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Competing for the System

The Essence of Emerging Strategic Rivalries

November 2022

Contents

The United States has now established strategic competition with two leading rivals—China and Russia—as the centerpiece of its national security strategy.[1] Russia's invasion of Ukraine in February 2022 dramatically raised the intensity of that bilateral rivalry and the general tenor of global competition. Many recent analyses have concluded that the United States is engaged in classic strategic rivalries with both countries, likely to persist for decades and involve all instruments of national power.[2]

Yet competition is an activity, not a strategy; a means, not an end.[3] Asserting that the United States is engaged in a competition or rivalry begs an obvious follow-up question: What is the United States competing for? Toward what end is U.S. strategy directed, and what then does this make the rivalries fundamentally about?

Competing in Systemic Terms

In this Perspective, we contend that the United States should conceive of these rivalries primarily in *systemic* terms. In one sense, this means something straightforward: The United States should seek to maintain predominant influence over the international system—its institutions, rules, norms, processes, networks, and values. In the leading rivalry in world politics today, for example, the United States and China are competing to establish the foundational global paradigm—the essential ideas, habits, and expectations that govern international politics—and the broader system that produces that paradigm.[4] That system includes actors or nodes ranging from states to industries, institutions, and nongovernmental organizations, as well as the relationships among them, such as agreements, rules, and forms of mutual exchange. Each of the main rivals is seeking to shape these components of the international system to produce an order oriented to its interests, goals, and values.

But competing in systemic terms also implies a second requirement, one more abstract and far more challenging to fulfill: to think and act *in systemic terms*—to develop strategies that are inherently designed to shape holistic, indirect, and networked systemic effects as much as, and even more than, successes on individual disputes. That means moving away from linear, problem- and issue-specific strategies and working to generate broader and more indirect effects. The United States cannot ignore individual challenges and will not always have the time or institutional capacity to look beyond their narrow focus

when it chooses policies. But as much as possible, competing in systemic terms means focusing on the whole rather than its parts, thinking in terms of indirect and secondary outcomes, and shaping systemic effects to its advantage. It means "understanding the system as a system and giving primary value to the relationships that exist among seemingly discrete parts."[5]

In this Perspective, we make two arguments. First, in these growing rivalries, the United States is principally competing for predominant influence over the structure of the global system, including institutions, rules, and norms. In this concept, the work of bilateral competition, or negotiation over specific issues, is instrumental toward establishing the system structure and ultimately to the emergence of a global paradigm. When the system structure and related norms are aligned with U.S. national interests and values, competition occurs in a context of incentives that works in the United States' favor.

But trends in any international system are fluid and emergent. Because the world is continually evolving, these systems must actively be maintained, and sometimes redesigned, if they are to continue reflecting U.S. interests and preferences. At some moments, the international system arrives at inflection points where a much greater number of its essential rules and values are at stake. Given the current stresses on the liberal world order, now is one of those times. We argue that a systemic perspective is essential for developing a strategy to shape the outcome of this systemic reset.

Second, in the process of pursuing this overarching strategic imperative of shaping the system, the United States must make strategy and undertake specific policy initiatives through a lens of system dynamics. That means a constant effort to place individual actions in the context of systemic realities, and to appreciate the nature of systems as opposed to discrete, issue-specific action. The United States must not only compete *for* the system. It must compete using *systemic strategies*.

This analysis builds on several prior RAND Corporation reports that have assessed both the nature of international orders and the nature of the emerging rivalries.[6] In the following sections, we explore areas of dispute in the current shape of the international system; introduce *systemic competition* as a conceptual frame to think about competition for the international order; illustrate historical and contemporary examples of systemic orders; assess the current U.S. capabilities for developing system-shaping strategy; and identify principles to guide development of national strategy for competing for the system.

The United States is principally competing for predominant influence over the structure of the global system, including institutions, rules, and norms.

Competing for the Shape of the International System

Scholars and analysts have offered multiple theories about the fundamental character of the U.S. rivalries with Russia and, especially, China.[7] In the case of China, some view the competition as primarily military, involving a contest for supremacy in the Indo-Pacific. Others see it as an economic-technological contest for dominance of a handful of cutting-edge industries. A few focus on the ideological aspects of the rivalry. Our case for the centrality of systemic factors relies on two primary sources of support. One is historical—in the following section, we briefly make the case that the history of various eras of order-building demonstrates the importance of systemic factors in determining geopolitical outcomes. The second source of support is the evidence of clear Chinese strategic objectives and tools oriented toward a systemic competition. We summarize these below.

We do not argue that the U.S. rivalries with China are Russia are *only* competitions for the system. They clearly have military, economic, and technological components. Some of those discrete contests can have important echoes through the system: For example, were U.S. military power in the Indo-Pacific to decay to the point of being clearly outmatched by China, that development would have profound systemic implications. Our argument is merely that, both in terms of the leading objectives of the competitors and the most important mindsets for competition, a systemic approach should provide the essential framework for how the United States approaches these rivalries.

The Historical Importance of Competing for the System

The history of a series of systemic rivalries from ancient times to the post–Cold War order highlights the competitive advantage that nations can gain from defining the prevailing regional or global system and paradigm. In ancient Greece, Athens reached the apogee of its power in part by dominating trade in the Aegean and Mediterranean Seas through various means, including its alliance network, the Delian League. Rome gained advantages from a similar control of regional seaborne trade after its defeat of Carthage, but even before that Rome had worked to generate an order of supportive (indeed quasi-vassal) city-states throughout Italy. Even in these ancient cases, the systems that grew up around these city-states were far more than the product of empire: They included flows of trade, networks of ideas and scientific exploration, and an increasingly interconnected elite class. Leading powers became magnets for the systemic dynamics of their era.[8]

In Europe beginning in the 17th century, a new system based on more formalized national sovereignty emerged at the end of the Thirty Years War, typically called the Westphalian System.[9] It represented an effort to stabilize European politics and reduce the incidence of war by building greater respect for the norm of state sovereignty. The resulting context created the basis for national competitive advantage: Political entities that managed to develop into more coherent, stable, competitive states accumulated more power and influence than those that remained more fragmented and ill-governed.

More recent historical examples also highlight the importance of systemic effects in global rivalries. The Brit-

ish Empire, spanning from the mid-1600s until the end of World War II, was a network of colonies and dependencies managed through a series of economic, social, and legal relationships that effectively amounted to a comprehensive systemic architecture to promote British interests.[10] Its *economic relationships* included flows of goods and resources with colonies, dominions, and trading partners, maintained through a preeminent maritime network. An accompanying set of *social and cultural relationships* included migration, language, and rule-of-law standards prevalent throughout the Commonwealth as colonization spread military, economic, and religious influence. The empire also reflected *legal relationships*, maintained through widespread use of the English common law and statutory law systems, which were diffused by settlers and traders and adapted to local environments.

Through these arrangements, the British Empire generated substantial political, economic, and social influence for a relatively small island nation. At its peak in the early 20th century, the empire covered nearly a quarter of both the world population and total land area. It is important to stress, however, that all of these effects depended on larger systemic processes well beyond direct British imperial activities. Britain, in a very different way but somewhat akin to Athens and Rome before it, became the hub of the dominant networks of exchange—economic, intellectual, and cultural—of the time. It came to have decisive influence over the trends in the larger system.

While the British Empire was maintaining a global system of colonies, dominions, and trade, the major powers of continental Europe gathered in Vienna in the wake of Napoleon's 1815 defeat at Waterloo. They developed a series of alliances and mechanisms for dispute resolution intended to strengthen cohesion among the continental powers, suppress revolutionary and liberal movements, and maintain the balance of power for established governments and monarchies. The arrangements came to be known as the *Concert of Europe* or *Vienna System* and persisted, with some adaptations, for nearly 100 years until the dissolution of the alliance in advance of the outbreak of World War I.[11] These agreements provided benefits to members and created costs to leaving the system or transgressing it. Eventually, cracks began to emerge with shifting alliances, but in dominant terms for a century throughout Europe, through the Crimean War, and beyond, the Vienna System achieved important geopolitical effects by shaping systemic realities and incentives.

Perhaps the most important and successful system-level strategy in the modern era emerged in Europe after World War II, with the Marshall and Schuman Plans and the effort to begin the integration of Europe.[12] The Schuman Plan, for example, sought to align the interests of industry, unions, and political leaders on the principle of interdependence, facilitated through economic and security cooperation.[13] Cooperative agreements over the mining and processing of coal and steel led to the European Coal and Steel Community (ECSC), enabling France, West Germany, and the Benelux countries to rebuild economically while making war among them materially difficult, or even impossible. With the principle of interdependence established, other nations joined additional trade and political unions, leading to the European Economic Community (Common Market) and eventually the European Union.

As it has continued to evolve, this postwar order represents one of the most elaborate efforts to achieve geopoliti-

cal effects by shaping systems dynamics.[14] It has involved multilateral collaboration among states in their economies, defense activity, and coordination on collective action challenges, such as trade and human rights. The current rules-based order includes institutions such as the United Nations, World Trade Organization, World Bank Group, and International Monetary Fund and systems of coordination such as the Group of 7 (G-7) and Group of 20 (G-20). The draw of these institutions created a gravitational effect in which a critical mass of leading states conditioned access to their markets and institutions on key norms and values. The result was a powerful echo effect throughout world politics that had important systemic influence.[15]

Since 1945 and especially 1989, then, the United States has thrived in the context of a favorable international order it helped to establish through formation of alliances and institutions. The systems that were established after World War II and during and following the Cold War—such as the United Nations, NATO, the European Community, World Trade Organization, World Bank and International Monetary Fund—and networks of economic and political alliances, have done well for ensuring peace and prosperity. Policymakers in the United States have viewed the relationships, rules, and resulting stability that arise from the international order as essential means to achieving U.S. national interests both domestically and throughout the world. As one of us argued in a 2018 RAND study that reviewed many categories of international trends and U.S. interests, "the postwar order has had important value in legitimizing and strengthening U.S. influence and institutionalizing and accelerating positive trends."[16] History suggests that succeeding or winning at the systemic level can be a critical component of success in long-term rivalries.[17]

> The modern postwar order represents one of the most elaborate efforts to achieve geopolitical effects by shaping systems dynamics.

