The Complexity Trap

MICHAEL J. GALLAGHER, JOSHUA A. GELTZER, AND SEBASTIAN L. V. GORKA

© 2012 Michael Gallagher, Joshua Geltzer, and Sebastian L. v. Gorka

When you start applying blanket policies on the complexities of the current world situation, you're going to get yourself into trouble.¹

—President Barack Obama

The Cult of Complexity

We live in a world of unprecedented complexity, or so we are told. President Obama’s words above echo an increasingly common narrative in the American foreign policy and national security establishments: the forces of globalization, rising nonstate actors, irregular conflict, and proliferating destructive technologies have made crafting sound national security strategy more elusive than ever before.² If “strategy is the art of creating power” by specifying the relationship among ends, ways, and means,³ then the existence of unprecedented complexity would seem to make this art not only uniquely difficult today but also downright dangerous, inasmuch as choosing any particular course of action would preclude infinitely adaptive responses in the future. As Secretary of Defense Robert Gates memorably described, the pre-9/11 challenges to American national security were “amateur night compared to the world today.”⁴ And as former State Department Director of Policy Planning Anne-Marie Slaughter recently stated, there is a “universal awareness that we are living through a time of rapid and universal change,” one in which the assumptions of the twentieth century make little sense.⁵ The “Mr. Y” article that occasioned her comments argued that, in contrast to the “closed system” of the twentieth century that could be controlled by mankind, we now live in an “open system” defined by its supremely complex and protean nature.⁶ Unparalleled complexity, it seems, is the hallmark of our strategic age.

These invocations of complexity permeate today’s American national security documents and inform Washington’s post-Cold War and -9/11 strategic

Michael J. Gallagher is a Captain in the US Marine Corps, Fellow in the Junior Officer Strategic Intelligence Program, and Ph.D. student in international relations at Georgetown University.

Dr. Joshua A. Geltzer is a law clerk to Chief Judge Alex Kozinski of the Ninth Circuit Court of Appeals. He graduated in 2011 from Yale Law School, where he served as editor in chief of the Yale Law Journal. He received his Ph.D. in War Studies from King’s College, London, where he studied on a Marshall Scholarship.

Dr. Sebastian L. v. Gorka is the Director of the Homeland Defense Fellows Program at the College of International Security Affairs, National Defense University, and also teaches Irregular Warfare and US National Security at NDU and Georgetown.
culture. The latest *Quadrennial Defense Review* begins its analysis with a description of the “complex and uncertain security landscape in which the pace of change continues to accelerate. Not since the fall of the Soviet Union or the end of World War II has the international terrain been affected by such far-reaching and consequential shifts.” In a similar vein, the National Intelligence Council’s *Global Trends 2025* argues that the international system is trending towards greater degrees of complexity as power is diffused and actors multiply. The Director of National Intelligence’s *Vision 2015* terms our time the “Era of Uncertainty,” one “in which the pace, scope, and complexity of change are increasing.” Disturbingly, the younger generation of foreign policy and national security professionals seems to accept and embrace these statements declaiming a fundamental change in our world and our capacity to cope with it. The orientation for the multi-thousand-member group of Young Professionals in Foreign Policy calls “conquering complexity” the fundamental challenge for the millennial generation. Complexity, it appears, is all the rage.

We challenge these declarations and assumptions—not simply because they are empirically unfounded but, far more importantly, because they negate the very art of strategy and make the realization of the American national interest impossible. We begin by showing the rather unsavory consequences of the current trend toward worshipping at complexity’s altar and thus becoming a member of the “Cult of Complexity.” Next, we question whether the world was ever quite as simple as today’s avowers of complexity suggest, thus revealing the notion of today’s unprecedented complexity to be descriptively false. We then underscore that this idea is dangerous, given the consequences of an addiction to complexity. Finally, we offer an escape from the complexity trap, with an emphasis on the need for prioritization in today’s admittedly distinctive international security environment. Throughout, we hope to underscore that today’s obsession with complexity results in a dangerous denial of the need to strategize.

