

Thinking the Future

by James Jay Carafano

America's problem in a nutshell is that we do not think very well. The last quarter century has seen an explosion in the human capacity to create and manipulate new knowledge. Despite that fact, the instruments used to inform public policy choices are as creaky as ever. Washington makes policy largely by intuition shaped by an orthodox adherence to tired interpretations of international relations and public choice theory—ideas that have barely evolved since the Cold War. Our minds are behind the times. All this needs to change if America wants to out-think its enemies and help its friends in the world secure a safe, free, and prosperous future.

The answer to the problem is creating institutions and a professional ethos that exploit multidisciplinary public policy analysis using cutting-edge information instruments. At the same time, Washington must make room for a certain amount of creative destruction. Institutions, no matter how facile, will never keep up with knowledge innovation. Room has to be made to allow new ideas and methods to reach decision makers, and we need a generation of leaders with minds facile and agile enough to “learn new tricks.”

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Developing a capacity to identify and exploit new means of analysis for informing public policymaking could be the key competitive advantage of the twenty-first century. Knowing what is out there and what is coming is an important part of “thinking the future.” Equally vital will be establishing the permanent capacity to change how we discover, innovate, and adapt new ways of knowledge creation to the task of sound decision making.

EVERYTHING OLD IS NEW AGAIN

Thinking anew is an old project. Periods of Western history are defined by efforts to reconceptualize our understanding of the links between cause and effect and to use that knowledge to make decisions. The Renaissance is remembered as the age of recovering the innovations of Greco-Roman thought and applying them to contemporary thought. The scientific revolution of the early modern era introduced experimentation as the foundational method for establishing empirical knowledge.

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From the later part of the eighteenth century, the Age of Enlightenment expanded scientific methods to virtually every field from medicine to military matters, arguing for replacing traditional means of gaining knowledge with new “rationale” processes. The Industrial Age ushered in an era when managers, accountants, and engineers applied scientific logic to organizing everyday life. The post-modern world introduced new intellectual constructs that questioned the Enlightenment’s assumptions of inevitable human progress and even the certainty of knowing anything for sure.

As in every other field of endeavor in the Western world, as the minds of men and women pioneered new means of knowledge creation, efforts were made to apply them to the process of national security decision-making. During the Renaissance, for example, the famed sixteenth century Florentine writer, schemer, sycophant, patriot, politician, diplomat, civil servant, and scholar Niccolò Machiavelli applied classical ideas to every problem from organizing armies to managing state affairs.¹ At the pinnacle of the Enlightenment, Carl von Clausewitz and Antoine-Henri Jomini applied scientific ideas to the art of war while Leopold von Ranke did the same for statecraft and international relations.²

In the twentieth century, many of the efforts to bring new methods of knowledge creation to the challenges of international affairs migrated from the private sector and academia into military affairs and from there to the emerging discipline of national security. Before the first decades of the century were over, notions of the scientific method had thoroughly permeated the industrial workplace. The 1911 publication of Frederick W. Taylor’s *Principles of Scientific Management* marked the outbreak of a “rationale” management craze. Industrial engineers armed with clip boards and stop watches fanned out across shop room floors, measuring every machine’s function to determine the most efficient way to raise productivity.³ In turn, the military readily adopted scientific management to help address the challenges of two world wars.⁴ Perhaps the epitome of this effort was the strategic bombing survey, a program to evaluate the efficiency of air attacks on Germany and Japan, which influenced the methods of military decision making for decades.⁵

By the height of the Cold War, analysts were applying a plethora of scientific measures from statistical analysis to computer modeling.⁶ No thinker exemplified the effort to take a multi-disciplinary approach to national security analysis more seriously than Albert Wohlstetter. Wohlstetter’s seminal 1959 article, “The Delicate Balance of Terror,” proved a model for applying various cutting-edge intellectual tools to the problem of evaluating the efficacy of the America’s nuclear deterrent forces.⁷ Among the innovations that developed from Wohlstetter’s alternative ways of viewing the challenges of atomic competition was the development of fail-safe means to prevent the accidental launch of nuclear weapons.⁸

WHERE WE ARE

Since Wohlstetter’s time, something dramatic has been added to the arsenal for analyzing national security decision making—the proliferation of computer

technology, the Internet, and everything else that goes with the information revolution. Today, over one billion users have been on the World Wide Web. Modern researchers have access to vast digital libraries and databases as well as powerful search and computational programs. New means of manipulating data, such as informatics (the science of information processing); data-mining (extracting and analyzing data to identify patterns and relationships); computer modeling and simulations; and open source intelligence (acquiring and analyzing information from publicly available sources to produce actionable intelligence) are delivering revolutionary instruments of knowledge discovery.⁹