Many treatments of the U.S. national security requirements of these emerging rivalries focus on specific required investments in defense and national security, from weapon systems to emerging technology areas. But beyond these issue-specific policies designed to secure advantage, there is a more holistic and systemic level in which the competition will play out. If the United States can sustain the supportive alignment of the overriding proportion of leading powers; maintain predominant influence in international institutions, processes, and standard-setting bodies; and win the battle for influence among nongovernmental networks, it will gain decisive competitive advantage. This, along with the domestic dynamism of the United States and its democratic allies, was how the United States prevailed in the Cold War. It will be essential for the United States to attend to this systemic competition in these new rivalries.[18]

As these examples suggest, shaping the international system can be viewed as one approach to grand strategy.

Russia and China are actively engaged in strategies that appear to be aimed precisely at influencing the operation of the system.

Barry Posen defines grand strategy as a country's "theory about how to produce security for itself."[19] One way of answering that question could be highly self-directed and oriented toward military power—producing security through military overmatch. But another approach, and the one we argue for in this Perspective, is to produce security for the United States by helping to fashion an international system more amenable to U.S. objectives, and less likely to generate risks and threats to the United States. This has been much of the story of world politics over the past half century—a critical mass of the countries of the world agreeing on basic systemic goals and arrangements to facilitate pursuit of those goals which aligned with U.S. goals.[20] These have included non-aggression, economic stability and relatively free trade, promotion of human rights and democracy, and encouragement of the rule of law and good governance.

Chinese and Russian Emphasis on Systemic Competition

Today, Russia and China are actively engaged in strategies that, intentionally or not, appear to be aimed precisely at influencing the operation of the system.[21] Russian revisionism seeks to undermine the strength of the current order and reestablish Russian spheres of influence. Russia is integrating military, informational, and diplomatic tools with energy diplomacy to try to fracture the U.S.-led order and build tentacles of its own influence. Russia's approach in some ways represents nothing more than classic statecraft across a range of instruments of power, but ones that add up to an importantly systemic focus.

China's strategy is much more comprehensively systemic in goals and approach. It is grounded in economic and technological investments and networks, designed to create systemic relationships and dependencies that tilt world politics toward a Sino-centric order. The best known and most substantial example of this process is the Belt and Road Initiative (BRI), a massive program of investment and economic and technological engagement designed to shape trading routes to China's favor through the development of revised trade pathways and rules. Indeed, the very essence of China's strategy could be considered as a systemic approach, designed to shift regional and global networks and systemic dynamics in China's favor. Table 1 summarizes some of the primary Chinese initiatives with this character.

The United States, on the other hand, though it speaks the language of systemic approaches in the form of support for a rule-based international order, does precious little to organize competitive strategies in systemic terms. Many

TABLE 1

China's Systemic Initiatives

Policy Initiative	Systemic Implications
Infrastructure investments (BRI)	China is consciously seeking to reshape Eurasian economic networks into a Sino-centric future, and major infrastructure investments are a leading tool of engagement with many developing countries who have a difficult time financing such ventures elsewhere.
Non-infrastructure foreign direct investment	Chinese banks and firms have made immense investments, mostly profit-seeking, in companies around the globe, including (until recently) the United States and Europe. These provide systemic power by integrating China into global supply chains.
Renminbi (RMB) initiatives—use as reserve currency, digital RMB program	China is seeking to redirect global currency markets toward the RMB as a way of diluting U.S. financial power.
Digital Silk Road	China is seeking to encourage countries to build their digital infrastructure on a foundation of Chinese technology, which would grant China access to data and generate huge dependencies.
Trade networks	Through national strategy but largely because of objective macroeconomic realities, China has become the leading trade partner of most nations in Asia, as well as a dominant partner in specific industries (such as automobiles) of other countries. These trade networks provide China with leverage over economic standards and create dependencies that can be manipulated to shape behavior.
Military cooperation	China's security cooperation activities remain relatively modest compared with U.S. and even European Union programs, but they are growing and designed to complement China's economic and technological initiatives with an offer of arms sales and transfers, military training, combined exercises, and other forms of collaboration.
Efforts to undermine U.S. Indo-Pacific alliance and posture	China aims to reshape the security architecture in the Asia-Pacific, pushing the United States out of the region as a primary security provider for many nations. This has involved a combination of steps to weaken U.S. alliances and security partnerships, ranging from threats to efforts (as in Thailand) to cultivate competing influence.
Cultural programs	The United Front Work Group in China has the mission to shape international perceptions and promote sympathy for Chinese values and culture. Through such tools as Confucius Institutes, scholarships and fellowships, and Chinese language training, China is seeking to establish Chinese cultural predominance among key actors in the Asia-Pacific.

U.S. competitive policies are seldom conceptualized or implemented with systemic effects in mind.

national security initiatives are undertaken for discrete and issue-specific purposes: to gain an advantage in a specific military technology, impose diplomatic costs on a country behaving against international norms, build long-term relationships in a key partner nation, and so on. U.S. competitive policies are seldom conceptualized or implemented with systemic effects in mind.[22]

Taking seriously the systemic essence of the competition among these powers need not make zero-sum assumptions. Even China and Russia today do not differ with the United States on *all* aspects of the desired system. All three countries agree on the need to combat terrorism, for example. All have called for responses to global warming, and at times have appreciated the potential value of cooperation on that issue. All want a stable international financial order. All have demonstrated a desire to mitigate runaway proliferation by countries such as Iran and North Korea (though they have differed on tactics and the degree of absolutism in their goals).

However, the three primary rivals in world politics do have significant disagreements about the nature of the international system they prefer. Recent RAND reports and other analyses highlight at least five such differences in systemic goals:[23]

1. In the broadest geopolitical and geoeconomic sense, the United States prefers a *U.S.- and ally-centric international system*, one in which the United States is the default security provider for many countries and the international order revolves around U.S., ally, and partner power and capacities. This means an international system with strong U.S. alliance networks, and deepening webs of security collaboration among democracies and selected other partner countries. It means a system that employs the dollar and select allied currencies as the global reserve currencies, and one in which most technical standards are set by the United States and other democracies. Russia seeks to fragment that system and establish itself as an equal to the United States in geopolitical terms—by weakening NATO, for example. China has much more elaborate goals in this area, seeking to fully trade out the U.S.-led order with a Sino-centric one, at least within the Asia-Pacific and potentially globally as well.

2. The United States desires systemic trends in the direction of *democracy and respect for human rights*; China and Russia are either agnostic about such progress or actively hostile to it. Indeed, both view the general push for democratization, reflected in such developments as "color revolutions," as active threats to their rule. This distinction also extends to external behavior, with China and Russia sometimes trying to constrain the expression of free ideas, or quash dissent aimed at their regimes, even in other countries.

3. The United States prefers a system based on *broadly liberal principles of economic exchange*, specifically free trade (with some exceptions), respect for intellectual property rights, and the largely free flow of capital. This is hardly a binary standard; trade is never entirely free, and markets are constructed through rules, institutions, and norms. Further, the United States has adopted a series of trade restrictions over the past five years, while China's approach to international trade agreements is not wholly cynical or dishonest. But it is true that, as significantly (and increasingly) state-run economies, China and Russia seek a more controlled and less liberalized economic system.

4. The United States prefers an international system that *maximizes the free flow of information while condemning and, to the degree possible, preventing hostile acts of information manipulation*, ranging from active disinformation campaigns to cyber attacks. China and Russia seek the ability—and international norms that both justify and empower that ability—to tightly control their domestic information environments for social control and political ends. They also regularly employ tools of informational harassment and attack to further their aims. Whether they want an international system that freely allows such cyber aggression, however, is unclear.

5. Finally, the United States wants a system characterized by *respect for international law, and a peaceful resolution of disputes in multilateral fora, regarding issues of freedom of movement and sovereign control of territory*. In the U.S. view, China and Russia each have territorial claims and/or deeply felt security needs along their periphery that lead them to want an order that prioritizes spheres of influence for great powers over shared and objective legal standards of behavior. The United States generally views this goal as prohibiting military aggression to control or subjugate neighbors; China and Russia have publicly claimed the right to engage in such activity when their interests demand it.

This final distinction may be less stark than the others. China, for its part, goes to elaborate lengths to broadcast its support for the principle of peaceful coexistence and the norm of sovereignty.[24] Nor has the United States always adhered to these systemic principles. It has modified its own support for human rights when circumstances demanded—especially during the Cold War, when it developed close relations with many autocratic states and directly supported the overthrow of multiple democratically elected regimes. The United States has displayed inconsistent respect for principles of international law—for example, in failing to join such arrangements as the United Nations Convention on the Law of the Sea Treaty and the International Criminal Court, and in engaging in military aggression of its own, such as the invasion of Iraq, when it felt security concerns demanded it. The United States has selectively employed offensive cyber tools.

