfolding. With most banks outsourcing their loan recovery functions, the uncivilized actions of the third-party agencies are hampering the relationship between the BYST and its partner bank. On the BYST Growth Fund front, concerns of diverging goals and

measures among partner institutions are emerging.

It is to be noted that the social and financial capital, and extensive network of partners that BYST has been able to build, perhaps owe much to the high-profile contacts that Lakshmi initially brought, owing to her father's presidential connections. Hence, the replication of the model elsewhere in the world, where beneficiaries could enjoy similar business contacts, is questionable. Lakshmi responds to this prospect:

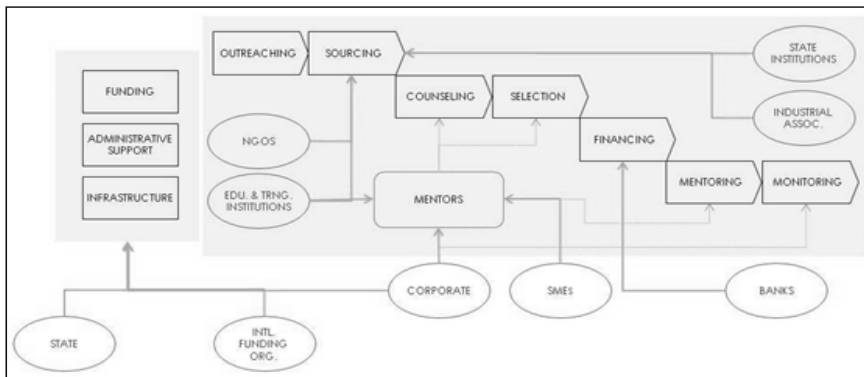
It is not that it requires Rashtrapati Bhavan [President House]. It really requires JRD [JRD Tata]. What did I do? I would like to place myself humbly in the place of someone who is very enthusiastic and passionate about ideas. That is my USP [Unique Selling Proposition] to living. You give me something exciting and I will run with it. I managed to see something and run with it.³⁶

Time will tell whether BYST's unique approach of leveraging key actors in public, private, and civil society sectors (see Figures 19-4, 19-5, and 19-6 for a structural, process, and uniqueness perspective of this collaboration model) will ease the very 'rules of the game' of entrepreneurship and create a 'level-playing field' for the future generations of grassroots entrepreneurs. "BYST has perhaps only shown the way and pointed to the huge potential that its approach has. Scaling it up to make a serious dent on India's poverty and human conditions still remains a massive challenge," concluded Lakshmi.



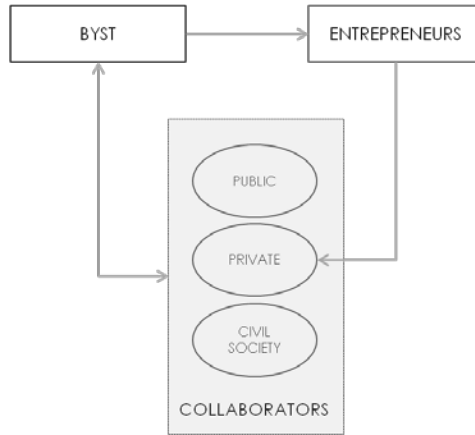
Source: Case Authors.

Figure 19-4. BYST Collaboration Model – A Structural Perspective.



Source: Case Authors.

Figure 19-5. BYST Collaboration Model – A Process Perspective.



Source: Case Authors.

Figure 19-6. BYST Collaboration Model – A Uniqueness Perspective.

ENDNOTES - CHAPTER 19

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CHAPTER 20

CASE STUDY 2: COLLECTIVE IMPACT AND THE GLOBAL ALLIANCE FOR IMPROVED NUTRITION

Lalitha Vaidyanathan

FSG AND COLLECTIVE IMPACT

FSG Social Impact Consultants is a nonprofit consulting and research firm founded by Harvard Business School in 2000. Since its founding, FSG has had success in strategic planning and evaluations of over 400 foundations, corporations, and nonprofits, and assisted in the development and creation of many collective impact initiatives. FSG researches effective practices to solve social problems. FSG disseminates its findings through webinars, conferences, and work published in journals such as *Harvard Business Review*, *Stanford Social Innovation Review*, and *American Journal of Evaluation*.

FSG conducts research into what makes collaborations successful. One of FSG's early findings deals with how problems are viewed. From the book, *Getting to Maybe*, FSG has noticed that there are three types of problems: simple, complicated, and complex. Simple and complicated problems are similar in that their solutions can be replicated in similar situations; the major distinction between the two is that complicated problems require specialized skills and resources. A complex problem is akin to raising a child in that there is not a standard, replicable way to raise the child or solve the problem. A complex problem is different in every circumstance and is influenced by uncontrolled

factors. Additionally, the needs and circumstances of the problem change over time. The social sector largely treats problems as simple or complicated, in which it tries to replicate and scale-up successes. The social sector views social problems this way to its own hindrance.

Another observation of FSG is that traditional approaches are not solving today's toughest social problems. The traditional approach involves organizations working separately and competing with one another for funding. It involves donors looking for and funding individual interventions or organizations. This leads to an "isolated impact" approach. In this approach, corporate and government sectors are largely disconnected from foundations and nonprofits. A different approach, "collective impact," involves organizations working toward the same goal and measuring the same things. In this collective impact approach, cross-sector alignment occurs, and government, corporate, and social sectors are essential partners. These partners actively coordinate their activities, share their lessons learned, and together adapt and refine strategies.

FSG extensively studies effective collaborations (i.e., collaborations that have made or are making significant progress toward solving social problems at scale) and finds that there are five conditions or principles that effective collaborations have in common. The first condition is a common agenda; all participants have a shared vision for change which includes a common understanding of the problem and what success looks like and a joint approach to solve it through agreed upon actions. The second condition is shared measurement in which participants collect data and measure results consistently across

all partners to ensure efforts remain aligned toward the shared goal and partners hold each other accountable. This condition includes measuring progress toward the shared understanding of success. The third condition is mutually reinforcing activities in which participant activities are differentiated and coordinated through a mutually reinforcing plan of action. The fourth condition is continuous communication among the participants: a structured process for participants to interact; communicate; build trust; engage in continuous learning; and refine strategies. The fifth condition is backbone support, where a separate organization with dedicated staff focuses on coordinating the activities of the collaborative.

In addition to these five conditions, FSG identifies three readiness factors that underlay collective impact success. These three factors are existence of key champions, urgency for change, and sufficient funding for the backbone. The existence of champions for collective impact is critical to convene key cross-sector actors and keep them engaged over time. The champions keep partners motivated to continue participating in the collaboration. The champions also play a critical role in rallying the various actors to agree on a common agenda and work together; this kind of leadership is an art because there is no set methodology to reach such agreements across all collaborations. The second readiness factor is urgency for change. Since collective impact requires commitment, sacrifice, and willingness to work in a highly collaborative manner often over an extended period of time, FSG's research has found that collective impact efforts are successful when there is pressure to make progress, where other approaches have not worked, and the community is ready to try a different approach. The third readiness

factor is sufficient funding. This is important to maintain the backbone organization so that it can focus on facilitating and expanding the collaboration, instead of worrying about its survival. Successful collective impact efforts typically have 3-5 years of funding secured for the backbone prior to launching the effort.