**Consequences of Worshipping Complexity**

Despite recent efforts to don George Kennan’s mantle by providing a global strategic vision, the central consequence of subscribing to today’s narrative of complexity is a failure to design and implement true grand strategy. Entranced by the notion of complexity, the United States responds with paralysis, “bet-hedging,” and repeated calls for new conceptual paradigms. Too often, the national security community seems content to accept the analytical trepidation—or paralysis—that is the natural by-product of believing in unprecedented complexity and, in turn, to adopt a fundamentally reactive posture, essentially viewing strategy as a process of watching, waiting, and then scrambling to adapt and respond in an ad hoc fashion. This view defines today’s strategic environment as such a Gordian knot that the United States cannot possibly foresee the range of possible options available and thus cannot productively estimate the benefits and costs of each. As a result, the world is seen as inscrutably complex and priorities cannot be set: the world becomes an
undifferentiated mass of chaotic threats, and deciding which should be handled first and how becomes impossible.

A slightly less damaging reaction to the narrative of unprecedented and dizzying complexity is “bet-hedging.” Today’s bet-hedgers believe complexity demands not a single strategy but a combination of acuity, balance, and agility, which together allow the policymaker to respond to stochastic contingencies and to function across a wide geographic and operational spectrum. This approach is, of course, still fundamentally reactive. A “jack-of-all-trades, master-of-none” approach to complexity carries serious risk: by attempting to pursue all possible options at once, one fails to prepare truly for any of them at all.

Yet the most common response to the assertion of overwhelming complexity is to claim that the United States needs to throw out the old paradigms and formulate new ones. The idea seems to be that the complexity of the world in 2012 is so unprecedented—indeed, unique—it requires brand-new conceptual and practical tools in order to advance American interests. This premise generates the increasingly popular notion that the problems of 2012 are “wicked” problems. Wicked problems are so complex one cannot understand them at all until one attempts solutions; and, when one does so, a form of Heisenberg’s Uncertainty Principle applies, whereby one’s interaction with the problem makes it all the more “wicked” and complex. Taken to their most damaging extremes, these arguments devolve into the notion that wicked problems do not allow for “good enough” approaches. In other words, they preclude right or wrong solutions: all that they permit are somewhat better or worse responses.

These various responses to complexity—even those that call for throwing out the old tools—are united by a nostalgic view of the past, a sense that, in contrast to the current strategic drift, during the Cold War the United States had the luxury of viewing the world through the “clarifying prism” of a single Soviet threat. According to this rose-tinted narrative of yesterday’s bipolar world, problems were linear, the international system was closed, and far-thinking public servants were able to design grand strategies that provided a stable strategic mechanism for over three decades of American foreign policy. We look back teary-eyed to the heady days of mutual assured destruction.

This version of history demands closer scrutiny. Perhaps those simpler times were not as simple as we remember them. Perhaps complexity is not quite as unprecedented as we have been told.

**Complexity Throughout the Cold War**

“It is impossible to calculate with any degree of precision the dimensions of the threat to US security presented by these Soviet measures short of war. The success of these measures depends on a wide variety of currently unpredictable factors, including the degree of resistance encountered elsewhere, the effectiveness of US policy, the development of relationships within the Soviet structure of power, etc.” So read President Truman’s National Security Council (NSC) 20/4, 23 November 1948, presented to the President at
a time when Truman was dealing with his own new order of complexity. The Cold War was only just beginning:

- On 23 September 1949, Truman revealed to the American public that the Soviets had detonated an atomic weapon, two years earlier than the intelligence community had predicted. The crucial question of when the Soviets would develop a bomber with sufficient range and payload to reach the continental United States remained unresolved.
- Less than a month later, the Soviets created the German Democratic Republic.
- That very same week, Mao Tse-tung announced the establishment of the People’s Republic of China.
- On 3 February 1950, Klaus Fuchs, a British scientist who worked on the Manhattan Project, was arrested as a Soviet spy.
- On 14 February 1950, the Soviets signed a Treaty of Friendship, Alliance and Mutual Assistance with the Chinese government.