This inconsistency—in the eyes of many around the world, hypocrisy—about the principles of the prevailing system could be extremely dangerous to the legitimacy of the U.S. posture of systemic competition. Others will be less persuaded by U.S. demands to follow shared rules, and the networks of institutional, rule-making, and procedural power that cluster around the United States could begin to

fragment if U.S. authority is viewed as entirely self-serving rather than operating in the name of a system of mutual benefit. China has begun to weaponize the hypocrisy involved in the U.S. position on many elements of the existing order, seeking to delegitimize U.S. leadership of it.[25]

It is not clear what the world would look like if China succeeded in this goal and achieved some realistic version of its objectives, or some significant number of them, in systemic terms. Some observers posit very elaborate Chinese ambitions to refashion the global system to serve Chinese ends, including antidemocratic and coercive geopolitical goals.[26] Others believe China would be satisfied with a less overtly Sino-centric order and that even significant achievement of its goals would represent a less dramatically realigned international system.[27] The ambition in China's goals appears to have grown over the past several years, in part in parallel with its growing power.

The degree of extreme ambition and hostile intent embodied in China's approach to systemic competition obviously has critical implications for the nature of any U.S. strategy to compete in this realm. One interpretation suggests that the United States can approach systemic competition calmly and gradually, because China does not harbor the intention of revising the system in dangerous ways. The other counsels an intense, urgent U.S. campaign to prevent a fundamental realignment of world politics.

That larger question is beyond the scope of our analysis. We assume that Chinese systemic goals are elaborate enough, and in some cases a significant enough threat to U.S. interests and values, to justify some response. But such a response can have distinct scope based on one's interpretation of Chinese intent. One critical implication relates to priorities: As we will argue below, any effec-tive strategy for systemic competition must identify those areas where most is at stake, and where China's efforts are most intense and effective, and prioritize U.S. efforts accordingly.

Competing with a Systems Mindset

One way for a great power to exercise influence over a system is to embody such overwhelming influence that the nation becomes a kind of gravitational field, shaping the behavior of other actors by its level of supremacy. Given China's rise and the intensifying determination of U.S. allies and developing countries alike to create a more multipolar world order,[28] this is no longer a feasible option for the United States. The requirement today is for something more calculating: developing a coherent strategy to *compete systemically*—that is, to take actions designed to shape system outcomes rather than to achieve case-specific wins within these rivalries. As noted above, however, U.S. national security strategists have not typically thought in systemic terms, at least not explicitly. Anne-Marie Slaughter, recommending a web- and network-based approach to global strategy, points out that "the portfolio of strategies to advance national interests and achieve global goals" in these networked, system-manipulating ways "is almost empty."[29]

Identifying a Chinese or Russian tactic in a particular domain, such as military diplomacy, and then developing a U.S. strategy to contest it and gain strategic advantage in that domain is an example of an issue- or policy-specific approach to a rivalry. Investing resources to gain advantage in the institutional structures of the international system—offering support to intergovernmental organizations, for

Thinking in systemic terms means competing *for* the international system, but also competing *in the context of systemic dynamics.*

example, or strengthening the role of the dollar as reserve currency—is competing in systemic ways but still through discrete actions. The real upshot of our analysis is the need to focus all such actions with the goal of achieving systemic outcomes—to take a range of individual actions and link them, through strategy, to reshape systems.

But what does it mean to have a "systems mindset"? The first step is to understand what we mean by a system in the first place. Robert Jervis explained that "We are dealing with a system when (a) a set of units or elements is interconnected so that changes in some elements or their relations produce changes in other parts of the system, and (b) the entire system exhibits properties and behaviors that are different from those of the parts." The most important implication of operating in a system, he notes, is the unpredictable and nonlinear effect of the linkages. In a system, "chains of consequences extend over time and many areas: The effects of action are always multiple." As a result, "the obvious and immediate effect might not be the dominant one." Such linkages and second-order (or third-order, or tenth-order) effects, Jervis concludes, "can defeat purposive behavior," and "results cannot be predicted from the separate actions."[30] The U.S. invasion of Iraq is a good example: Designed in part to suppress global terrorism and reaffirm U.S. prestige as the world's dominant power, it arguably

had counterproductive results on both counts and continues to have pernicious echo effects on U.S. strategy 20 years later. Despite achieving some of its most direct and linear goals (such as removing Saddam from power and ending his presumed weapons of mass destruction program), the invasion had wider systemic consequences with immense costs to U.S. statecraft.

Thinking in systemic terms, then, means thinking of policy interventions as spurs to long and extended chains of consequences, in Jervis's terms. It means competing *for* the international system (in its physical manifestations, such as institutions), but also competing *in the context of systemic dynamics.* The two are linked, because shaping the structures of a system is one way to influence interlinked network effects. But focusing on institutions alone is not sufficient for a comprehensive systemic approach.

Many elements of U.S. public policy and international strategy have sought systemic effects, though seldom as part of any wider approach formally dedicated to that goal. In some cases, this purpose is quite open: During the 2008 financial crisis, for example, many U.S. responses, such as bank bailout packages, were justified by the need to address vulnerabilities in the global financial system and shape global perceptions and thus behavior, independent of the objective economic assessment of the importance of a spe-

cific bank or issue. Indeed, the overall U.S. crisis response could be seen as a massive program of system shaping. In other cases, such as the formation of alliances, the systemic goals were less explicit but still important: U.S. security ties with Europe, Japan, South Korea, and others create echo effects relating to U.S. credibility and global alignments of power that have systemic effects.

Another way in which such indirect effects on systemic outcomes can occur is by taking steps to adjust the opportunities, constraints, and incentives for actors within the system, and thus shift behavior over time by adjusting the context for state action. Much of the global political, economic, and security activity that works in the United States' favor—such as corporate choices to subject themselves to sets of standards or norms—arises through the self-motivated actions of individuals, companies, and nations working in their own interest. It does not occur because the United States directly causes it to. These different actors are making decisions guided by their own internal motivations and in response to the broader context of incentives and constraints in which they exist. These could be laws and agreements, economic or political relationships, culture and norms, or feelings of affinity or fear.
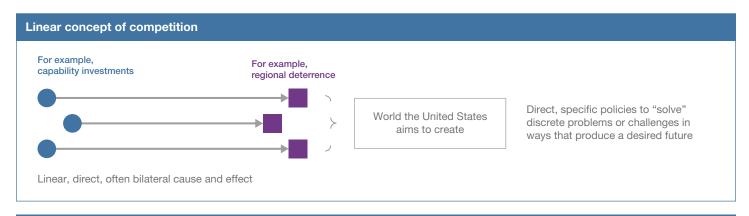
Figure 1 offers a graphical representation of this distinction. A linear, direct, and often bilateral approach to competition deploys specific policy actions to achieve issue-specific results. It implicitly presumes that the sum of those outcomes will create the world that U.S. strategy aims to achieve, but this expectation is seldom explicitly assessed and instead actions are piecemeal without strategic linkages. Competing in systemic terms, on the other hand, involves taking actions with the goal of generating holistic effects, influencing the nature and operation of the system. In writing about planning under conditions of deep uncertainty, Paul Davis has called this "environment shaping," or influencing the future "by promoting international stability, economic integration, and universal democratic principles . . . through commitments, relationships, and credible military forces."[31]

As Figure 1 suggests, the sum of U.S. actions during the Cold War—though not necessarily always understood to be part of a formally linked systemic concept—is a good example of such an approach. The United States took many specific competitive actions, from creating alliances to designing trade regimes to supporting international economic institutions. These involved engaging in the rivalry with the Soviet Union in these specific domains. More importantly, however, they worked together to create a systemic reality in which competitive advantage tilted in the direction of the United States and its friends and allies. Critically, too, as we will emphasize, intentional U.S. foreign policy actions only exercised partial influence over those system-level outcomes. They were also influenced by the success and stability of domestic socioeconomic models, secular trends on issues like development and the spread of democracy, and the impact of specific events.

In terms of outward-facing strategy, the great risk today is that the United States is contesting Chinese and Russian objectives and initiatives in a case-by-case, piecemeal basis, without necessarily seeing the connections between them or thinking of the ways in which they shape the larger environment. In the case of Russia's invasion of Ukraine, the United States has used the moment to strengthen alliances and generate other systemic effects, but mostly in a reactive way not yet extending to fundamental systemic initiatives.

FIGURE 1
Competing in Systemic Terms

Linear concept of competition

**For example,
capability investments**

**For example,
regional deterrence**

World the United States
aims to create

Direct, specific policies to "solve"
discrete problems or challenges in
ways that produce a desired future

Linear, direct, often bilateral cause and effect

Competition in a complex system

Whole is
greater or
different than
sum of its
parts

*Open, fair, just marketplace
of choice* as one basic
gestalt concept

Actions that shape the international
system such that it generates emergent
behavior consistent with the future the
United States is trying to create

Policies designed as inputs that
affect and shape the dynamics
in a complex adaptive system

Larger actions, themes, and realities that shape state perceptions of their interests and goals

Cold War example: U.S. building of institutional order, alliances, trade networks created
context that shaped state behavior more than any specific policy—and enveloped the USSR

Conceptualizing Systemic Competition

The United States faces a choice over the type of competition it pursues in the coming years: one focused on specific issues, where it strives to come out ahead of rivals in a series of bilateral relationships, or one where it exploits global interconnectedness to shape international systems and increase the likelihood of desirable futures from the standpoint of U.S. interests. Either form of competition can be zero-sum, positive-sum, or somewhere in between, but the fundamental distinction is between competing on a one-off basis and competing in systemic terms.