Theories of knowledge have also evolved. Throughout the course of the Cold War, for example, various permutations of realist and neo-liberal international relations theory dominated the debate over describing human events. In the last decades, new interpretive theories, such as constructivism, have emerged to compete with them.¹⁰ Indeed, traditional intellectual constructs in every discipline that might have an impact on national security, from public choice to chaos theory, have been challenged or supplanted in the last quarter century.

ZERO AND BEYOND

Ironically, knowledge discovery is proliferating in every field except national security. While the means of knowledge discovery have become more sophisticated, the process of public policymaking has become increasingly intuitive. In Washington, talking points, gut-feeling, partisan preferences, and ideological fervor crowd out cutting-edge, multi-disciplinary analysis.

No aspect of contemporary national security policy suffers from an absence of analysis more than arms control. The move to zero movement represents the most prominent recent contribution in this field. The Getting to Zero project envisions eliminating nuclear weapons by inducing nuclear powers to eliminate their weapons stockpiles. Many veteran national security luminaries, including George Shultz, Henry Kissinger, William Perry, and San Nunn, have endorsed the proposal.¹¹ This movement is not just Utopian trumpeting by former defense officials. Both major candidates in the 2008 presidential elections included campaign pledges arguing the greatest contribution the United States could make to non-proliferation would be to voluntarily reduce their nuclear arsenals. Shortly after taking office, President Obama announced plans to negotiate reductions of United States and Russian stockpiles to 1,000 weapons.

The case made for “getting to zero” as an achievable or even a desirable goal rests largely on epistemological grounds, an expression of shared beliefs about the nature of nuclear competition. For example, it remains wholly unclear how a new administration that had been in offices for only a few weeks could justify eliminating three-quarters of the nation’s nuclear weapons. Logically, the number of nuclear weapons the US should have would be based on an assessment of the number and

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kinds of targets that must be held at risk to deter attacks on the United States and its allies; an assessment of whether US weapons and delivery systems (submarines, bombers, and land-based launch sites) were adequate to meet targeting requirements; and an assessment of whether the standards and means of verifying reductions in other nations' inventories were adequate to ensure the American nuclear deterrent remains credible. No campaign staff or advisory group could perform that kind of analysis, and the fledgling administration did not have the time to do it. The decision on inventory size largely appears to have been based on an intuitive judgment by the new president.

In general, the “getting to zero” literature lacks analytical content. As a result, many questions loom large about the implications of following a course of disarmament without thoughtful consideration of other geo-strategic factors that may impact nuclear competition. For example, if the United States and Russia reduce their inventories too low, they might actually create a new arms race because it would be far easier for new nuclear powers to build up adequate inventories of weapons and delivery systems. Additionally, if nuclear weapons are abolished, while ballistic missiles continue to proliferate and missile defense is not deployed, nations or non-state actors that put non-nuclear

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weapons on missiles (such as chemicals, biological agents, or conventional explosives that are much easier to obtain) will have powerful attacks means that the US and its allies could not practically counter. As a result, America might be more, not less, vulnerable after nuclear disarmament. In fact, it is far from clear what is on the horizon beyond zero—all because serious analytical assessments of the challenges that might be encountered by arbitrary reductions in nuclear inventories are lacking.

Nuclear competition is not the only field increasingly swamped by opinion over analysis. In anticipation of the new presidency, associations, research institutions, and other non-governmental organizations pumped out a steady stream of reports recommending policies for everything from cyber security to immigration reform. These reports are dominated by the informed judgments of academic researchers, policy experts, or government practitioners—virtually none contain recommendations derived from new original analytical research.

THE AGE OF OPINION

It is not clear why the current policy paradox has emerged—why intuition so often trumps analysis in an era when our analytical powers have reached such unprecedented heights. In part, the answer might be rooted in our two competing intellectual cultures. On the one hand, the Western approach to national security derives from a tradition of applying scientific methods to public policy making. On the other hand, we are also products of an older narrative culture, dominated by the

oral transmission of ideas in the form of stories that have a beginning and end, heroes and villains, and lessons to be learned.