GLOBAL ALLIANCE FOR IMPROVED NUTRITION

FSG uses its findings from previous research to study the Global Alliance for Improved Nutrition (GAIN). GAIN focuses its efforts on combating malnutrition and is the backbone organization of these coordinated efforts. Malnutrition is an important issue because about one-seventh of the world's population (925 million of seven billion) does not receive enough nutrition to live a healthy, active life. It is the number one global health risk and is the cause of death of 3.5 million children under the age of 5 annually, accounting for 40 percent of 11 million deaths of children under the age of 5 in developing countries. Additionally, malnutrition hinders development. Countries may lose 2-3 percent of gross domestic product because of iron, iodine, and zinc deficiencies. Without addressing malnutrition, the world might not be able to achieve the millennium development goals.

GAIN was created within the United Nations (UN) in 2002 to coordinate efforts more effectively so as to end global malnutrition. The organization was redesigned as a Swiss foundation in 2005. The Geneva-based alliance collaborates on multiple levels. For example, at the global level, the board comprises business and philanthropic representatives. At the country level, GAIN has partnerships with business, government, and social sectors to conduct its activi-

ties. GAIN creates stakeholder alliances of relevant government agencies, businesses, civil society, and international organizations to further its goal of fighting malnutrition.

GAIN's model matches the five conditions for shared success that FSG finds in prior research. GAIN's many partners share the goal to increase access to missing nutrients necessary for people, communities, and economies to be stronger and healthier. GAIN partners have agreed-upon strategies to improve nutrition globally. The first is to build partnerships that deliver results by creating alliances of leading companies at the national and regional levels. The second strategy is to enable innovation; GAIN funds programs and provides technical assistance in the design, implementation, and evaluation of programs. The third strategy is to improve nutrition by measuring performance, evaluating work, and reporting progress; these measurements allow GAIN to direct its resources to maximize impact and progress toward the shared goals of its partners.

GAIN uses a matrix to create collaboration with its partners. GAIN itself coordinates the initiatives of its partners, which include large-scale food fortification, the provision of multi-nutrient supplements and nutritious food for children under the age of 2 and pregnant and lactating women, and the increase of nutrition in the agricultural value chain. The large-scale fortification of food is a primary activity of GAIN to reduce malnutrition. GAIN coordinates and facilitates these initiatives by managing the programs and delivery of food, providing innovation, and technical support to these initiatives, monitoring and researching ways to improve the delivery of its food, facilitating advocacy and communication, and developing and managing partnerships.

In India, GAIN coordinates and facilitates efforts to provide nutrients to malnourished individuals. In one of GAIN's main efforts, the large-scale fortification of edible oils, GAIN coordinates with Cargill, a multinational producer of edible oils, to fortify vegetable oils with essential nutrients for delivery to target individuals in India. GAIN provides Cargill with scientific knowledge necessary to fortify oils which Cargill then produces. In the Indian state of Andhra Pradesh, GAIN uses its partnership with Andhra Pradesh Food, a government-owned food manufacturer, to produce and provide fortified cereals to the Integrated Child Development Services, an Indian government project.

GAIN is a successful backbone to the collaborative effort against malnutrition. As all backbones, GAIN must balance the tension between ensuring the coordination and accountability of its partners while "staying behind the scenes" in order to establish collective ownership. GAIN exemplifies several requirements of a successful backbone. The first of these requirements is creditability: GAIN has a large amount of creditability because it was established by the UN. GAIN builds relationships across members of the initiative by aligning business and government interests with GAIN's objectives. GAIN continually measures and evaluates the activities of its partners in order to reallocate resources to where they will be most effective.

GAIN also possesses the three readiness factors for successful collaboration. The GAIN collaborative includes key champions from government, nongovernmental organizations, as well as the private sectors, and has been able to facilitate the creation of a shared understanding of the issue successfully, coordinate the differentiated activities of its partners, and measure the progress of the collaborative toward the shared goal. The looming deadline to achieve the millennium

development goals (MDG) has served to create sufficient urgency for change. Country governments, the UN, and the private sector are all under pressure to help make progress in key MDG areas, and this has provided the forcing function to bring and keep participants at the collaboration table. GAIN has also received over \$430 million from combined private sector and donor investment sources, and this has provided the funds necessary to manage the Alliance's activities and sustain the collaborative.

The collaborative effort that GAIN coordinates is successful in progressing toward the shared goals of its partners. In the past 9 years, GAIN has made significant progress and achieved a number of its goals. The first goal, "reach," is to have one billion individuals consume fortified foods: to date, GAIN has helped 667 million people to do so. The second goal, "coverage," is to have 500 million women and children consume fortified foods: to date, GAIN has helped 321 million women and children to do so. GAIN has made good progress in achieving its goal of a 30 percent minimum reduction in prevalence of micronutrient deficiencies, with rates varying from 11 to 30 percent. GAIN has also achieved some of its other important goals. With respect to efficiency in reaching individuals, it has achieved a cost-per-target individual of \$.22, which is a far lower cost than its stated target goal of \$.35 per target individual. GAIN has surpassed its goal of receiving \$50 million in donor investment, receiving \$73.5 million.

GAIN is progressing toward achieving the shared goals of its participants as it continues to expand the Alliance and coordinate efforts to combat malnutrition. The success of GAIN reflects the previous findings of FSG that collective impact success must be highly structured.

CHAPTER 21

CASE STUDY 3: THE ALLARM APPROACH: A COLLABORATIVE PROCESS FOR SUCCESSFUL COMMUNITY BASED ENVIRONMENTAL MONITORING

Julie Vastine

The Alliance for Aquatic Resources Monitoring (ALLARM), a project of the environmental studies department at Dickinson College, has provided capacity building technical assistance to Pennsylvania communities to monitor, protect, and restore local waterways since 1986. Through the work of student and professional staff, ALLARM offers comprehensive services to enable volunteers to use critical scientific tools to enhance environmental quality and fully participate in community decisionmaking. ALLARM has three full-time staff, a faculty science advisor, and employs 10-14 Dickinson College students. The process employed by the organization to serve Pennsylvania communities is referred to as the ALLARM Approach.

THE ALLARM APPROACH

The ALLARM Approach is best defined as a co-created community based participatory research process.¹ The process is comprised of six separate steps (see Table 21-1). The process begins with the community's resolve to address a recognized environmental concern that is associated with their local waterways. The service provider selection is the critically important next step in the process. Volunteer communities have varying knowledge about available resources to

assist them carrying out effective action. ALLARM will learn about a community-in-need either from the community directly or from another service provider that thinks that a community could benefit from ALLARM's resources. For 27 years, ALLARM has provided customized programmatic and scientific assistance to communities to facilitate the collaborative design and implementation of a monitoring program. In Pennsylvania, ALLARM is one of 10 service provider organizations that work with communities on water quality monitoring. To complete community-based monitoring programs successfully, service providers, in collaboration with the community seeking assistance, must achieve three separate but related goals.

Step 1: The community identifies and resolves to address an environmental concern directly involving their local waterways.

Step 2: Community representatives select and contact a service provider to assist in the planning and implementation of a community based monitoring program that is designed to protect and restore their local waterways.

Step 3: The service provider provides monitoring training to build competencies of the community volunteers to implement community-based stream monitoring.