These combined events “struck the United States like a series of hammer blows.” Faced with this staggering series of foreign policy surprises, Truman commissioned the wholesale strategic review led by Paul Nitze that produced NSC 68.

“The ‘bipolarity’ which distinguished the immediate post-hostilities period has thus lost much of its rationale, and is obviously giving way to a more complex and fluid international situation.” These words were written by Task Force A, chaired by George Kennan, of President Eisenhower’s legendary Project Solarium. This exercise in competitive grand strategy design that produced Eisenhower’s “New Look” strategy (NSC 162/2) has come to be viewed as “the best example of long-term strategic planning in the history of the American Presidency.” Indeed, as the newly elected President and his Secretary of State John Foster Dulles surveyed the murky security environment in 1953, they could conclude only that the present course laid out by the Truman administration would lead to disaster, potentially endangering western civilization.

Far from being confronted with the simple, monolithic enemy that today stars as the familiar rogue in nostalgic renderings of the Cold War, Eisenhower faced a multitude of disparate and globally dispersed threats: the rapid expansion of nuclear technology, unpredictable Soviet leadership in the wake of Stalin’s death, increasing instability in Asia, a fragile and strained NATO alliance, and the breakup of colonial empires into conflict-prone states, among many others. Although, for a short period, the United States had a “virtual monopoly” on nuclear weapons, American long-range nuclear delivery capabilities did not become fully functional until the late 1950s and early 1960s. The level of uncertainty surrounding Soviet nuclear development was even higher. As the Eisenhower Administration designed its grand strategy, American policy experts and intelligence professionals attempted to forecast when the Soviets would achieve nuclear parity. This so-called “year of maximum danger” framed the debate over containment versus “rollback” of the Soviet Union and produced no clear answers.
“Four factors compose the key to understanding this environment. The first of these factors is that we face higher levels of risk and danger... The second key factor in the security environment of the Eighties can be summarized as unpredictability.” These reflections of General Andrew J. Goodpaster—originally published in the March 1981 issue of *Parameters*—came just one year after President Carter described the international environment as “potentially the most dangerous... since World War II.” The January 1979 Iranian Revolution and the corresponding hostage crisis, the December 1979 Soviet invasion of Afghanistan, rampant inflation and a debilitating dependence on foreign oil, and the general sense that the United States was declining as the Soviet Union appeared to be on a roll all contributed to the sense of American strategic disarray from which Goodpaster’s words emerged.

As historian John Lewis Gaddis argues, though “Carter did not handle these challenges particularly well; still, given their complexity and intractability, one wonders how well others might have done.” Yet President Reagan would sign National Security Decision Directive (NSDD) 32 by May 1982 and NSDD 75 by January 1983, setting out the beginnings of the “Reagan Doctrine.” By turning nationalist forces in the “third world” and the Eastern European satrapies against an increasingly bankrupt Soviet Union, the Reagan Doctrine ultimately forced Moscow to change its behavior, thereby accomplishing the original strategic objective of containment. Unpredictability and free-fall appeared, almost miraculously, to give way to a consolidated doctrine and, ultimately, strategic triumph.

These snapshots reveal that the canvas of the Cold War at which Washington stared was anything but a simple black-and-white. To the contrary, it was always more Jackson Pollock than Mark Rothko: connections were unclear, developments were frenzied, and complexity reigned. For Truman, for Eisenhower, and for Carter, world events occurred at a dizzying speed, wiping away previous predictions, permitting little time for analysis, and continually demanding responses amidst persistent uncertainty. What we now regard as one of the clearest, starkest, most stable periods in American foreign policy felt otherwise to those formulating strategy and implementing policy in real time as events unfolded around the globe. If even during the putatively “simple” Cold War international affairs were so unkempt and disorderly, one can reasonably posit that, at virtually any point in history, strategists and statesmen dealt with issues and problems that, in their time, appeared—and perhaps even were—unprecedented in their complexity.