Much of the current discussion of strategic competition focuses on contests with specific countries or over particular issues and measures them in terms of the degrees of power and influence held by the United States and a rival or competitor. An underappreciated component of strategic competition is winning the contest to set the foundational global paradigm, or "the essential ideas, habits, and expectations" that govern the international system.[32] This work builds on that of earlier scholars, such as Immanuel Wallerstein and Robert Jervis, who have emphasized the importance of structural and systemic power. Susan Strange, for example, argued that "structural power decides outcomes (both positive and negative) much more than relational power does."[33] World Systems theorists have thought in systemic terms for decades.[34]

In those and other examples, a rich tradition of scholarship has examined just such systemic dynamics in world politics for decades. In this section, we review some of that scholarship for hints of what a systemic mindset would suggest for U.S. strategy. That scholarship has been especially rich in three subjects: network effects, system dynamics, and complexity science. While somewhat theoretical, they lay the essential basis for a systemic approach to international strategy.

Types of Competition

In Figure 2, we characterize four types of competition. The first, *competing over particulars*, refers to situations in which a small number of actors compete over a narrow scope, such as specific industries (e.g., cars or agriculture) or in the cultural space when countries subsidize their artists and invest in promoting them abroad, or in such case-specific contests as the U.S.-Soviet space race.[35] *Managing the system* occurs when parties participate in, administer, or monitor activities within a current structure or substructure of the international order, such as monitoring trade agreements, maintaining institutions, and mitigating disputes. Two examples are the World Trade Organization or the United Nations Framework Convention on Climate Change (UNFCCC). Managing the system may include shaping or changing components of the system but does not alter the basic, or fundamental, system structure. *Competing for comparative advantage* refers to situations involving a small number of parties, such as two or three states, competing over issues of large scope, such as through bilateral trade negotiations. These take the typical "win-lose" or "win-win" perspective of negotiation and competition.[36] Finally, *competing for the system* involves seeking to incrementally reshape the environment, aligning systemic context—structures, incentives, and expectations—with policy objectives.

FIGURE 2
Types of Competition

Breadth of Focus		
	Narrow	Broad
Macro	**Competing for Comparative Advantage** *Examples: economic advantages, tariffs*	**Competing for the System** *Examples: institutions of global order, such as the World Trade Organization, International Monetary Fund, World Bank, and Bank for International Settlements*
Micro	**Competing over Particulars** *Examples: industries or sectors, security cooperation participation, cultural penetration*	**Managing the System** *Examples: specific initiatives within individual institutions, mitigating disputes*

Level of Focus (vertical axis label)

Many literatures offer insight onto the character of competition at the systemic level, but we highlight three here. The first is the complexity sciences, which deal with the operation of complex adaptive systems. The second is network analysis, and the third is system dynamics.

Complexity

The complexity sciences provide essential insight for understanding power in the international arena, characterizing human social systems from families, communities, and societies to large institutions and governments.[37] Nearly all scholarly disciplines address complexity in some way, from physical and natural sciences to social sciences. In the physical sciences, complexity is a major theme of chemistry and chemical interactions, and at the subatomic

level it has upended the fundamentals of our Newtonian understanding of the world. Biology and natural sciences have been at the forefront of complexity in thinking about individual organisms and ecosystems, in terms of their own behavior and interaction within an ecosystem. Complexity is central to how anthropologists and sociologists approach behavior of individuals and organizations, including their internal behavior, responses to one another and with the surrounding environment, and emergence of properties such as culture and customs.

Across literatures it is common to distinguish among simple, complicated, and complex systems.[38] For world politics, we can include complex adaptive systems, emphasized by Davis et al. and outlined in Table 2.

In this framework, *simple* systems have few components and can be easily understood, such as routine processes within an organization (e.g., loading ammunition in the military). The elements of the simple system do not have individual agency and are not adapting. *Complicated*

systems have more parts and may even have many parts, but they are ultimately understandable by analyzing and summing the direct relationships between elements. For example, an F-35 has many parts, but its overall behavior can be understood by examining the relationship of each inanimate object in relation to others. The elements do not adapt, and there is no emergent behavior. Finally, *complex* systems may have few or many parts but have greater interconnection among elements in the system and greater interdependence. Instead of summative behaviors, they have nonlinear and emergent behavior—for example, an accelerating viral social movement. And complex systems may have disjointed behaviors that occur at a point of phase change, such as the behavior of ant hills or bee colonies—emergent behavior that is not reflective and reactive on the part of the agents. The systems adapt and evolve as individual agents within them make decisions and adapt to each other and their environment.

TABLE 2

Characterizing Environments: Simple, Complicated, Complex, Complex Adaptive

System Characterization	Number of Elements	Nonlinear	Adaptive Agents	Emergence
Simple	Small	No	No	No
Complicated	Larger	Yes	No	No
Complex	Usually large	Yes	No	Yes (inanimate features)
Complex adaptive	Larger (with exceptions)	Yes	Yes	Yes (animate agents)

SOURCE: Adapted from Paul K. Davis, Tim McDonald, Ann Pendleton-Jullian, Angela O'Mahony, and Osonde A. Osoba, "Reforming the Teaching and Conducting of Policy Studies to Deal Better with Complex Systems," *Journal on Policy and Complex Systems*, Vol. 7, No. 1, 2021.

Some complex systems can be further understood to be *complex adaptive systems*. These are *complex* because they represent collections of many elements interacting in ever-shifting, often disordered ways. They are *adaptive* because they change over time as the individuals or organizations that constitute the systems ("agents") continually and consciously adjust their behavior to try to achieve their goals. These behaviors may occur, for example, in horizontal and vertical teams within armed forces, among individuals and organizations connected by cyber networks, and in the use of weapon systems.

Complex adaptive systems make up international competition. There are many actors, organized into communities, organizations, industries, and governments, with many interconnections and interdependencies. They have formal and informal rules and relationships that form structure, and these relationships are nested, such as alliances or trade agreements that exist within larger communities of nations or economic blocs. There is no single person or nation in charge; instead, authority is widely diffuse, and actors are acting and reacting to one another, informed by their own interests or beliefs.

There typically are not clean demarcations among these system types. It is possible for a complicated system, such as a truck or drone, to have complex behaviors occurring within it, such as the operation of algorithms in its onboard computers. Instead of seeking hard distinctions, we can use this as a first-order understanding and think of systems or situations as being more or less complex and adaptive, exhibiting more or fewer characteristics of complex systems.

Complex adaptive systems exhibit a set of common characteristics.[39] They can be understood as networks of

Complex adaptive systems make up international competition.

elements and structure, where the elements can be animate or inanimate, and the structure is their relationships. Complex systems may have *multiple levels* and be *nested* within each other, such as a large corporation that has layers to its management and exists within domestic and international industry and global trading systems. The systems can be understood functionally, defining their boundaries and understanding relationships in terms of what the systems are producing, or trying to produce (whether successfully or not).

Individuals or organizations operating within the networks are *agents* and make decisions from their own interest in response to others and the environment around them. Through the collection of individual actions, the system adapts over time, leading to self-organization or spontaneous order. The agents acting and reacting are not necessarily thinking of the entire whole, such as markets or societies. Complex systems often exhibit behaviors that are *nonlinear*, meaning that changes do not occur in consistent ways or that small inputs lead to categorical changes in behaviors, such as the spread of a virus, or panic in response to terrorism.

Self-organization is a form of *emergence*, which is one of the most distinguishing characteristics of complex systems and central to our concept of competition. Emergence

occurs when a system exhibits properties that are different than those of its individual pieces. The madness of crowds is an emergent property from the reasoning of individuals. Deterrence is also an emergent effect: Seldom the result of a single move (like reinforcing a military position), deterrence more often arises from a long series of actions, statements, and signals that accumulate to a larger effect than any one action alone. Seva Gunitsky describes emergent properties, nonlinear dynamics, and non-additive models as essential aspects of international relations.[40] Such systems exhibit concepts from systems sciences, such as positive feedback loops and self-dampening dynamics, as well as co-adaptation. "Complex systems are not merely adaptive but co-adaptive. This means that actors are not only shaped by the system but can also shape the system itself."[41]

One of the most powerful emergent properties in the international order is that of the *paradigm*. Donella Meadows describes a paradigm as "the shared idea in the minds of society, the great unstated assumptions, unstated because unnecessary to state; everyone knows them, constitute that society's deepest set of beliefs about how the world works."[42] Nations whose values, norms, and preferences come to dominate the paradigm of any era gain tremendous competitive advantage.

Agents not only have conflicting values and interests, they may also have conflicting viewpoints about how to conceptualize and achieve them. Values and interests guide decisions by agents in response to the actions of other agents and to the conditions that surround them. These could be individuals, groups, or governments. There often is not alignment, which can lead to conflicting viewpoints on the same situation. Or the interests of a population (or subset of a population) within a country may influence its decisionmaking in relation to other actors. The resulting interconnections, differing views, and differing values lead to systems being *deeply uncertain*, a special form of uncertainty that arises when parties "cannot agree upon (i) the external context of the system, (ii) how the system works and its boundaries, and/or (iii) the outcomes of interest from the system and/or their relative importance."[43] In this situation, conventional approaches to point-based uncertainty (e.g., something is "30 percent certain") are not possible, and are potentially misleading.

Finally, over time, complex systems generate *feedback*, as the outputs from one action to the input of a next action. As Jervis explains, "feedback is positive or self-amplifying (and destabilizing) when a change in one direction sets in motion reinforcing pressures that produce further change in the same direction; negative or dampening (or stabiliz-

Nations whose values, norms, and preferences come to dominate the paradigm of any era gain tremendous competitive advantage.

ing) when the change triggers forces that counteract the initial change and return the system to something like its original position."[44] Part of the U.S. goal in systemic terms, then, is to take actions that prompt positive feedback in directions helpful to U.S. goals, such as general adoption of sound fiscal policies, and that promote negative feedback to dampen aggressive or value-destroying actions by hostile or revisionist powers.