Step 4: The service provider provides quality verification to ensure that communities are using their equipment and techniques correctly and that their data is of known quality.

Step 5: The service provider works with committed community representatives to manage data and interpret their data.

Step 6: Community representatives use the data to communicate to watershed stakeholders and advocate for the protection and restoration of water ways.

Table 21-1. The ALLARM Approach.

The first goal, which is represented in Step 2 of the process, is the completion of a comprehensive monitoring plan. The completion of the plan requires the preparation of detailed responses to 10 separate questions.² The service provider serves as the facilitator in this process. It is the responsibility of the community representatives to provide comprehensive answers to the questions. It is important in this model that from the very beginning, the community—not the service provider—dictates the direction of their program. The completion of the planning process is intended to provide an agreed-upon plan of action owned by the community.

Building the community representatives' capacity to carry out water quality assessments as represented in Step 3 of the ALLARM Approach is the second goal of the process. This requires building community competencies in collecting valid and reliable data from chemical monitoring, biological monitoring, and physical monitoring procedures.

The third and final goal of the process is to diminish the data road blocks. This goal is relevant to Steps 5 and 6 of the ALLARM Approach. Several strategies may be employed to improve data management and interpretation. Management strategies include the design and use of community customized database templates or the use of a statewide database. To improve data interpretation, analytical tools are available to condense data and identify trends. Additionally, community members can hone their data interpretation skills by practicing with data from existing models of virtual watersheds. The value of data management and interpretation efforts, however, is diminished if actionable information cannot be communicated effectively to key decisionmakers. One strategy to build

confidence in communicating is through mastering and utilizing different media to convincingly convey the community's data driven story.

The efforts of numerous Pennsylvania communities in collaboration with ALLARM have met with success. Examples of positive outcomes include: successful petitions to the Commonwealth to upgrade stream designations; collaborations with local government units to incorporate stream protection into new development projects; and increased stream health awareness. Most notably (though a rare example), one successful community initiated a law suit against a paper mill that resulted in the plant being required to invest in the installation of \$25 million of plant upgrades to ensure the protection of local waterways.

Provided next are two brief case studies of ALLARM projects which effectively illustrate successful collaborative efforts to protect and restore waterways.

Middle Spring Watershed Association Case Study.

The formation of the Middle Spring Watershed Association (MSWA) arose from the failure of four local municipalities to reach agreement on a financing strategy for the upgrade and continued operation of a waste water treatment facility located on the eight-mile-long Middle Spring Creek in southcentral Pennsylvania. As a result of the impasse, one of the municipalities announced plans to build a second waste water treatment plant on the same creek. This was possible because each of the municipalities had separate decisionmaking authority over the use of the Middle Spring Creek. The addition of a second treatment plant on an eight-mile creek was seen as excessive by concerned citizens. It was anticipated that the

addition would lead to a further decline in overall water quality.

In reaction to the announcement, a nucleus of concerned community representatives organized the MSWA. The Association quickly realized that there was very little quantitative data on the Middle Spring Creek. The near absence of data was a function of limited state government resources for environmental monitoring, coupled with the large number of stream miles (over 83,000) to be monitored in Pennsylvania. At that point, the MSWA reached out to ALLARM. In a period of 3 years, ALLARM, in collaboration with the Association, successfully achieved the three key goals associated with the ALLARM six-step process. Together, the two organizations completed a comprehensive water monitoring plan; built community capacity to monitor and collect valid and reliable data, as well as to manage efficiently and interpret the data accurately; and established methods to communicate their findings effectively to key stakeholders.

After the comprehensive monitoring plan was implemented, MSWA members armed with data-driven information, routinely attended open meetings of all four involved municipalities and advocated for a resolution of the waste water treatment plant problem that did not include the construction of a second plant. Four years following the formation of MSWA and with the cooperation of all four municipalities, the issue was resolved in favor of the association's position. The MSWA continues to operate today: they continue monitoring but have a new focus on stream improvement projects, including tree plantings and dam removals.

The Potter County Shale Gas Monitoring Model Case Study.

Pennsylvania has experienced a significant growth in unconventional gas drilling activity with the discovery of rich deposits of shale gas in the southwestern, northcentral, northeastern, and northwestern regions of the state (see Figure 21-1). Since 2005, 8,000 gas wells have been drilled in the state. The unconventional extraction process used, high-volume slick-water hydraulic fracturing, is commonly referred to as “fracking.” The extent of drilling in the state; the relative newness of the drilling technology; and the limited regulatory guidelines in place to monitor unconventional drilling operations³ have created concern over the possible decline in the quality of life and environment in the affected Pennsylvania communities.

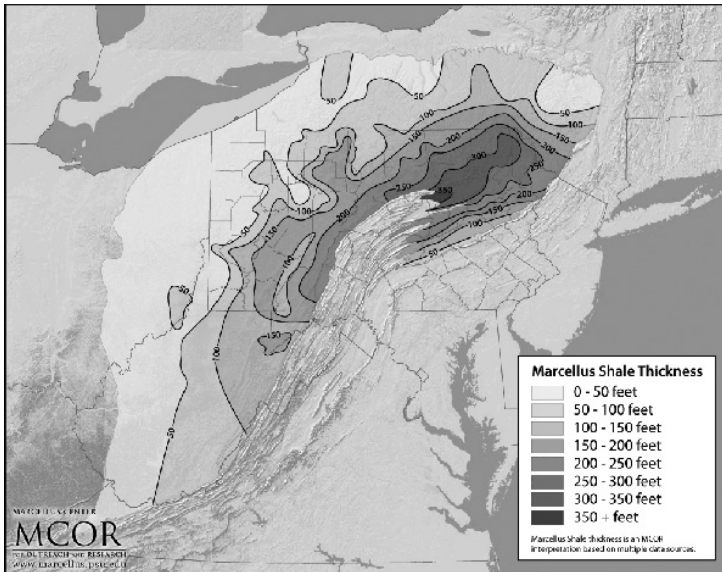
One Pennsylvania county experiencing moderate growth in drilling activity⁴ is Potter County, located in the central part of Pennsylvania bordering the New York State line. It is a rural region with 18,000 residents. Located within the heavily forested county are the headwaters for three rivers: the Allegheny, Susquehanna, and Genesee.

In 2011, the Potter County Commissioners directly engaged the community on the subject of increased gas drilling through the formation of a cross-sector collaborative. The collaborative, the Potter Marcellus Task Force (PMTF), welcomed all interested stakeholders to participate regardless of their view on the future of gas drilling in the county. One of PMTF’s first actions was to form a water quality monitoring subcommittee to collect baseline data led by volunteer monitoring organizations. The work of water quality monitoring is completed through the coordinated efforts of three

community groups: Trout Unlimited, the Waterdogs, and the Potter County Conversation District (PCCD).

ALLARM was contacted by the water quality subcommittee to assist with monitoring efforts. In response, ALLARM has conducted four workshops. The workshop training aided community representatives in their selection of monitoring sites and provided them training on data gathering methods specific to monitoring fracking operations. ALLARM remains involved in assisting the subcommittee with data management and interpretation responsibilities.