Thus, even if today’s policymakers are correct in claiming that their job is harder than that of their Cold War counterparts—a claim that is much simpler to make with the benefit of hindsight—it is a job that has never been easy. As one high-level policymaker recently argued, “We don’t need Tom Friedman to tell us the world is suddenly interconnected and thus the various forms of national power are interdependent and interactive. It has always been thus.” It seems that complexity, or the perception of complexity, is the timeless companion of the national security strategist. Have we already forgotten the warning...
of a certain Prussian general that war is simple but even the simplest things in war are hard to do?

**Escaping from the Complexity Trap**

So what? The universe may be inexorably tending toward greater levels of entropy, but even escalating entropy does not mean that we should throw up our hands or abandon all old models—or our responsibility. Ritual obeisance to the concept of complexity is a self-imposed rhetorical trap. Paying unrelenting homage to allegedly unprecedented levels of complexity leads to two descriptive flaws: it neglects a past filled with precedents of similar, and perhaps even greater, complexity; and it characterizes the world with a descriptor that lacks clear—or useful—analytic content.

Even as today’s invocations of complexity are descriptively misleading, they are also normatively dangerous. Succumbing to complexity does not tell us how to react; indeed, if anything, it dissuades us from reacting at all, out of fear that we cannot possibly know what to do. And, at best, it dictates a reactive stance, because pursuing an affirmative vision is deemed foolhardy amidst a turmoil that we cannot even comprehend. The Cult of Complexity demands confusion and even fear in the face of incomprehensible threats. Belief in unprecedented complexity does not merely do a disservice to the Cold Warriors and others who coped with confusing and even convulsing international situations; more worryingly, the complexity trap unduly induces the reactive combination of paralysis, bet-hedging, and paradigm revision discussed above. In other words, overstating complexity not only muddles our thinking but also hinders our acting and therefore our pursuit of national security.

To be sure, there are distinctive features of the current strategic environment, even if utterly unprecedented complexity is not one of them. It does seem true that determining which threats and opportunities are most important for American national security is a more difficult task in 2012 than it was during the Cold War. The Soviet threat framed the strategic debate in the Cold War era in a way that al Qaeda cannot in 2012. Not a single Cold Warrior questioned that dealing with the Soviet Union was their highest strategic priority. Today’s strategic community is devoid of such consensus. Some argue that al Qaeda represents our definitive national security threat, while others counter that focusing on al Qaeda is myopic and that the emergence of China or nuclear proliferation is far more germane to national security. Still others call for a broader view of national security, encouraging an emphasis on climate change and global disease as the gravest challenges of the present and future.

**Prioritization**

These competing views of America’s national security concerns indicate an important and distinctive characteristic of today’s global landscape: prioritization is simultaneously very difficult and very important for the United States. Each of these threats and potential threats—al Qaeda, China, nuclear
proliferation, climate change, global disease, and so on—can conjure up a worst-case scenario that is immensely intimidating. Given the difficulty of combining estimates of probabilities with the levels of risk associated with these threats, it is challenging to establish priorities. Such choices and trade-offs are difficult, but not impossible. In fact, they are the stock-in-trade of the strategist and planner. If the United States is going to respond proactively and effectively to today’s international environment, prioritization is the key first step—and precisely the opposite reaction to the complacency and undifferentiated fear that the notion of unprecedented complexity encourages. Complexity suggests a maximization of flexibility and minimization of commitment; but prioritization demands wise allotment of resources and attention in a way that commits American power and effort most effectively and efficiently. Phrased differently, complexity induces deciding not to decide; prioritization encourages deciding which decisions matter most. Today’s world of diverse threats characterized by uncertain probabilities and unclear risks will overwhelm us if the specter of complexity seduces us into either paralysis or paranoia. Some priorities need to be set if the United States is to find the resources to confront what threatens it most. As Michael Doran recently argued in reference to the Arab Spring, “the United States must train itself to see a large dune as something more formidable than just endless grains of sand.”