Network Thinking and Analysis

A second category of analysis that can be useful in developing approaches to systemic competition comes from studies of networks. Some of these studies are highly technical, describing the nature of human social network dynamics in almost algorithmic terms.[45] Others derive broad principles for operating in human social networks. It is the latter that we find most useful in contributing ideas for competing for the system.

Several recent analyses have considered the role of social and international networks in ways more general and theoretical than the narrower field of network analysis. Anne-Marie Slaughter has offered a network-centric approach to national security strategy. She argues that there is power in networks. "Influence requires connection," she concludes; "the denser the web of relationships, the greater the influence."[46] "To see the international system as a web," she argues, "is to see a world not of states but of networks, intersecting and closely overlapping in some places and more strung out in others." It is a world composed of all the ties of interdependence and engagement and interaction: trade, climate and environmental

issues, drug and weapon trafficking, global finance and money-laundering, disease, and much else.[47]

Given the web-based reality of the international system, Slaughter contends, web or network-oriented strategies—thinking in systemic rather than linear and discrete terms—are more effective than issue-specific ones.[48] She means something somewhat more specific and slightly different from a general systemic approach; she is arguing for an effort to achieve progress on specific issues by assembling networks that connect societies in a globalizing world.[49] That is one way to compete for a system but is best viewed as a critical subset of the mindset we are proposing, which is not only about building networks but finding other ways to use system design and influence to shape preferences and behavior.

David Singh Grewal's treatment of network dynamics is perhaps the most directly relevant to our purposes. His argument is akin to our emphasis on systemic dynamics: He describes how global interactions produce what he terms "standards" that shape behavior. Standards are tacit and sometimes formalized agreements or conventions that regulate behavior in networks in service of shared interests. In the process of evolution, *some* standards become much more influential than others: "As some standards gain prominence," he adds, "alternative ones become less attractive choices for social coordination," a process that "can prove self-reinforcing." This comes partly through pure muscle: "The larger the network," he explains, "the more powerful the standard underlying it will be—and the more pressure non-users will feel to adopt that standard." He adds that "Expectations play a critical role in this process"—if people anticipate that a standard will become

universal, they will behave accordingly even if by some objective measure it should not.[50]

Grewal refers to the overall mechanism as "network power," which is a good analogue to the sort of systemic power and influence we are emphasizing. Network power, he argues,

> consists in the joining of two ideas: first, that coordinating standards are more valuable when greater numbers of people use them, and second, that this dynamic—which I describe as a form of power—can lead to the progressive elimination of the alternatives over which otherwise free choice can effectively be exercised.[51]

Such power "works through the simultaneous promise of belonging to a dominant network and the threat of social exclusion, which together give a network influence over the actions of individuals."[52] Favored sets of standards and conventions can become quite sticky once they are in place: It is costly to move from one standards or rule set or network to another, whether an actor is a technology company or a cell phone subscriber or a nation.

This is in many ways the story of the Cold War and post–Cold War international orders. Standards associated with free markets and, in many cases, liberal democracies, became dominant and attracted more adherents. Their growing predominance then further enhanced their attractive power, which made them even more dominant. That process does not reflect all the incentives and interests at work—inherent human desires for dignity and prosperity, the spread of ideas, and predominant U.S. economic power all played a role. But once other factors begin to create a network around certain rules, norms, and actors, the dynamics described here can create momentum behind it, and a certain degree of path dependence.

Grewal describes the most important and decisive standards as the "focal points" around which global action becomes centered.[53] These can be leading norms, such as the prohibition on territorial aggression or human rights conventions. They can be technical standards, such as the underlying protocols that shaped the structure and operation of the internet. They can be dominant applications, such as software and social media platforms. They can be economic policies and practices, such as the fiscal and monetary standards often imposed by the International Monetary Fund.

Taken together, a set of dominant focus points can align to establish a predominant global arrangement. What Grewal is describing, in other words, is the same notion mentioned above, of a dominant paradigm—precisely the concept at the core of many system-level theories, and one of the best ways to understand the degree of U.S. predominance in the post–Cold War era. The United States came to reflect the hub and leading embodiment of the dominant global paradigm.[54] Whichever state manages to achieve that same result in the 21st century—if any does—will earn significant competitive advantage.

As Grewal emphasizes, one implication of this process is to restrict free choice, on the part of individuals, groups, and whole nations. That dynamic is not always liberating: The dominance of neoliberal standards, concepts, and institutions that peaked in the 1990s ended up depriving many nations of more worker- and equality-centric approaches that could perhaps have avoided some of the present political polarization and social instability. Network power, Grewal recognizes, involves an uncom-

fortable dance between choice and coercion that can rein-force the "systemic power of already privileged actors or institutions."[55] But our focus here is not on the normative quality of the standards which become dominant—that is the subject for another treatment. Our focus is on the ways in which the United States can use such network power to its advantages in the current rivalries.[56]

This emphasis on networks is a bottom-up philosophy. Grewal describes the idea of "sociability," which is one way of thinking about the interconnections that emerge in net-works. Under relations of sociability, "aggregate outcomes emerge not from an act of collective decision-making, but through the accumulation of decentralized, individual decisions that, taken together, nonetheless conduce to a circumstance that effects the entire group."[57] In that way, network dynamics mirror the emergent behavior of com-plex adaptive systems—indeed, that is precisely what a network of human agents is. This is part of the challenge but also the potential magic of competing at the systemic level: Actors can gain important leverage by influencing processes of bottom-up sociability, to bend them in the right direction.[58]

Grewal's analysis also points directly to the strate-gies U.S. rivals are using to challenge the predominance of U.S.-centric standards. "The best way to counter net-work power," Grewal suggests, "is through institutional changes to the configuration of networks," specifically by breaking down the universality of a given standard or net-work by providing "alternative and multiple channels for such access, refusing to privilege any one." The required response is to "open up access to its network in a way that does not require outsiders to abandon their standards."[59]

In a more multipolar era, the universality of standards will be harder to sustain.

One challenge for the United States—both in the con-text of emerging rivalries but also the growing demand for a voice by rising powers—is that in a more multipolar era, the universality of standards will be harder to sustain. If "standards have a power that grows in proportion to the size of the network they unite,"[60] then degradation in network size will inevitably weaken standards. As Chinese alternatives to U.S.-led institutions and process become more prevalent, it will be more difficult to sustain network power.

Grewal argues that there is a point at which a standard or network acquires enough participants that it suddenly begins to shut others out in a more decisive way. Alterna-tively, a dominant network will shed members until some tipping point where its predominance collapses.[61] This is precisely the question with the degree of power inherent in the U.S.-led postwar order: At what point do specific elements lose enough members or perceived necessity to collapse? He stresses that these points are very difficult to identify in advance, will be different for different kinds of issues, and are best conceived as loose dynamics rather than very precise tipping points.

One way to approach this challenge is to continue to sustain the normative superiority of U.S.-centric standards. Grewal does admit that pure membership is not the only factor that shapes the success of standards: Networks can attract members "because of the desirability of the particular standard that unites it."[62] And this is potentially a strong competitive advantage that the United States possesses, because of its clear normative advantage relative to both of its major rivals—especially in the wake of Russia's aggression against Ukraine.

One way in which a major power can defend its established network power is to make choices more difficult. Most states, given the choice, would prefer to belong to any and all available networks. Only if the networks are incompatible and "govern the same mode of social interaction without allowing complementary or parallel structures"[63] are actors forced to choose and does one network gain the potential for having power over others. In the postwar order, for example, both intergovernmental economic institutions and private investment firms complicated choices about national economic and trade strategies by conditioning their involvement on a given set of rules. The postwar order, indeed, has had a strong flavor of constrained choice, creating default norms, rules, and standards that countries must abide by to gain access to critical parts of the order. One difficulty in world politics is that it can be difficult to sustain this exclusivity over long periods: Countries want to belong to the China-led Asian Infrastructure Investment Bank (AIIB) as well as the World Bank, for example. This is precisely China's narrative about the current order—that it limits choice in an increasingly multipolar world.

Another avenue to preserving network power is to find ways to make alternative institutions abide by the same standards as the prevailing ones. This is what happened, for example, with the AIIB. China's effort to begin constructing an alternative to the World Bank/International Bank for Reconstruction and Development system could only attract a significant number of members because it promised to use essentially the same standards for investment as that system. This could change over time, but if it does the sustainability of the AIIB might come into question.

Systems Sciences

The systems sciences include fields ranging from engineering to design that aim to see and understand the world in terms of a fuller scope of elements and their relationships. While systems thinking spans the natural, physical, and social sciences, modern fields pertinent to this study began in the mid-20th century with systems analysis, system dynamics and engineering, and—in addition to network sciences outlined in detail above—approaches to developing the architecture of social systems.