The PMTF water quality monitoring efforts have created a much needed resource for county residents. As a result of collecting 3 years of valid and reliable data and creating a data base on water quality, PMTF has been able to report pollution violations resulting from drilling operations within the county to the appropriate regulatory agencies. PMTF is also now in position to monitor actively the activities of a much anticipated drilling waste water recycling facility, the Ulysses Plant, when it comes on-line in the county. The collaborative remains active and continues to focus on protecting the quality of life of county residents by mitigating any negative impact of unconventional drilling technology development and application within the county.



Source: Marcellus Center for Outreach & Research, University Park, PA: Pennsylvania State University.

Figure 21-1. Thickness of Marcellus Shale.

ENDNOTES - CHAPTER 21

1. The ALLARM Approach definition was formed by the Washington, DC: Center for the Advancement of Informal Science Education.

2. The 10 questions were formulated by Dickinson College, Carlisle, PA:

1. What are your organization's major objectives?
2. Why are you monitoring?
3. How will you use the data?
4. What will you monitor?
5. How will you monitor?
6. Where will you monitor?
7. When will you monitor?
8. What are your QA/QC measures?

9. How will you manage and present the data?
10. Who will complete the tasks?

3. The 2005 Clean Energy Bill exempted certain unconventional gas drilling processes (including fracking) from 17 separate federal regulatory laws including the Clean Air Act, the Clean Water Act, and the Safe Drinking Water Act. Responsibility for regulating unconventional drilling processes was ceded to the states. In Pennsylvania, the applicable regulations are based on 1985 state legislation, The Oil and Gas Act. Regulation created by this legislation is not fully relevant or effective for monitoring the new forms of extraction.

4. For the 5-year period from 2005-09, 22 wells were drilled in Potter County. In a 2-year period from 2010-11, an additional 50 wells were drilled in Potter County. Although no wells were drilled in 2012, it is anticipated that there will be a resurgence of drilling activity with anticipated increases in wholesale gas prices in 2014.

CHAPTER 22

CASE STUDY 4: THE HERSHEY COMPANY: COMMITTED TO SOCIAL RESPONSIBILITY THROUGH COLLABORATION

Todd Camp

HERSHEY COMPANY: FOUNDING SOCIAL RESPONSIBILITY PRINCIPLES

The Hershey Company was founded by Milton S. Hershey in 1894. Today, the Hershey Company is a multinational firm with \$6.6 billion in annual revenue and with manufacturing operations in the United States, Mexico, Canada, Brazil, India, and China. The founding principles which have guided the growth of the firm throughout the 20th century and into the 21st century are encapsulated in three simple directives: 1) Make a difference in the community; 2) Be a good steward of the environment; and 3) Give back to the employees.

Hershey's strict compliance with these principles during his tenure as company president was revealed in two separate and important ways. First, he was actively engaged in the design and development of the town of Hershey, PA. In an effort to give back to his employees, Hershey truly contributed to the community's quality of life by ensuring that the then predominantly company town of Hershey offered quality housing, educational, cultural, and recreational opportunities to its residents.

The most noted legacy of Hershey, however, is the Milton Hershey School. He created the school as a philanthropic effort focused on children when he pri-

vately donated his entire fortune to start the school. His unselfish act occurred 30 years before his death and was not public knowledge until 5 years after the donation and formation of the Milton S. Hershey School Trust. The original donation of \$60 million in 1918 has grown to an endowment of \$8 billion (ranking it in the top five in the United States of endowments of all learning institutions). Today, the Milton Hershey School provides residency based education from pre-kindergarten through the 12th grade for 1,900 students. The children who live and attend school in Hershey come from backgrounds of severe poverty or social risk.

The Hershey Company remains critically important to the Milton S. Hershey School Trust. Milton Hershey School operations are financed solely by the trust's interest and dividend earnings. The Milton S. Hershey School Trust is the largest stockholder in Hershey Company.

PRESENT DAY CORPORATE SOCIAL RESPONSIBILITY STRATEGY

Continuing Milton Hershey's legacy of commitment to consumers, community, and children, the Hershey Company provides high-quality products, while conducting business in a socially responsible and environmentally sustainable manner. The Hershey Company's four broad areas of social and environmental focus include the environment, community, workplace, and marketplace.

- **Environment:** The Hershey Company consistently attempts to minimize the impact of its business activities while meeting functional requirement through sustainable product design,

sustainable sourcing of raw materials, and improved efficiencies in business operations.

- **Community:** The Hershey Company positively impacts society and local communities in which it resides through philanthropy; contributions of expertise; and employee giving and volunteerism. In 2012, donations totaling \$9 million (in cash and product) were made to nonprofit organizations. Hershey Company employees donated more than 200,000 volunteer hours in 2012 to their local communities.
- **Workplace:** The Hershey Company fosters a desirable workplace by supporting an open and inclusive culture in safe work settings and by regularly offering programs that are engaging to employees. Hershey is very successful in generating high levels of employee engagement. On a recent engagement survey conducted in 2012, 96 percent of employees responded they were proud to work for the Hershey Company.
- **Marketplace:** The Hershey Company engages in fair and ethical business dealings with its suppliers, distributors, retailers, and customers. Essentially, Hershey's focus is on the supply chain from start to finish, beginning on cocoa farming fields in West Africa and extending all the way to consumers, and every stop in between.

The Hershey Company refers to its three-step process for planning and implementing corporate social responsibility initiatives as the "Listen, Learn, Act" approach.

- **Listen:** During the first step, key stakeholders across the value chain are identified (community, employees, consumers, business partners, regulators, interest groups, and investors), and proactive measures are taken to engage with each group.
- **Learn:** The goal of the second step is to identify and understand the expectations, questions, concerns, and complaints of the stakeholders. In the process of learning, it is critically important to reflect these issues accurately from the stakeholders' perspectives.
- **Act:** Information gathered from stakeholders is aligned with internal business strategy objectives to prioritize those areas of focus upon which to act. Prioritization is required simply because the scope of activities commanding attention outpace available resources and time. The engagement priorities therefore reflect a balanced blend of stakeholder and company concerns and needs. Current engagement priorities are focused on responsible sourcing. Significant effort and energy is being expended on collaborative programs which benefit sustainable agriculture, responsible sourcing, material use, and energy.

SUSTAINABILITY INITIATIVES IN GHANA

Cocoa is the primary ingredient consumed by chocolate candy makers in the production of their final products. Simply stated, there would be no Hershey Company without a reliable source of cocoa. West Africa is the global center for the production of this raw ingredient and is the source of 70 percent

of the world's annual supply. Therefore, along with other global chocolate candy manufacturers, the Hershey Company has significant economic interest in the region.

The Hershey Company has been working with West African cocoa farmers since the 1960s. Over the last several years, the Hershey Company has accelerated its focus and investment in the area. In January 2012, the company committed \$10 million to improve the sustainability of West Africa. The definition of sustainability extends beyond economic considerations within the context of this investment. Remaining true to their founding principles, the company's initiative contains equally important environmental and social goals.

As part of the \$10 million investment, the Hershey Company has embarked on the "Learn to Grow" initiative at a time when a growing global demand for chocolate is forecast. Although demand growth is favorable, the business risk confronting the Hershey Company and rivals centers on the fact that jumps in demand for chocolate products could quickly outpace their combined abilities to supply product due to cocoa shortages. The amount of cocoa produced in West Africa results from the combined efforts of small-scale farmers. The number of farms in West Africa is estimated to be between two and three million. The specific size of each holding is unknown, even to the farmers. The vast majority of cocoa farmers continue to produce cocoa in the same manner as those generations of farmers before them. In short, if one looks at cocoa farming today in West Africa and compares it to cocoa farming in the 1930s, there has been no change. As a result, there have been no agricultural increases or yield increases in the last 80 years.