The information age has empowered both our scientific and narrative cultures. Information technology allows researchers to conduct more analysis, but it also allows opinion makers to spin better, more compelling stories faster and proliferate them more widely.¹² In many areas of modern life, the analytical power of the information age dominates—but not in the public sphere where public policies are made. While computers expand computational power, they also power E-mail, Facebook, YouTube, Twitter, and other social networking tools (often collectively called Web 2.0) that facilitate conversation and storytelling on a global scale.¹³

Narrative culture's emerging dominance may also be attributable in part due to the increasing importance of empathy in the contemporary world. Empathy has risen to become a key preferred attribute of Western society.¹⁴ The emotion of caring overwhelms the logic of cold hard facts. Since stories are particularly effective at stirring our emphatic impulses, the power of information age technology pushes that impulse into overdrive. Historian Lynn Hunt argues, for example, that contemporary concerns over torture and the universal nature of human rights are modern expressions of an increasingly emphatic culture.¹⁵

Another possible candidate for explaining the rise of the power of the narrative over analysis in public policy debates is the profound transformation in our understandings of the representation of truth and facts driven by post-modern philosophy and literary criticism. "These have led scholars to value 'smart' and 'interesting' work over the 'sound' and 'rigorous' studies that were most praised in earlier decades," suggests sociologist Michèle Lamont.¹⁶ Perhaps these academic attitudes have crossed over to influence the character of the debate in the public sphere as well.

While the source attitudes toward public policymaking are certainly open to debate, the impact seems pretty clear. It is noteworthy, for example, that the Obama campaign was recognized for its unique ability to harness the web for social networking rather than producing cutting-edge policy analysis using state-of-the-art analytical tools. Likewise, the growing obsession with global warming has arguably been driven not by the scientific debate on climate change per se but by the global dialogue initiated through communicative tools, such as the documentary *An Inconvenient Truth*.

In the end, we are thinking anew, just as generations past have when provided with new means to gain and interpret knowledge. But after the first decades of the information revolution, it appears that as far as public policymaking is concerned, the impulse to embrace compelling stories rather than hard numbers is winning the day.

WHAT WE NEED

There is nothing wrong with stories or empathy. Likewise, we should expect our decision makers to have heart-felt beliefs and passionate principles. It would be

hubris to argue that any analytical process could provide all the answers. The scientific method cannot resolve every issue. Faith and reason both have their place. What is needed today is a better balance in the arguments presented in the modern, virtual public square. In particular, multi-disciplinary analysis has an important role to play.

A multi-disciplinary approach recognizes that there is no assured single path to knowledge. Rather, this approach argues for testing cause and effect relationships through several means. Multidisciplinary studies are not new, but they can be particularly fruitful now. The information age provides an unprecedented capacity to tackle tough problems in different ways.

On their own, any one analytical method might still be an imperfect means for evaluating available data even with the power of computers. In the real world, real problems are plagued by “dirty data”—a conglomeration of incomplete, undependable, ambiguous evidence that defies easy analysis. Combining various ways of looking at the same problem together, however, provides policy analysts with a richer and more nuanced view of how to interpret the facts before them. In the end, the answers provided might still be unclear or contradictory. Decision makers might still have to make intuitive judgments, but they would at least be able to make them with the confidence that their assumptions, predispositions, and prejudices had been rigorously put to the test.

Washington’s problem today is that it really lacks the capacity to do cutting-edge analysis. That is a great irony because there are, in fact, a number of powerful analytical tools available to address the challenges of the world in which we live.

AN ARSENAL OF IDEAS

Several modern methods of analysis are especially promising. The capacity to query databases for extracting particular knowledge and evaluating large quantities of data, revealing patterns or relationships that might not otherwise be readily apparent, adds a new and powerful dimension to these methods. They are attractive tools for addressing the challenges of making decisions in the information age

Scenario-Based Planning

The future is a foreign country—impossible to understand until you get there. Nevertheless, decision makers routinely opt for policy choices based on anticipating a future-state. Intuitive policymakers tend to select the future that best fits their own preconceptions, picking the “Rosie” or “Doomsday” scenario that allows them to plan for the outcomes they want. A telling criticism of post-war planning for the invasion of Iraq was that Pentagon officials assumed a brief and largely passive occupation period, similar to the first Gulf War. They were caught unprepared for the difficulties of managing what proved to be virtually an ungovernable country.¹⁷

One means to combat the tendency to plan against only the most anticipated endstate is through an analytical approach often called scenario-based planning. In scenario-based planning, analysts postulate alternative futures conditions and

determine the optimum response for each. They then postulate the capabilities needed to provide that response and determine how to obtain those capabilities. Finally, they compare the results of each analysis and identify common capabilities and responses across the scenarios. The common capabilities provide the basis for future contingency planning, offering a core set responses that would likely be highly useful regardless of how the future unfolds. This method also holds the advantage of providing analysts a structured, common framework for problem solving and planning.