The 1950s saw the emergence of both *systems analysis* and *system dynamics*, distinct fields that were both motivated to see the relationships among elements as important as the elements themselves. Systems analysis emerged in the years following World War II to provide structured approaches to the study of military operational and strategic questions, informing decisionmaking on complex problems. Systems analysis has been defined as "a process of systematic examination of a problem of choice in which each step of the analysis is made explicit wherever pos-

sible," and stood in contrast to intuitive approaches to decisionmaking.[64] The approach included aspects such as specifying objectives, setting criteria to assess success against objectives, identifying the relevant components of a system and their relationships, studying a system and its related issues, identifying existing policy recommendations, and—if left wanting—developing new options.[65]

Around the same time as the emergence of systems analysis, Jay Forrester pioneered system dynamics, an engineering approach using conceptual and detailed modeling to estimate the relationships among components that determine how a system performs over time.[66] System dynamics helps to understand the behaviors of complicated and complex systems, which may often be nonlinear. The field developed initially through application to industrial and corporate problems, then expanded to societal scopes ranging from cities to worldwide dynamics.[67] System dynamics has both qualitative and mathematical components, with the approach beginning by developing simple causal loop diagrams demonstrating the relationships among elements; from these diagrams, feedback and stock and flow models can be developed showing quantitatively how values change within the system over time. Feedback loops demonstrate amplifying, neutral, or dampening relationships.[68]

When focusing on societal behavior, the incentives of the actors become a focal point. Efforts to design social systems may place greater emphasis on the role of incentives, including it as an "unseen" feature of a system along with characteristics such as culture. (This is a leading component of national security strategies, for example—to shape the incentives of other governments in the system.) These accompany the visible structural aspects, such as elements and their relationships. Walter McClure uses the

System dynamics helps to understand the behaviors of complicated and complex systems, which may often be nonlinear.

term *macrosystem* to refer to all elements, structure, and contextual elements that strongly relate to a definable purpose.[69] He describes an approach to social system design, *Large System Architecture*, that begins with a statement of goals, and then iterative process of analysis, design, and implementation to bring a systems structure and incentives increasingly in line with goals. The structure, incentives, and culture of markets, agreements, institutions, or alliances serve to change the incentives on actors.

A systems view can be aided by adopting multiple lenses, viewing the system from multiple vantage points or perspectives. Each observer of a system, or stakeholder, has its own view of a system's behavior and what it means to them. Different governments, for example, view the basic rules and norms of the postwar system in radically different ways. These divergent perspectives exist even between the United States and some of its closest allies, on issues such as international law and trade policy.

The discipline of international relations is inherently systems-focused, but there are barriers to its effective adoption. A first is overcoming cognitive, institutional,

and practical challenges to systems thinking. Individuals have limited cognitive abilities to keep many complex factors in mind, and so we generalize and abstract, and focus on more immediate pressing problems.[70] Therefore, both mindsets and tools need to be developed for structuring thinking to account for the many factors. Institutionally, most organizations are structured to respond to incentives that do not always provide space for considering systemic approaches to problems. To change a system in truly fundamental terms requires long, sustained intervention and collective action, including involvement of many stakeholders throughout the system.

A second barrier to effective use of systems thinking is translating it into practical tools that can be employed by national security practitioners. Most people, including those throughout the government and civil society, understand that there are deeper, root causes to problems in the world, but it is not clear how to translate a systems view of the world to practical steps. To do so requires tools in analysis, design of campaigns and strategy, and implementation—which we take initial steps toward in the next section of this Perspective.

Principles to Guide a Strategy of Competing for the System

If the United States accepts the importance of systemic competition, the logical next step is to determine what specific policies and strategies support such an approach. Drawing from our source literatures and vignettes of systemic power, we have developed a list of tools and methods for shaping an international system. They are organized into *analysis*, *campaign and strategy design*, and *implementation*.

Analysis

The first part of a systemic approach to competition is to assess the international environment as a system, understanding its networks, key nodes, interactions, and other systemic dynamics:

1. **Have a clear understanding of systemic objectives.** Building and refining the international order requires many small actions that contribute to a larger whole, but the way in which these independent actions add up to systemic effects can be difficult to understand. Clarifying an actor's objectives is an essential starting point to exercising systemic influence. The objectives may be expansion of a national belief system, such as the Marshall Plan's support for European countries to resist Soviet Communism, or the post–Cold War liberal order advancing liberal ideas of economies and societies. They can include material considerations, such as access to resources, the stability of the system (a major objective of the Concert of Europe), or general prosperity. Having a clear understanding of goals can help policymakers analyze where the order is falling short, prioritize actions, and provide clarity to other agents in the system.

2. **Distinguish symptoms and causes of problems.** Much of the work of military and political leaders is inevitably responding to problems as they present themselves. But responding only to problems cedes the initiative to circumstances. Attention

Responding only to problems cedes the initiative to circumstances. Attention to the foundational causes, from where problems arise, enables leaders to target them.

to the foundational causes, from where problems arise, enables leaders to target them. Analytically, the definition of a problem can be understood as the discrepancy between goals and actual system behavior, and the causes of such behavior may be multidimensional.[71]

3. **Map the systems.** This can be done to various degrees of detail, from general and conceptual to detailed and parameterized. System mapping can serve analytical purposes, to help an analyst understand how a system is or should work, or it can serve communicative purposes, showing to others how the system functions. It may include an evaluation of the values, motivations, and objectives of key parties, identifying their capabilities and constituencies.[72] As part of developing a mapping effort, the U.S. government should seek to identify systemically important entities, relationships, or networks. These may include states, international institutions or organizations, and companies, including social media companies. Those that are systemically important may have many connections to other entities or may establish norms or expectations upon which other actors in the system base their behavior. The field of assumption-based plan-

ning (ABP) uses the concept of "load-bearing" to describe those assumptions that, if they were faulty, could cause a plan to fail.[73] The same concept can be applied to analysis of international relations and networks: Analysis can help identify strategically important, or "load-bearing," elements or dynamics of the system, the critical nodes on which others depend. The assumption here is not that such relationships can be reduced to simple algorithmic rules to allow fine-tuned modeling—quite the opposite, in complex adaptive systems full of changing behavior and feedback loops. But there is value in understanding the main elements and key relationships in any system, even at a relatively qualitative level.

4. **Find leverage points that take advantage of complex causalities.** Leverage points are places in a system where inputs will affect a comparably large degree of systemic dynamics. Some of these will emerge from an assessment of load-bearing elements of a system. Others will be ideational and normative rather than physical or material: Meadows argues that it is the rules and goals of a system and the "mindset or paradigm out of which the goals, rules, (and) feedback structure arise" that typically constitute the most powerful leverage

points in a complex system.[74] Looking at measurable data, she argues, is "Diddling with details, arranging the deck chairs on the Titanic. Probably ninety-five percent of our attention goes to numbers, but there's not a lot of power in them." More spending on police, for example, does not always reduce crime, in part because—like many complex systems—pushing numbers one way or another does not necessarily address, and can exacerbate, feedback loops operating within a system. The most powerful leverage points may be the formal or implicit rules of a system, tapping into its power of self-organization, the goals of the system, and changing mindsets by changing the paradigm.

5. **Understand the role of time in the system.** Systems are continually evolving, and interventions have downstream effects—thus expanding the range of opportunities to have long-term impact. In some systemic competitions, time is likely to work in favor of one of the competitors. During the Cold War, for example, in systemic terms time was on the U.S. side (though it took some time for U.S. officials to appreciate this): The Soviet system was destined to weaken, both economically and socially, and the multinational character of the Soviet empire was destined to become more of a problem for Moscow. Time can have more issue-specific implications, such as favoring one side in a specific technological contest or making one side more dependent on some resource or economic partner. It can be difficult to make such judgments in the middle of events, but time is a critical variable in any systemic competition and assessment.

Campaign and Strategy Design

Having assessed the character of the system, the next step in constructing systemic strategies for competitive advantage is to design the U.S. strategy or approach. Designing for systemic effects has several specific requirements:[75]

1. **Identify key design principles oriented to achieving objectives.** In the absence of a step-by-step roadmap, a set of design principles can bridge the day-to-day decisions and actions of creating policy or institutions. In postwar European efforts to influence the regional order, for example, a leading principle was *interdependence*. By starting with cooperation on material items, such as coal and steel, leaders of industry, labor, and governments took steps toward greater cooperation in other areas, such as the energy, markets and security. The road toward European integration did not need to be—and could not be—mapped out entirely in advance. So long as incremental steps were working toward integration and aligned interest, creating more prosperity, security, and liberty for all parties, the project could be seen as on track.

2. **Make values and visions explicit.** As in the Cold War, a clear vision for the future of a system, including the core values that are its objective, is a source of significant competitive advantage for the United States in any system.[76] This vision needs to be articulated clearly and in a way that can have general appeal and be reflective of the aspirations of a local society. Put more broadly, systemic strategies built around a concept of meaning will be stronger than those restricted to purely transactional or material

gain. Empirical evidence seems to support the intuition that an order organized around a vision of self-determination, fairness, and rule of law will have greater intrinsic appeal than one that is exploitative, where the weaker party does not have agency in the transaction. During the Cold War era, the economic and political unions of the European Community and Common Market were powerful magnets for Central European states and enabled coordination among states and specializations of their economies. Comecon (the Council for Mutual Economic Assistance), the economic union of the Warsaw Pact, had a more difficult time. The Soviet Union sought to direct the economic output of member states but met resistance.

3. **Think at multiple levels and across multiple domains.** The international system can be observed at a macro level, such as the formation of international social, political, and economic institutions, such as United Nations and the European Union; at meso institutional levels, such as the U.N. Security Council or the European Parliament, Council, or Central Bank; or at the micro level, among interaction of individuals and organizations. In complex systems theory, each level has its own sets of norms and rules, and a higher level assumes the rules of lower levels—thus, changes at lower levels can affect higher levels, yet the incentives and constraints on individuals and organizations are heavily influenced by the systems in which they are situated. Enduring change requires alignment among levels to sustain.[77] If the rules of a lower level are inconsistent with the rules of a higher level, the activities

> An order organized around a vision of self-determination, fairness, and rule of law will have greater intrinsic appeal than one that is exploitative.

will be resisted, or their distinctive edges sanded down, or outright eliminated—as shown by efforts at constructing civil society in unfree countries. At the same time, any holistic strategy for systemic effect must incorporate fully integrated actions in many domains—diplomatic, economic, informational, military, and others.