The Hershey Company's "Learn to Grow" pilot program is specifically designed to address these issues. The goal is the doubling of cocoa production within several years. If this goal is achieved, supply issues will be resolved, and, most importantly, the livelihoods of cocoa farmers and their families will improve dramatically. The Hershey Company, in collaboration with its partners, has initiated several related strategic actions to achieve the production goal. These include:

- **High tech learning through technology centers.** These centers provide computer access to farmers, schools, and the community. Training programs are based on an interactive curriculum designed to instruct farmers about optimal agricultural, social, environmental, and business practices.
- **Support from community farmers organizations.** These local organizations reinforce good agricultural, social, environmental, and business practices; provide access to improved planting materials; and arrange financing for the purchase of farm inputs.
- **Global Positioning Satellite mapping.** Mapping provides farmers with accurate information on the size of their farm, thereby enhancing their abilities to best use modern practices in planting, fertilizing, irrigating, and pruning to increase yield and sustainability.

Of the many ongoing collaborative engagements with the West African pilot community, the Milton Hershey Company is most proud of a distance learning cooperative between two elementary schools (see Table 22-1). This effort resonates with the company

because of its long and storied history of support for children and children’s education, and its belief that programs of this nature serve as a starting point for improving the region’s overall quality of life.

In partnership with CISCO, Orange, the Milton Hershey School, The Milton Hershey Foundation, Assin Fosu District, and the Assin Fosu Demonstration School, the Hershey Company facilitated the linkage of a classroom in Ghana with a classroom in Pennsylvania by leveraging high definition video conferencing in order to exploit a collaborative distance learning opportunity.

To help ensure success, the distance learning project’s planning and implementation process was expected to meet four requirements. These included that Ghana and U.S. partners must participate equally in project design creation; program benefits must be clear, usable, and inspiring to all participants; the communication platform must be inviting by being open and transparent; and global technology must be effectively leveraged.

The implementation of the project was met with several challenges which were overcome as partners negotiated financial, educational, and technological issues.

As a private sector for-profit firm, the Hershey Company is motivated to generate profits each quarter of the fiscal year. This goal is important but is only a part of the company’s broader goals for sustaining operations. These broader goals, which include social and environmental measures, are best described by identifying the company’s alignment with its past, present, and future. The Hershey Company pursues collaborative projects such as the distance learning project because it aligns with its heritage and legacy as articulated in its founding principles; its current economic interests and commitments to social responsibility; and its interests in leveraging technology to affect positively the future of West Africa, and in so doing, its own interconnected future.

The distance learning project created a virtual classroom of 14 Milton Hershey 4th graders and 45 Assin Fosu Demonstration School 6th graders. In the several months in which they met by video conferencing, the students jointly gained a greater appreciation of each of their community’s contributions to the production, distribution, and sale of chocolate by learning more about the history, culture, and evolving technology of chocolate making.

The benefits of the distance learning project included an increase in social capital between members of both communities; encouragement for Ghanaian students to continue their education beyond the country’s mandated 6 years of education; and the development of a reliable global communication platform capable of reaching rural communities.

The Hershey Company has committed to continuing and expanding the distance learning program with future curriculum offerings designed and developed by students.

Table 22-1. The Milton Hershey School and the Assin Fosu Demonstration School Distance Learning Project.

A related program in West Africa targeted at transforming the region by leveraging technology is the “Cocoa Link” project (see Table 22-2). In this instance, the Hershey Company partnered with local organizations to empower small-scale farmers by taking advantage of existing technology and independently expanding technological infrastructure.

Cell telephone ownership in West Africa is ubiquitous. At the present time, 75 percent of the region’s population possesses mobile telephones. Telecommunications companies in West Africa are accelerating the construction of cell telephone towers in an effort to push the ownership percentage even higher.

For the last several years, the Hershey Company, in collaboration with local regional partners, has actively enrolled small-scale farmers to an informational and educational resource referred to as the “Cocoa Link” network, which is accessed via the farmers’ mobile telephones.

Cocoa farmers routinely receive information about economic, social, and environmental conditions and instruction in the form of text messages as a free service of the “Cocoa Link” network.

An example of economic information provided is the daily price of cocoa beans. This information allows farmers to arrive at equitable agreements with cocoa bean middlemen who buy directly from small-scale farmers, with the intent of then selling to exporters.

Information on school openings and schedules; agricultural information; and weather updates are routinely provided, which permit the farmer to better plan both business and social activities.

Table 22-2. The Cocoa Link Project.

CLOSING COMMENTS

At the current time, the Hershey Company's global sales represent 15 percent of their overall sales, with domestic sales making up the remainder. The company's goal within the decade is for global sales to reach 25 percent of overall sales. Likewise, at the current time, a significant portion of the company's corporate social responsibility initiatives are domestic. In line with their planned global sales growth, the company intends to strengthen and expand its corporate social responsibility to match its expanding global foot print.

To make sure it achieves its social and environmental goals, the Hershey Company continues to improve its corporate social responsibility measurement system and to pursue a social commerce strategy that carefully selects cross-sector strategic partners and relies on lessons learned from the West African experiences.

One of the most challenging aspects of corporate social responsibility engagements is measuring outcomes associated with the targeted beneficiaries and also the impact of programs on the larger community. Stated in a more businesslike manner, the challenge is simply measuring the true return on investment. In some instances, such as environmentally oriented projects, changes in the amount or types of consumption are relatively easy to quantify and compare. Investments in social transformation are much harder to measure. At the current time, the Hershey Company regularly reviews a quarterly report on all of their projects. The report contains both qualitative and quantitative data and is produced by an independent third party. The data driven information from these reports

assists the company in investment and management related decisions and actions. Efforts to incorporate forward looking data into the report are ongoing.

By initially introducing enterprises with clear social and environmental goals, the Hershey Company relies on a social commerce strategy to enter developing regions for the long-term purpose of growing economic commerce. For example, although Ghana is critically important to the Hershey Company as a cocoa producer, the Ghanaians do not have an interest in purchasing Hershey products. The Hershey Company is interested in fostering a growing interest among Ghanaians for their products. To this end, the Hershey Company and a nonprofit organization are collaborating on Project Peanut Butter. The Hershey Company is making a financial commitment and is providing the technical expertise needed to build a factory in Ghana, which will use one of Ghana's major food products—peanuts—to make a nutritionally based protein bar for malnourished children. The enterprise will be organized as a nonprofit entity. The Hershey Company, therefore, will not realize an economic return on this venture, but it does hope for longer-term benefits, in the form a stronger bond between the Ghanaians and the company.

From experiences in West Africa, the Hershey Company realizes that cross-sector collaborations are only as successful and valuable as the collaborating components: the partners. Moving forward, the Hershey Company will continue to partner with organizations from all sectors that share the same vision and insights; understand the benefits and costs of participation; have the needed skill sets; and work together to leverage the collective strengths of the group to achieve agreed upon goals.