There are examples of these techniques already being employed in government. An interagency team co-sponsored by the State and Defense Departments undertook a multiple-future based planning exercise called Project Horizon.¹⁸ In addition, the Department of Homeland Security used scenario-based planning to determine the critical emergency response capabilities required by states, cities, and communities to address a wide variety of disaster scenarios.¹⁹ They are, however, rarely used to address whole-of-government challenges, though they have application in a wide range of fields from responding to pandemics to dealing with a financial crisis.

Complex Systems Analysis

Most problems faced by policymakers today involve trying to understand, predict, or affect the behavior of complex systems from border and immigration security to financial markets to transnational terrorist organizations. Yet, policy makers rarely fully comprehend the impact their decisions have on altering the behavior of these systems. Rather than deal with systems as a whole, contemporary decision makers tend to concentrate their choices on discrete activities that are easier to identify and understand. The problem with that approach is that the more complex and disorganized the system, the more unpredictable the discrete, uninformed intuitive decisions of policy makers may have on driving specific outcomes.

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consequences. In the aftermath of Hurricane Katrina, for example, emergency officials barred all but authorized emergency responders from entering New Orleans. As a result, fuel handlers which had not been credentialed by officials could not make deliveries to emergency operations centers that were powered by generators. Without gas or fresh batteries, the centers lost power and became inoperable since officials failed to understand how the entire system worked. They fixed one problem—preventing unnecessary convergence at the disaster scene, but they also created another—disabling key command and control nodes.

Describing complex systems—how they work; what they produce; and then

applying various planning methods and choice models to determine how the systems performance can be changed—is the task of complex systems analysis. Through advances in computer modeling, systems analysis has more potential now than ever. For example, new developments in agent-based modeling allow for simulating the actions of many autonomous entities in a network (like people in a crowd) to predict the impact of individual choice on the overall performance of a system.

The Pentagon has exploited methods for complex systems analysis since Secretary of Defense Robert McNamara first introduced these methods in the early 1960s.²⁰ Additionally, some efforts have been made to apply systems to addressing homeland security issues. For example, the Northwest Partnership for Regional Infrastructure Security has held a series of exercises called “Blue Cascades” that examines all the interdependencies of a regional-wide failure of the electrical grid. There are, however, too few centers of excellence that routinely integrate complex systems into national security planning.

Operations Research

Rather than focusing on the performance of a system as a whole, operations research entails focusing narrowly and in greater depth on a single process or organizational activity. In short, it conducts an end-to-end assessment of how specific tasks or missions are performed.

Like systems analysis, the military has used operations research for some time. During World War II, the US military discovered that operational research methods proved a great tool for improving the efficiency of some military activities. The military adopted a tool that had long been in use in the private sector, where exploitation of an emergent field of math determined new ways of achieving business efficiencies in activities, such as the work on an assembly line, by discovering critical paths that determined productivity and by adjusting the allocation of resources to boost production. During the war, the Pentagon applied operations research to all kinds of difficult problems, from determining how to organize transatlantic convoys to maximizing bombing runs over the Third Reich. Operations research became part of American military culture and was applied over the years to many of the Pentagon’s problems. Operations research was also employed during the Vietnam War. The experience of operations was so positive that during the era of the Reagan build-up, every command and military installation had its own team of military operations professionals, including university-trained officers. Recently, the military has resurrected operational research concepts to address the challenge of improvised explosive devices in Iraq and Afghanistan.

While operations research is not new, information age capabilities (the ability to gather and sort vast amounts of information) have greatly expanded the potential of operations research to aid in national security decision making. Operational methods, however, are not widely used outside defense circles for national security planning.

Net Assessment

Another problem often found in how Washington makes decisions regarding national security is that the urgent often crowds out the important. Leaders distracted by the pressures of daily meetings, briefings, and decisions often fail to anticipate the long-term consequences of their decisions.