4. **Develop a clear set of priorities that lie at the heart of the approach.** In any system, not all issues or trends are equally important. Some rival actions or campaigns or ambitions will have much larger systemic effects than others. The essence of a systemic strategy is to identify the places or issues of greatest significance and gain decisive competitive advantage in them. Even though a systems mindset demands a holistic appreciation for the full range of events in the system, that does not negate the criti-

cal role of prioritization. Effective strategy demands finding those few issues where larger systemic outcomes will be determined and focusing on them.

5. **Think in terms of indirect forms of power.** Thinking in systemic terms requires an emphasis on indirect ways of exercising power, ones designed to shape the context for action rather than exercising direct control. That more direct, traditional concept of power has been defined by one political scientist as "the capacity of some persons to produce intended and foreseen effects on others."[78] But in complex systems, the goal is to influence the "invisible fields that shape behavior"[79] rather than to determine the behavior more directly. States and policymakers interested in such indirect power will focus instead on exercising influence through agenda setting[80] or the broad values and beliefs present in a given context.[81] Taking this approach means prioritizing indirect action, seeking to modify structure, incentives, or culture—to shape the context that generates behavior. It can be effective to confront an actor head-on to change their behavior, such as the imposition of sanctions on leadership of a state to raise the costs of undesired behavior. But more enduring and wider-scale change can come through altering conditions, both among and within actors in the system. This principle highlights the value of changes to the established values and habits of key social institutions, such as the corporation:[82] The movement toward corporate social responsibility and "stakeholder capitalism" is one example of a way to shift the system by changing the behavioral programming of some of its key elements. Yet attending to indirect forms of influence also means taking seriously the role of reputation and prestige: Other actors' perception of the U.S. trajectory of power, for example, will have echo effects throughout world politics. This does not imply that any actors must take a rigid and obdurate approach to prestige, overreacting to every insult; but it does mean that a systemic view cannot ignore the very real role of perception of reputation and power as one source of system outcomes.

6. **Identify and leverage areas of shared objectives among system actors.** System actors—whether governments, industries, or individual organizations and individuals—respond to the environment around them through decisions informed by their own values and interests. Both values and interests have intrinsic roots and are driven by connections within the system. The interest may be to stay in power, to advance a constituency, or to regain national pride. When seeking action by a party, it is not realistic or sustainable to rely on altruism or even a common appeal of culture, heritage, or worldview. The Concert of Europe, integration of postwar Europe, Cold War, and post–Cold War order all emphasized economic prosperity and military security in their creation of new systemic orders. These created powerful gravitational forces. Aligning interests through institutions and relationships can, over the long run, be simpler, and more powerful, than attempting to directly influence behavior. The promise of new markets can do more to drive increase in industrial production than fiat from a government.

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7. **Think in terms of systemic resilience—yours versus your rival's.** In systemic competition, enhancing the resilience of one's own system is a critically important baseline strategy. A systems perspective highlights this issue because resilience—the ability of a system to sustain attacks or negative effects and bounce back or return to an equilibrium—is a critical systemic property, as opposed to issue-specific steps to improve a nation's strength of security. Thinking in terms of resilience is essential for a networked reality.[83] This principle may suggest specific systemic design actions—for example, thinking in systemic terms now appears to involve an embrace of distributed, individually resilient nodes in a network, whether in terms of domestic energy generation or forward-deployed U.S. military posture.

8. **Build pockets of natural initiative and threat response into the system.** Another aspect of system design suggested by network approaches is to create pockets of inherent responsiveness to threats and instability within a system or network. These can be as straightforward as emergency response capabilities, such as cyber repair specialists or emergency services personnel. But the United States can

also pursue what Slaughter has referred to as an "archipelago strategy" to build "strong pockets of cooperation among government officials, business leaders, church groups, universities, and many other groups in the private and civic sectors."[84] From a system design standpoint, this means finding various ways, some through direct investment and engineering and others through indirect cultivation, to promote the emergence of such pockets of initiative and response. It is a way of shaping the feedback effects in a system, positive and negative, to one's advantage—for example, strengthening norms and preset agreements that will punish undesired behavior, such as territorial aggression.

9. **Use coalitions, formal as well as informal, as gravitational magnets that strengthen your position.** Alliances can create favorable norms of behavior among members, decrease transaction costs, and reduce uncertainty. They can also create positive returns in the form of economic prosperity and political stability, thereby making the alliance both attractive and a way to ensure stability. The conservative powers of 19th century continental Europe sought to suppress liberal uprisings and ensure regional stability through alliance. They

reserved the right to intervene in a member state if the government was overthrown by revolutionaries. Western Europe created a postwar dynamic that was magnetic, attracting steadily increasing membership into the European Community through the economic efficiencies of the common market. Military alliances have enabled the United States to influence the policies of nations and ensure its own influence through a security umbrella. In the process, the rules and norms promulgated by these coalitions provide critical levers to influence system effects. Rules govern behavior and can be formal, such as the terms of agreements between nations or the requirements of international institutions that are the arbiter of disputes, or informal, such as societal norms and commonly accepted behaviors. To take just one example, the European Union requires new members both to align with values ("stable institutions guaranteeing democracy, the rule of law, human rights and respect for and protection of minorities," according to criteria laid out by member states in 1993[85]) and to be able to integrate their economies into the common market.

Implementation

With the elements of a systemic strategy in place, the United States would then turn to implementation. Implementing a strategy for systemic advantage has somewhat different characteristics than general policy initiatives. It can be guided by several principles:

1. **Shape the impressions of global trends and U.S. actions.** Any human system will depend on *per-ceptions* of emergent trends—perceptions that are always subjective and sometimes badly misplaced—as much as material realities. In some cases—as in Russia's 2022 invasion of Ukraine—obvious facts speak loudly, but even in that case, global views of the aggression were mixed and inconsistent. As Jervis has emphasized, thinking in systemic terms in human social contexts demands priority emphasis to the impressions that actions make.[86] Margaret Wheatley similarly notes that information constitutes the essential shaping agent of complex systems; it is "the fundamental ingredient, the key source of structuration—the process of creating structure. Something we cannot see, touch, or get our hands on is out there, organizing life. Information is managing us."[87] Efforts to shape the information environment must reside at the core of any approach to strategies that seek to operate in systemic terms. This again speaks to the importance of reputation and prestige as one influence on the system, and the importance of informational statecraft in any systemic approach.

2. **Undertake changes to the system incrementally and over time, incorporating feedback.** In a complex system with many actors, the system does not change all at once. There are logical and practical reasons for this. Logically, some changes need to occur before others can take place, due to the temporal nature of complex adaptive systems: Before a peace can be struck, the war must end. A large power may need to join an alliance before other nations reliant on them join the alliance as well. In practical terms, no one person or government has

its hands on all the levers to change a system, and so multiple parties need to be engaged. The metaphor of clearing a logjam provides guidance: An actor seeking to shape a system needs to determine the "front log" in the jam, defined as the log (the step) that, if removed, will cause the jam to shift. To "move" the log, an actor identifies the agent in the system with the capacity to move the log. The actor then works with this agent to persuade or compel the action to be taken, thus causing the jam to shift. The actor then reevaluates the log jam to find the next front log.[88] To extend the analogy, sometimes dynamite can be used to clear multiple jams at once.

3. **Sequencing matters.** The order of steps taken can have a profound effect on whether and how a strategy unfolds. A systems view of strategy should consider the way components interact over time—which ones will be most effective early, which ones later, which as single-shot initiatives, and which as ongoing efforts. To take just one example, in a systemic competition for global influence, it is likely to make sense to put certain foundational initiatives in place first—such as revisions to U.S. policies designed to mitigate reputational harm—before moving on to consciously designed information campaigns. The sequencing of steps to develop agreements or strategy can be called a "negotiation campaign," working on multiple fronts, over time.[89]

4. **Avoid reflexive responses to every action by your rival.** A systems perspective emphasizes the importance of long-term, overarching trends. Individual successes for a rival may be important to these, or they may be marginal and unimportant. A habit of feeling compelled to reflexively counter the actions of the rival, to the point of even mirroring their techniques, might distract from larger systemic goals and produce self-defeating results. This is especially true when the response has negative systemic implications.

5. **Codify changes with institutions.** Leaders and agreements may enact a policy, but its implementation is carried out through organizations of people. Further, individual leaders eventually move on from their position. The prospects for a change taking root and persisting in a system are increased when there is an institution that can carry out the tasks and is responsible for maintaining the change and develops a culture around it. Jean Monnet, a key architect of the Schuman Plan, wrote that the urgency of the moment could create the necessary pressure to drive changes in a system. It was not enough to rely on goodwill alone. "Friend-

Feeling compelled to reflexively counter the actions of the rival might distract from larger systemic goals and produce self-defeating results.