CHAPTER 23

CASE STUDY 5: THE HUMANITARIAN ENGINEERING AND SOCIAL ENTREPRENEURSHIP PROGRAM AT PENNSYLVANIA STATE UNIVERSITY: AN ACADEMICALLY DRIVEN MODEL OF CROSS-SECTOR COLLABORATION TO CREATE SUSTAINABLE VALUE FOR DEVELOPING COMMUNITIES

Khanjan Mehta

PROGRAM PHILOSOPHY/ PURPOSE

The goal of Pennsylvania State University's Humanitarian Engineering and Social Entrepreneurship Program (HESE) is to develop innovative and practical technology-based solutions to address the most compelling challenges facing marginalized communities in the developing world. Successful solutions are characterized by the four hallmarks of sustainability – technology appropriate, environmentally benign, socially acceptable, and economically sustainable. Innovative solutions which create sustainable value for developing communities result from the collaborative efforts of students and faculty from various disciplines engaged with partners from multiple sectors. These cross-sector partnerships collectively leverage indigenous knowledge to foster developmental entrepreneurship.

PROGRAM STRUCTURE

Teaching and Research.

The HESE certificate program is structured to meet the tripartite university missions of teaching, research, and outreach so as to educate globally engaged social problem solvers and create sustainable community value, while generating and disseminating knowledge and lessons learned.

Through the HESE certificate program, the university meets its teaching goal by offering a core HESE course in social entrepreneurship; projects in humanitarian engineering; and, design for developing communities. The classroom courses serve as the foundation for outreach efforts which help students satisfy the HESE field experience requirement. The reflection and research dissemination course completed after the field experience provides students with just-in-time information and skill sets necessary for developing their research manuscripts.

HESE students and faculty conduct research in affordable design, design thinking, social entrepreneurship theory and pedagogy, systems thinking, food value chains (FVCs), post-harvest technologies, telemedicine systems, community health workers (CHWs) and pre-primary healthcare, cellphones, social networks and trust, indigenous knowledge systems, development ethics, grassroots diplomacy, educational technologies, educational assessment tools, women in engineering, and informal lending systems. Engaging students in original, institution-approved, and publishable research bolsters learning while strengthening the venture-creation process. HESE students regularly present papers and participate in pan-

els at conferences, including National Collegiate Inventors and Innovators Alliance (NCIIA), the Institute of Electrical and Electronics Engineers (IEEE) Global Humanitarian Technology Conference, the National Engaged Scholarship Conference, American Society for Engineering Education (ASEE) Conference, Unite for Sight, and Clinton Global Initiative University.

Community Outreach.

Collaboration with local communities is an integral component of the program. The key requirement of the program is for the student to participate in a real-life engineering design project with a focus on engaging a community and providing that community a service. These projects are challenging. From a social entrepreneurship perspective, the cross-sector collaborative team strives to develop systems-level social innovations and business models for sustainable enterprises that enable and accelerate positive social change. This form of innovation requires the commitment and coordination of numerous community organizations across sectors to succeed. From an engineering perspective, the actual design of realistic solutions for complicated problems in resource-constrained contexts also requires systems thinking and a trans-disciplinary approach to succeed. Within the last several years, HESE has participated in a series of community projects targeted at improving the quality of life of those in greatest need. A brief summary of several of these are provided in the next section.

COMMUNITY PROJECTS

Community projects tackled by HESE faculty and students vary in focus area and complexity. The projects described herein include a food preservation project; food preparation project; and food production project. Additionally, HESE teams have tackled social networking projects and community health projects, which are also briefly covered later in this monograph.

Low Cost Solar Dryers.

Kenya is a country where 23 percent (9.7 million people) of the population is malnourished. A primary cause of this malnourishment is significant food wastage. About 40-60 percent of food produced in East Africa is wasted annually because of spoilage, contamination, and ineffective transportation methods. The HESE Solar Dryer Team aimed to combat this issue by creating a sustainable and industrial means to drying crops. The goal was to enable farmers to sell goods which are normally lost, while not burdening them with any extra costs. The systems strategy involved empowering farmers and providing jobs to local entrepreneurs and community members. It did so by incorporating the dryer into a business chain wherein the farmers could sell crops that would otherwise be wasted to a central drying facility, which in turn sold dried crops to domestic and foreign markets. The HESE team, in collaboration with local communities and Kenyan-based businesses, achieved the goal by applying the stated strategy.

The solution, the Sun Catcher, is a small-scale solar dryer that helps preserve food and prevent wastage.

The Sun Catcher driers produce quickly and efficiently using locally sourced materials that meet the standard food-grade requirement. The Sun Catcher costs \$120 to manufacture, can be built by two people in just 2 days, and pays for itself within one harvest season. The sun's energy heats up the air flowing through the dryer chamber, and thus results in faster and safer drying.

Two Kenyan firms are currently active partners in developing and maintaining a sustainable supply chain. Azuri Health is a company operating in Nairobi, Kenya, with a network of 600 farmers. Azuri Health committed to purchasing the solar driers for its farmers. VegPro is the largest producer and exporter of food in Kenya. All of its produce is shipped to the European Union/United Kingdom. It has an established supply chain and serves as a key partner in introducing the dryer on a large-scale level in Kenya and Ghana, as well as being a purchaser of food products resulting from the solar dryer process.

Biogas Digester.

Fossil fuels like coal, oil, and wood are the primary sources of energy in many developing countries. It is estimated that rural families spend in excess of 20 percent of their income on cooking fuel. The use of these traditional energy sources for cooking result in poor indoor air quality leading to significant health risks, from dyspnea to retinal damage and tachycardia. Biogas digesters convert organic waste into methane gas that can be used for cooking. An HESE team working in a Nicaraguan community designed and field tested a standardized affordable biogas digester that can be used by homesteads and small communities.

Affordable Greenhouses.

Over 60 percent of the East African population is considered malnourished. One solution to the ongoing problem involves helping small-scale farmers move from subsistence to sustainable farming by boosting their agricultural productivity, reducing post-harvest spoilage losses, and establishing market linkages. One strategy for boosting agricultural productivity is to provide farmers with greater ability to deal with the highly variable climate in the region. Greenhouses are permanent glass or plastic-covered structures, which allow farmers to grow vegetables and fruits year-round by mechanically controlling the temperature, as well as the timing and flow of water for irrigation. Despite the acknowledged benefits of a greenhouse, small-scale farmers did not routinely adopt this technology because available designs were inappropriate and expensive.

The HESE Affordable Greenhouse Team aimed to combat this issue by creating a greenhouse specifically designed for the small-scale farmer. Beginning in 2008, in collaboration with the Children and Youth Empowerment Center in Nyeri, Kenya, the Tropical Pesticide Research Institute in Tanzania, and the United Nations Industrial Development Organization, HESE initiated a project to develop an affordable greenhouse technology and an associated dissemination strategy.

With their partners, HESE succeeded in achieving its goal. With the help of the Dickinson School of Law's International Sustainable Development Projects Clinic, the Pennsylvania State student team licensed its greenhouse technology to a for-profit company, Mavuuno Greenhouses, in the summer of 2012. Mavuuno

has since begun mass manufacturing the greenhouses as “kits” at a retail price of less than \$200 per unit and hired construction workers and engineers to build these for customers. The HESE team is now pursuing similar partnerships in Cameroon, Haiti, Madagascar, and other countries.

Social Networking Project.