The free-thinking, speculative nature of net assessment offers senior leaders a disciplined process to expand their thinking horizon beyond the immediate environment and timeframe. This process begins with a premise—all national security challenges are a series of actions and counteractions between competitors—and asks how these competitions might progress in the future. Net assessment argues for a comprehensive approach to analysis, looking at the full range of factors that shape and alter the security environment of the future, including social, political, technological, and economic trends.

The net assessment method employs diverse tools to enrich understanding of the nature of competition. The tools of net assessment for defense analyses combine “scenarios, war games, trend analysis, and considered judgment.”²¹ The net assessment process often begins with systems analysis and game theory to interpret competitive environments. Net assessment adds to these analytical methods by helping to produce predictable outcomes, such as computer modeling that posits the impact of changing oil prices on consumer goods. Net assessment encourages senior leaders to consider unexpected outcomes that emerge from unforeseen and unappreciated factors. In the end, net assessment takes on multiple complexities and forecasts futures that conventional analyses or formal models may overlook.

Net assessment has been used to support national security decision making since 1971, when President Richard Nixon created a net assessment team within the National Security Council. Dissatisfied with the level of integration of his intelligence contributors and defense analysts, Nixon formed the group from scholars at the RAND Corporation, a federally-funded research and development center (FFRDC), and had them report directly to the National Security Adviser, Henry Kissinger. The unit was led by Andrew Marshall, a RAND analyst. In 1973, Marshall’s unit moved to the Pentagon, and he was named director of the Office of Net Assessment, a post he has held during every subsequent Administration. Among its many insights, Marshall’s office recognized the impending rise of China and its potential impact on global geopolitics. “Net assessment was really the first framework which correctly identified the importance of Asia as an area of strategic competition,” writes Paul Bracken. “It did this in the 1980s, when there was essentially no immediate problem of Asian security beyond that on the Korean peninsula.”²²

Outside of Marshall’s office and a few boutique think tanks, however, net assessment is not widely employed to address contemporary national security issues, even though this method has more potential than ever. The computational power of modern computers has greatly enriched virtually every analytical method used in net assessment analysis.

NEW WINE, NEW BOTTLES

Not one of the techniques in the idea arsenal will solve all problems. What is really required are analysts and decision makers skilled in all these methods and comfortable in combining them to produce a rich multidisciplinary study of complex problems. That rarely happens routinely across the whole-of-government. If Washington is going to take maximum advantage of these research tools and the instruments of knowledge discovery (like data-mining, informatics, computer modeling and simulations, and open source intelligence analysis), which make modern research so powerful, the government is going to have to change the way it does business.

At the heart of transforming how Washington thinks must be a new conceptualization of how the whole-of-government works. This is often referred to as the interagency process. Virtually every national security issue from rebuilding Iraq to responding to terrorist incidents at home demands the organized and integrated effort of multiple federal agencies. A core component of the interagency response has to be the capacity to jointly perform complex, multidisciplinary analysis, develop recommendations, draft plans, and oversee implementation. This core component will require both ensuring there are people trained in information age analysis and that they have a place and the resources to practice their craft.

If government analysis is ever going to out-compete the storytellers, Washington needs to build permanent institutions to teach modern critical thinking skills. At the same time, the government needs to make sure these institutions are flexible and agile enough to recognize and exploit not only the information instruments that are available now but the next wave of knowledge discovery as well. The foundation of this system has to be establishing a framework of education, assignment, and accreditation tools that can be applied to developing professionals capable of mastering cutting-edge analysis.

A program of education, assignment, and accreditation that cuts across all levels of government and the private sector has to start with professional schools specifically designed to teach interagency skills, including the ability to perform information age analysis. No suitable institutions exist in Washington, academia, or elsewhere. The government will have to establish them. While the resident and non-resident programs of many university and government schools and training centers can and should play a part in interagency education, specific institutions charged with teaching government analysts and decision makers how to “think the future” should form the taproot of a national effort with national standards.

Qualification will also require interagency assignments in which individuals can practice and hone their skills. These assignments should be at the strategic level where national priorities are set and, just as importantly, at the operational level where leaders learn how to make things happen, not just set policies. Identifying the right organizations and assignments and ensuring that they are filled by promising leaders should be a priority. New organizations are needed not just to provide a

training ground for professionals but also to address the current shortfalls in conducting interagency national security operations, including those from post-conflict reconstruction overseas to dealing with pandemics here at home.