This is not to deny the possibility of nonlinear phenomena, butterfly effects, self-organizing systems that exhibit patterns in the absence of centralized authority, or emergent properties. If anything, these hallmarks of complexity theory remind strategists of the importance of revisiting key assumptions in light of new data and allowing for tactical flexibility in case of unintended consequences. Sound strategy requires hard choices and commitments, but it need not be inflexible. We can prioritize without being procrustean. But a model in which everything is potentially relevant is a model in which nothing is.

Devolution of Power and Authority

Another useful alternative to worshipping complexity is to understand the extent to which power and authority are more thoroughly devolved or diffused throughout the present international system than they were during the Cold War. For example, increasing international regime complexity in the form of overlapping international agreements that are not hierarchically ordered makes “it harder to resolve where political authority over an issue resides.” This “spaghetti bowl” of parallel, overlapping, and nested institutions is one in which “understanding units does not sum up to the whole and . . . the dynamics of the whole shape the behavior of units and sub-parts.” Consequently, more attention should be paid to systems analysis and identifying newly empowered units and agents who can punch above their weight: for example, it already seems wise to devote increasing attention to transgovernmental policy entrepreneurs and nonstate actors. This trend of “democratization” is not inherently more or less complex—it depends on the particular actors as well as the power
and authority that they are exercising. But it does appear to be a change; and an assessment of today’s priorities must include an awareness of this potentially distinctive characteristic of the current international security environment.

**Technology and the Speed of Change**

The events of 2012 seem to unfold faster than events did during the Cold War, even though, as discussed previously, Cold War events often occurred quite rapidly. The power of technology to connect people across space and time in new and significant ways was as important in Plato’s times as it is in ours. Yet today, due to the speed of technological change and diffuse and instant access to wide sources of information, individuals can quickly flex their muscles on the global stage. Individuals can become organized groups with astonishing speed and then can engage international attention and even international institutions in pursuit of their agendas. Technology and the speed of change have the ability to empower, but they can also limit.

There are reasons to believe that the information age limits the use of states’ material power in important ways, complicating the conversion of resources into usable forms of power. This newfound limitation may account for the so-called “paradox of unrealized power,” or why “power measured in resources rarely equals power measured in preferred outcomes.” A system in which many more state actions are observable and subject to instantaneous global broadcasting exerts a countervailing form of power. This is power as panopticism: surveillance creates “a state of conscious and permanent visibility that assures the automatic functioning of power.” States do not need an adversary to limit them; rather, an automatic and dis-individualized sense of being seen—without being able to verify who is watching at any moment—further restrains action, as photos from Abu Ghraib and videos of Predator strikes harming civilians act as potent counterthrusts to the exercise of American power. Especially for the United States as a global superpower, this worldwide watchfulness poses a challenge and presents a distinctive component of the security environment in which America must first prioritize and then act. Perhaps it even calls, in certain situations, for caution—but it does not suggest the inescapably reactive approach that flows from the very different idea that today’s world is inscrutably and uniquely complex.

**Conclusion**

Once we abandon complexity and begin to talk of prioritization, diffusion of power, and speed of change, we start to see that there is a deep irony in the complexity trap. Proclaiming complexity to be the bedrock principle of today’s approach to strategy indicates a failure to understand that the very essence of strategy is that it allows us to cope with complexity—or at least good strategy does. Strategy is a commitment to a particular course of action, a heuristic blade that allows us to cut through large amounts of data with an overriding vision of how to connect certain available means with certain
desired ends. By winnowing the essential from the extraneous, such heuristics often outperform more complicated approaches to complex (or even allegedly “wicked”) problems that end up being computationally intractable. The more complex the system, the more important it is to rely on heuristics to deal with it. Whether through the use of heuristics or otherwise, the ability to peer through seemingly impenetrable complexity and to identify underlying patterns and trends is richly rewarded when others remain confused or intimidated by the apparent inscrutability of it all—especially when that ability is coupled with a recognition that small changes can have a big impact when amplified throughout an interconnected system. If complexity, whether real or perceived, is truly the defining characteristic of the current strategic environment, then we should be witnessing a corresponding renaissance in grand strategy design and long-term strategic planning. Not so, unfortunately—or at least not yet.