Over several years of on-the-ground research that was started in 2007 and was primarily based in Tanzania, HESE team members identified three key issues faced by the economically poor: a lack of availability of information in developing regions; a lack of trust or especially a lack of ease in building trust in these regions; and the fact that too much money and time was being spent by individuals on many common, day-to-day tasks, yielding returns that were not very good.

To address the identified issues, the HESE team set as a goal the creation of a more trusting environment through investment in social capital for the purpose of fostering increased social and economic development. This strategy was selected because it was determined that there is a significant overlap between social and economic networks in East Africa and in most communities in developing countries.

In 2009, WishVast, a cell-phone and web-based social networking and trust-building system, was initiated. WishVast harnesses the pervasiveness of cell-phones to build trust; optimizes resource utilization within supply chains; connects people and expands their social networks; and facilitates peer-to-peer trade. The hardware for the WishVast system consists of a cell phone linked to a computer. All interactions between users take place by short message service

(SMS) text messaging. The network is managed by a server-side program. WishVast does not require any changes to the users' cell-phones and is easy to set up and maintain.

The HESE team continues to work with a diverse set of cross-sector partners to test the system; identify best applications; and determine workable and equitable revenue models for purposes of commercialization.

Community Health Project.

A social enterprise, Mashavu strives to provide accessible healthcare in developing nations. HESE Faculty and students work with international partners to confront provider shortages and reduce barriers to care. The goal is to enable individuals living in resource-constrained communities to take an active interest in their health, regardless of proximity to a medical facility.

From an operational perspective, Mashavu may be described as a networked system that enables medical professionals, locally and from around the world, to connect with patients using modern technology and communication infrastructure. CHWs at Mashavu kiosk stations collect essential medical information, including weight, temperature, blood pressure, and basic hygiene and nutrition information for each patient. Web servers aggregate this information, from Mashavu station over the Internet and provide it on a web-based portal.

The idea for pre-primary health care originated at HESE. In the summer of 2008, a HESE team traveled to Tanzania and worked to validate the Mashavu concept. They sought to understand whether the people

in Tanzania would need, understand, and benefit from a telemedicine system; design a business model; and gauge the availability of the primary and enabling technologies in the local area.

In 2009, Mashavu formalized partnership with the Children and Youth Empowerment Center and moved its primary operations to Kenya. With the newly formed partnership in place, the concept of operations could be tested, and demonstrations of the kiosk could be performed.

In May 2010, the HESE team and three health-care professionals traveled to Nyeri, Kenya. Over the course of 3 weeks, the team saw 150 patients and collected the opinions of 300 people through interviews and focus groups. Each patient who came to a Mashavu kiosk had his or her medical history collected and vital measurements tested using both commercially available devices and low-cost ruggedized biomedical devices developed by Pennsylvania State University students.

Progress in the development and implementation of the pre-primary health initiative significantly advanced in 2011 when the social enterprise partnered with the United Nations Industrial Development Office. Together, the organizations employed a multi-systems approach that focused on training CHWs to serve as kiosk operators, building strategic partnership, and conducting a pilot project with six kiosks established in various remote locations.

In 2012, Mashavu again advanced when it entered into a partnership with Safaricom, the largest telecommunications provider in East Africa. For the first time, this enabled Mashavu to offer telemedicine services at Safaricom Digital Villages throughout Kenya, thus vastly expanding the reach of the program. Safaricom

also agreed to send SMS blasts over their networks to alert community members about Mashavu and market the services offered. In 2012, Mashavu also started an endeavor in conjunction with the Kenyan Ministry of Health, to mobilize CHWs. Equipped with biometric equipment, the CHWs are better enabled to collect comprehensive health data from village households.

With the support of its partners, HESE plans to scale operations to a national level in 2013.

CHAPTER 24

THE U.S.-INDIA RELATIONSHIP: CROSS-SECTOR COLLABORATION TO PROMOTE SUSTAINABLE DEVELOPMENT – INSIGHTS FROM THE WORKSHOP; POSSIBLE NEXT STEPS

Michael J. Fratantuono

In this brief conclusion, I offer some overarching insights that emerged from the Workshop and some preliminary thoughts about next possible research steps.

CHARACTERIZING CROSS-SECTOR COLLABORATION

Throughout the workshop sessions, the participants were mindful of the complexity of cross-sector collaborations and began to offer two sets of thoughts about the nature of collaborations. First, they noted that in some instances, especially in the context of collaborations involving some segment of the national government, there would need to be strong leadership. They observed that powerful or influential individuals might have different mindsets, capacities or authority – of either a formal or informal variety – for initiating and shaping cross-sector collaborations. Nonetheless, they noted that one might imagine a spectrum of cross-sector collaborations that ranged from purely voluntary to purely coercive. They also speculated that, in order to be transformative in nature, cross-sector collaborations would have to fall somewhere in the mid-range of the spectrum. If correct, that speculation poses additional challenges for strategic leaders.

Second, the participants were, of course, comfortable with the idea that cross-sector collaboration, by definition, involves cooperation among individuals who represent different types of organizations, including for-profit businesses, nonprofit entities, branches of government, the military, intergovernmental organizations, and so forth. But—and in some cases drawing upon their own professional experiences—they also observed that cross-sector collaborations are a subset of a larger construct, one that involves crossing boundaries of various types. The boundaries they listed included: organizations from different sectors; levels of hierarchy within an organization; bureaucratic structures across an organization; culture; knowledge; language; and geography. They observed that tension will arise whenever boundaries need to be crossed; and, if not properly managed, that tensions can lead to conflict.

UNDERSTANDING THE PARTNER IN A COLLABORATION

In the final segment of the workshop, the participants were asked to use the high-level schema of Figure 24-1 to help identify insights from the workshop about the prospects of collaboration between the United States and India to promote sustainable development. At first, they resisted that starting point on grounds that any conversation should first come to terms with the unique features of each system. Instead, participants suggested a range of basic questions that should be addressed before focusing on the details of cross-sector collaborations between the two countries. They advised that, only with sufficient investment in understanding the features of each system might one

begin to delve into the prospects of cross-sector collaboration. They then offered several points of comparison.

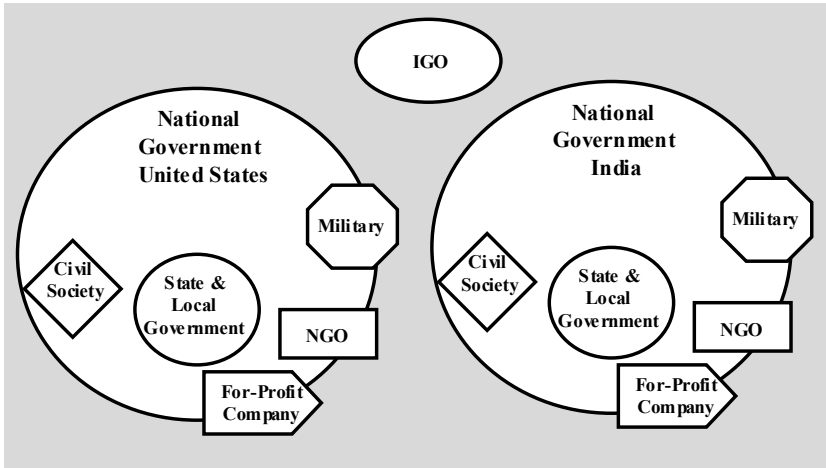


Table 24-1. A Proposed Schema for Identifying Insights from the Workshop.