Finally, accreditation and congressional involvement are crucial to ensuring that programs are successful and sustainable. Before leaders are selected for critical positions in national and homeland security, they should be accredited by a board of professionals in accordance with broad guidelines established by Congress. Congress should require the creation of boards that first establish educational requirements and accredit institutions that are needed to teach national security and homeland security; second, boards should screen and approve individuals to attend schools and fill interagency assignments; and third, the boards should certify individuals as interagency-qualified leaders and thinkers.

THE TICKING CLOCK

It is perhaps not surprising that in the world today, storytellers are routinely besting other forms of analysis. Washington has done a very poor job preparing itself to “think the future.” The US government requires serious, concerted reforms to revitalize its capacity for information-age analysis. If Washington fails to act, then it could well sacrifice the key competitive advantage of this new century—exploiting the discovery of new knowledge.

Notes

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- ⁴ James Jay Carafano, *GI Ingenuity: Improvisation Technology and Winning World War II* (Mechanicsburg, PA: Stackpole Books, 2008), 40, 61, 76–83.
- ⁵ Gian P. Gentile, *How Effective is Strategic Bombing? Lessons Learned from World War II to Kosovo* (New York: New York University Press, 2001), 131–166.
- ⁶ Many of these are described in Richard L. Kugler, *Policy Analysis in National Security Affairs: New Methods for a New Era* (Washington, DC: National Defense University Press, 2006).
- ⁷ Wohlstetter’s methods are described in Robert Zarate, “Albert and Robert Wohlstetter on Nuclear–Age Strategy,” in *Nuclear Heuristics: Selected Writings of Albert and Roberta Wohlstetter*, eds. Robert Zarate and Henry D. Sokolski (Carlisle, PA: Strategic Studies Institute, 2008), 1–90.
- ⁸ Alex Abella, *Soldiers of Reason: The RAND Corporation and the Rise of American Empire* (New York: Houghton Mifflin, 2008), 86.
- ⁹ Hsinchun Chen, *Intelligence and Security Informatics for International Security: Information Sharing and Data Mining* (New York: Springer, 2006), 7; James Jay Carafano and Andrew Gudge, “Future Computing and Cutting–Edge National Security,” *Backgrounder* 2049 (July 5, 2007) Available at <http://www.heritage.org/Research/NationalSecurity/bg2049.cfm>; Robert D. Steele, “Open Source Intelligence Clarifies Global Threats,” *Signal* (September 1992), 65–67. Available at http://www.oss.net/dynamaster/file_archive/040321/cc24cb57f06c8ad5495ab522ffbc4d3c/OSS1992-01-17.pdf.
- ¹⁰ Also called National Identity Theory. See Peter J. Katzenstein, ed., *The Culture of National Security: Norms and Identity in World Politics* (New York: Columbia University Press, 1996), 3–17.
- ¹¹ George P. Shultz, Henry Kissinger, William J. Perry, and Sam Nunn, “A World Free of Nuclear Weapons,” *Wall Street Journal*, January 4, 2007.
- ¹² Alex Wright, *Glut: Mastering Information Through the Ages* (Washington, DC: John Henry Press, 2007), 231–232.
- ¹³ Josef Kolbitsch and Hermann Maurer, “The Transformation of the Web: How Emerging Communities Shape the Information We Consume,” *Journal of Universal Computer Science* 12, no. 2 (2006): 187–207.
- ¹⁴ Lynn Hunt, *Inventing Human Rights* (New York: WW Norton, 2007), 28–29, 39–40.
- ¹⁵ *Ibid.*
- ¹⁶ Michèle Lamont, *How Professors Think: Inside the Curious World of Academic Judgment* (Cambridge: Harvard University Press, 2009), 73.
- ¹⁷ Special Inspector General for Iraq Reconstruction, *Hard Lessons: The Iraq Reconstruction Experience* (Washington, DC: US Government Printing Office, 2009), 7–16.
- ¹⁸ Sid Kaplan, “Project Horizon—A new approach to interagency planning,” *Federal Times*, February 13, 2006. Available at <http://www.federaltimes.com/index.php?S=1527532>.
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- ²¹ See, for example, Julian J. Ewell and Ira A. Hunt, Jr., *Sharpening the Combat Edge: The Use of Analysis to Reinforce Military Judgment* (Washington, D.C.: Department of the Army, 1974).
- ²² Paul Bracken, “Net Assessment: A Practical Guide,” *Parameters* 36, no. 1 (Spring 2006): 90–100.
- ²³ *Ibid.*