More to the point, because strategy copes with complexity, complexity actually rewards truly strategic actors. Those who are prepared, organized, and rich in physical and human capital can exploit complexity to secure their interests. For example, international regime complexity enables “chessboard politics” whereby strategic actors can shop among forums for the best international venue to promote their policy preferences or can use cross-institutional political strategies to achieve a desired outcome. Due to its high concentration of technical and legal expertise, the United States is ideally suited to exploit this complexity and to thrive in an age of chessboard politics. The first step is replacing the current reactive worship of complexity with proactive prioritization. To escape the complexity trap, let us dare to decide—that is, let us strategize.

Notes


2. See Joshua Cooper Ramo, The Age of the Unthinkable: Why the New World Disorder Constantly Surprises Us and What We Can Do About It (New York: Little, Brown, and Company, 2009), 99. Ramo argues that old security approaches are increasingly useless in the twenty-first century environment, one in which “[t]hreats to our physical security are complex, new, and growing. They demand nothing less than a complete reinvention of our ideas of security.”


4. Robert Gates, “That Was Amateur Night,” interview by John Barry, Newsweek, October 25, 2008. The full context of Gates’s remarks merits repeating: “I recall Henry Kissinger in 1970. There had been the Syrian invasion of Jordan. I think something was going on in Lebanon. And we had discovered the Soviets were building a submarine base in Cuba. I always thought Kissinger managing two or three crises at the same time was an act of legerdemain. I tell you: that was amateur night compared to the world today.”


10. Mr. Y, *A National Strategic Narrative*.


12. QDR, 7.

13. Jeff Conklin, “Wicked Problems and Social Complexity,” in *Dialogue Mapping: Building Shared Understanding of Wicked Problems* (Hoboken, NJ: Wiley, 2006). The idea of wicked problems was introduced in Horst W.J. Rittel and Melvin M. Webber, “Dilemmas in a General Theory of Planning,” *Policy Sciences*, Vol. 4 (1973), 155-169. It is important to note that these authors were emphasizing that certain problems cannot be addressed scientifically. We, of course, do not claim that strategy can be addressed scientifically: it is every bit as much an art as a science, plus an inescapably value-laden one, too. We do, however, disagree with those who have invoked the idea of wicked problems as an excuse for avoiding a search for optimal solutions in the first place.


20. Ibid., 4, 246, 252.


24. Quoted in Ibid., 40.


26. Ibid., 347.

27. Ibid., 355-359.


30. “The real question at issue is our own will—our readiness to give serious and sustained attention to these complex and difficult issues; our openness to reach intelligent decisions; our willingness to take responsibility, to pay the costs, to make the sacrifices.” Goodpaster, “Development of a Coherent American Strategy,” 47.


32. Michael Scott Doran, “Doran Replies,” *Foreign Affairs* 90, no. 4 (July/August 2011): 187. Here Doran is arguing against what he calls the “academic fallacy, in which the necessary simplicity of strategic concepts is mistaken for simple-mindedness.”


35. Ibid., 15.


39. Ibid., 201.

40. “Scholars building on the insights of political psychology find that complexity leads to selective information processing and a reliance on relations and heuristics to cut through what is an overwhelming amount of information. This reliance affects politics because what constitutes the ‘rational’ choice is far less clear, and because the time horizons of politicians may be out of sync with the time needed for cause-effect outcomes to become clear.” Alter and Meunier, “The Politics of International Regime,” 17. See also Daniel W. Drezner, “Does Obama Have a Grand Strategy?: Why We Need Doctrines in Uncertain Times,” *Foreign Affairs* 90, no. 4 (July/August 2011): 57-68. Drezner makes the related point that grand strategies matter in times of radical uncertainty in international affairs...
because they “can function as cognitive beacons, guiding countries to safety.” He contends that the current era is one of radical uncertainty because of (1) a massive global disruption and (2) a power transition.