The United States.

Thinking about key features of the United States, participants raised the following questions about power and structure.

- What is the nature of presidential power?
- Who are the initiators of policy?
- What is the nature of the interagency process?
- Do the core concepts of cross sector collaboration pertain to the interagency process?
- What is the reason for existence and the organizational logic of entities from each of these different sectors?

In terms of the U.S. place in the global system and the role of military in the U.S. model, participants observed that one has to appreciate the fact that the United States is a global power with global reach. Its national interests include:

- defense of the homeland,
- economic prosperity,
- favorable world order, and
- promotion of U.S. values abroad.

The commanders in chief (CINCs) of the various regions of the world have enormous power and have the ability to shape minds and influence policies in other branches of the federal government.

With respect to factors in the U.S. model that could impede cross-sector collaboration to promote sustainable development, some participants suggested that there was not yet consensus among many in the government, security community, or the professional military about the relevance of sustainable development to U.S. national security objectives or to the connections between environmental security and national security. With respect to trying to advocate policies that tended to cross bureaucratic or agency boundaries, some participants acknowledged that when doing so, they had been confronted with “stay in your own lane” messages from leaders further up the chain. Those experiences led those same individuals to wonder whether cross-sector collaborations intended to promote sustainable development might need to be bottom-up rather than top-down, or if that implied the need for TRACK II rather than TRACK I interactions.

India.

As to key features of the India system, participants noted that the governance process in India's is highly complex and is very hard to navigate. Participants emphasized that the military in India has less influence on the policymaking process than in the United States—Bureaucrats in the Ministry of Defense exert very strong control over the military. They also noted that the National Security Advisor (NSA) in India is very powerful—the Intelligence Bureau reports to the NSA rather than the Prime Minister. They suggested that with respect to foreign affairs, there was opportunity for ambassadorial leadership. Finally, they noted that the General Assembly of the United Nations might be a better arena for thinking about sustainable development than the Security Council.

With respect to the place of India in the global system, and the role of military in the India model, participants emphasized that India is a continental power, not a global power. As such, it has no commanders in chief stationed in regions of the world. Nonetheless, India is concerned with transnational issues. Some participants suggested that sustainable development is a very important national interest and is thus relevant to the military. If one is concerned about the role the military might play in sustainable development, an important place to start is with military procurement, an area that is characterized by a high level of cross-sector collaboration; and in efforts to reduce military waste.

As to factors in the India model that could impede cross-sector collaboration to promote sustainable development, some participants indicated that the institutional logic in India must be changed. Politicians and

bureaucrats must somehow be incentivized to take action on issues related to sustainable development. In turn, restructured incentives depend on a more active and influential civil society.

Cross-Sector Collaboration and National Security Strategy.

During the final session, the workshop participants talked about the Means – Ways – Ends paradigm used at the U.S. Army War College to frame conversations about strategic initiatives. In that framework, those words have the following meaning.

- Ends are strategic objectives.
- Means are strategic resources: they are capacities or elements of power.
- Ways are possible courses of action that might be chosen in pursuit of a strategic objective. When a way or a set of is selected by strategic leaders, they will employ some or all of the elements of power in pursuit of ends – when they are thus utilized, the elements of power are transformed into instruments of power.

First, there was consensus among the workshop participants that engaging in **cross-sector collaboration** is a WAY of achieving one or more strategic objectives. The assertion that cross-sector collaboration is a WAY of achieving a strategic END raises two questions. First, what skills sets or capacities must be in place prior to the collaboration; that is, what elements of power must exist or be developed prior to the collaboration?

The workshop participants began to address that question. They associated some important conditions to the notion of MEANS.

- The ability to engage in open communication and to contemplate coordination.
- The ability to identify the interests of various stakeholders.
- The existence of goodwill between potential partners to the collaboration, based on prior relationships and prior experiences.
- The existence of institutional structures within each of the organization types that would accommodate collaboration.

Second, when it comes to cross-sector collaboration, how might one begin to think about the process via which elements of power are transformed into instruments of power? One participant suggested the following template for shaping a cross-sector collaboration in which there is strong top-down leadership – this might be the most relevant for cases involving sectors of national government or the military as key stakeholders.

1. Cross-sector collaboration is doable.
2. There must be clarity on what is to be accomplished – the END must be identified.
3. The leader (or leaders) must shape the environment on both sides of the relationship.
4. The leader must use all resources (means) at his or her disposal.
5. Both sides to the collaboration must believe at the outset that a “win-win” outcome is possible.
6. To achieve the objective, all relevant sectors must be engaged.
7. The leader (or leaders) must provide oversight throughout the initiative.

FINAL THOUGHTS

At the outset of the workshop, we asked ourselves two *a priori*, outcome-related questions. As of this writing, David Sarcone and I have just finished the process of reviewing and editing the papers, comments, and case studies, and we are still absorbing ideas that were shared. We are in a position to offer two preliminary *ex post* answers.

Question 1: Will we in the workshop begin to push against and perhaps extend the theoretical boundaries of cross-sector collaboration?

Answer: As the material in this volume will suggest, the workshop certainly did have merit as an academic exercise. But our realistic answer to the question would have to be “not quite.” Nonetheless, we do think that as a result of the workshop, participants did begin to recognize the location of the boundary lines.

Perhaps the most intriguing characterization of the workshop is that a number of our participants currently work or have worked at the very highest levels of the military and government sectors in both India and the United States. When they approach the issue of cross-sector collaboration, they tend to do so from a “top-down” perspective. That is, when they think about the dynamics of the contemporary era, they tend to start with transnational problems and the necessity for multilateral cooperation across countries and for interagency coordination across branches of government. Given their professional endeavors, they have a slightly more difficult time with grassroots, cross-sector collaboration involving stakeholders from the civilian, government, and business communities. On the other hand, the workshop also included research-

ers who have spent time thinking about collaborative processes and sustainable development at the local level. Thus, they tended to have a more bottom-up perspective on matters. The implication is that at the conclusion of the workshop, there still seemed to be a bit of a “donut hole” in constructs. As suggested in our brief answer to the second question given next, the implication is that future research might focus on somehow filling in that gap.

Question 2: Will the workshop only be an academic exercise, or will it lead to other activities and first steps toward making a change?

Answer: Perhaps—but it is still too early to tell. Based on the comments of participants during the final workshop session, there was enthusiasm for doing more work in this area, and there do appear to be ways forward in terms of promoting insights and perhaps beginning to engage policymakers.

Looking ahead, participants offered some ideas with respect to moving things along.

- There is a strong need to engage in further conversations with those who have had experience in the field with cross-sector collaborations to promote sustainable development.
- There is a need to do an inventory and typology of cross-sector collaborations which have involved the U.S. military and/or militaries of other countries, in an effort to understand those factors which contribute to success in achieving objectives.
- Related to that last point, there is a need to build a collection of case studies that involve the military as a partner in collaborations.

- Curriculums designed for military professionals and for undergraduate and graduate students in various disciplines should be revisited for the purposes of introducing more insights about collaborative processes.
- Models that emphasize system level thinking, and place sustainable development and cross-sector collaboration within the context of evolving ecosystems are quite relevant.

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