Influencing a system demands reaching many actors.

ship would not be enough," he wrote in his *Memoirs*, "and danger was no longer there to force us together. What kind of institutions, what international laws, could be established to take the place of necessity?"[90]

6. **Support system entrepreneurs and builders.** Many important components of the order are not part of or administered by a national government. These include civic service, media, and educational institutions; advocacy groups; and international organizations from the United Nations to the Internet Corporation for Assigned Names and Numbers (ICANN). These organizations form the linkages of the system and contribute to supporting liberal values. The formation of such organizations is driven by individuals and groups with the motivation to create and build. Much of the challenging work of peace and security is instigated or carried out by individuals, sometimes but often not part of a government. Protecting, supporting, and funding the system entrepreneurs and builders that are human rights advocates, journalists, or civic and religious groups improves systemic conditions and enhances the system's resiliency. These can include what are often called "epistemic communities" or

what Grewal has termed "social imaginaries," the networks of people inventing the future of a network or system.[91]

7. **Emphasize widespread participation.** Influencing a system demands reaching many actors. Unilateral efforts to exercise predominant control will generally not work as well as inclusive strategies that draw many actors into establishing and sustaining the goals of the system.[92] This is true for many reasons, but primarily because the reach and resilience of actions to influence a system are only as great as the support of actors throughout that system.

8. **Build formal nodes of experimentation into governance institutions at all levels.** The business scholar Eric Beinhocker has written about the strategic requirements of responding to a context of complexity. Perhaps his major theme has to do with institutionalizing mechanisms for experimentation. "An evolutionary approach to strategy," he argues, "emphasizes creating choices, keeping options open, and making the tree of possibilities as bushy as possible at any point in time. . . . The objective is to be able to make lots of small bets, and only make big bets as a part of amplifying successful experiments when uncertainties are much lower. Being forced to make all-or-nothing bets under uncertainty means that a company is boxed in—the opposite of a bushy strategic tree."[93] He advocates what he calls a "portfolio of experiments" approach to strategy—trying many things, seeing how they work, and putting resources behind the successful experiments. There are limits to how fundamental that approach can be in national security, but it can be cultivated

by establishing formal nodes—research institutions, experimental technology offices, innovation contests, and much more—that build an ongoing engine of experimentation even within the largest bureaucracies.

Conclusions and Recommendations

Current discussions of U.S. competition and rivalry tend to fit into one of three categories: competing over particulars, managing existing systems, or competing for comparative advantage. We describe these forms of rivalry as *linear*, prioritizing bilateral rivalry over a finite set of parameters and actors. They often occur issue by issue rather than systemically or linked and focus on win-lose or win-win approaches, which can forgo the opportunity to address root causes or create new opportunities through reshaping of the systems within which competition occurs.

These forms of competition have helped the United States to succeed and thrive through decades of international leadership. But the risk of taking a linear approach to a complex, systems problem is in misunderstanding and misdiagnosing the behavior of systems, leading to developing the wrong strategies and being outsmarted by adversaries engaging in system-shaping approaches that drastically limit the effects of linear problem solving or render it moot.

The alternative is to move toward a systems-oriented approach to competition. Thinking in systemic terms means seeing more in *space* (more elements, their interconnections) and *time* (upstream to the origins of system behaviors, and downstream to how actions affect ongoing system evolution) and intervening to shape system structure.

The United States needs to bolster its approach in two ways. First, by adopting a systems mindset—developing some rules of thumb to guide decisionmaking and strategy around system shaping. Second, by developing institutional capacities for developing systemic strategy within and across government and nongovernmental aspects of the policy development process.

As a step in this direction, Tables 3–5 show examples of policies or initiatives that can pair with each of the principles of systemic strategy discussed in the previous section. These provide a potential starting point for improving the U.S. capacity for policy on and planning for systems shaping.

These are still broad recommendations. Incorporating these principles into strategic decisionmaking processes requires recognizing the structural limits of the U.S. government's planning and the fragmented nature of government, nongovernmental, and industry stakeholders. Applying these systemic approaches to U.S. national security generally, or to a particular policy challenge, would require detailed analysis. But several of the essential steps could be taken quickly, as they require only a shift in analytical focus or a minor institutional reform to put in place structural guarantees of taking systems dynamics seriously. What this agenda would look like for a specific issue must be the subject of a future analysis.

At a minimum, however, being serious about a systems mindset in U.S. national security strategy now demands at least two things. The first is a renewed vision for the character of the emerging system—one with a strongly multilateral character—that can help reestablish the United States as the dominant source of systemic leadership. The second is efforts to build the bureaucratic prerequisites of effective

systemic leadership. Given the holistic demands of systemic competition, that would appear to call for not only a dramatic modernization and expansion of U.S. diplomatic capabilities, but a much more formalized commitment to organizations to bring coherence and strategic focus to U.S. economic and informational statecraft.

Whatever the specific policies and investments involved, thinking in systemic terms is not optional for a United States determined to succeed in the current rivalries, especially the contest with China. That rivalry is primarily about control of the system, and that goal must be the focus of U.S. strategy. To succeed, the United States must pursue that goal in systemic terms—by taking actions designed to shape the system rather than merely to achieve individual wins.

TABLE 3

Principles of Systemic Strategy: Analysis

Principle	Examples of Policies or Initiatives
1. Have a clear understanding of systemic objectives	• Define long-term vision of success in competitions to much greater degree of specificity, with leadership coming from Executive Office of President through inter- and intra-agency planning processes • Define objectives in interactive and systemic terms (e.g., achieve X to produce trends Y and Z, which generate effects on Chinese behavior of A, B, and C)
2. Distinguish symptoms and causes of problems	• Perform "root cause" analysis of the origins of observed behaviors • Structure policy research and analysis to account for both upstream drivers of behaviors and downstream effects of actions • Improved clarity around objectives will assist with identifying problems and diagnosing their causes
3. Map the systems	• Maintain an ongoing program of identifying and mapping important parties and their relationships and interests • Make a more formalized systemic mapping the required first step of all strategic analyses (such as the National Security Strategy and the Joint Operating Environment assessment) • Mapping can be done through formal modeling or informal sketches, and by large teams or individuals and employ such tools as social network analysis • Identify the system elements that play an outsized role in performance; they may be indicated through a higher degree of interconnectedness with other elements • Develop multiple forms of measurement of strength and impact for system components, and perform "stress tests"
4. Find leverage points	• Identify those areas where actions can significantly weaken an adversary's position, and/or strengthen the United States' • Policies should discuss how they are targeting leverage points, and whether and how each leverage point connects to a broader system-shaping strategy
5. Understand the role of time	• Situate policies within a wider view of time, tracing the events or drivers that led to the current situation, and articulating how interventions will alter how future events unfold • A longer time horizon opens opportunity for small actions that have a large long-term impact (e.g., by creating new trade relationships) and allows for incremental progress on a change instead of requiring success all at once (e.g.. incremental progress on climate change agreements) • Undertake analysis to determine whether long-term systemic trends are working in the United States' favor or the rival's • Policy planning should account for the longer time horizon and situate current actions within a longer-term context

TABLE 4
Principles of Systemic Strategy: Campaign and Strategy Design

Principle	Examples of Policies or Initiatives
1. Identify key design principles	• Guiding principles can provide focus for otherwise decentralized strategy development across agencies, such as creating greater interdependency or promoting foundational characteristics of human rights
2. Make values and visions explicit	• Lead continually with clear statements of values, providing guidance to the development of policies and moral leadership and setting the tone (this may require recognition of the tensions and conflicts between values and interests when making policy) • When discussing Russia and China, contrast the aspirational values of democracies with the reality of these governments • To make this principle effective, the actor must practice what it preaches to a significant degree; perception of deep hypocrisy will undermine this criterion
3. Think at and multiple levels and across domains	• Strategy development should account for interconnections throughout systems and explore both opportunities and risks by looking "away from the ball," to areas that may not be the most obvious point of focus
4. Establish clear priorities for action	• Establish analytically grounded mechanisms for identifying issues or actions with the largest systemic effects • Prioritize in investments, time, and effort to achieve advantage in those areas
5. Prioritize indirect action	• Seek strategy that avoids taking on a problem directly, instead changing the conditions that gave rise to the problem; this may help with avoiding direct confrontation with interested parties • Strategy should seek to achieve objectives as efficiently as possible, minimizing blowback or unintended consequences
6. Find shared objectives, and appeal to interests	• Implementation strategy for system shaping, or system-sensitive actions, requires broad knowledge of stakeholders, their interests, and capacity to assist or be "spoilers"
7. Think in terms of systemic resilience	• Identify and create hedging strategies for potential strategic weak spots, such as Europe's reliance on Russian energy supplies, U.S. reliance on rare earth minerals by countries with exclusive relationships with China, and vulnerability created by domestic political discord • Similarly, identify ways to weaken the social, economic, or political resiliency of adversaries
8. Build a proactive approach to threat response into system	• Systematically identify and build capacity in areas critical for responsiveness, such as pandemics, terrorism, cyber war, and other contingencies • Situate planning for such events independent of, but linked with, strategy development for system shaping, anticipating that certain actions may lead to higher likelihood of outlier responses
9. Use coalitions as gravitational magnets	• Work to strengthen existing U.S.-led institutions that have echo effects on others' standards and behavior, such as military alliances and economic institutions • Support non-U.S.-led coalitions that have helpful echo effects (such as the EU's independent role) • Work to build new coalitions, processes, and institutions that will have this effect • Preserve support for these coalitions by pursuing inclusive leadership style

TABLE 5

Principles of Systemic Strategy: Analysis: Implementation

Principle	Examples of Policies or Initiatives
1. Shape impressions of global trends and U.S. actions	• Enhance U.S. information narrative contest capabilities • Conduct assessments of the perceptual effects of potential options and the possible system echoes
2. Shape the system incrementally and adaptively	• Focus on creating a sequential "campaign" of actions, taking incremental steps toward the objective • For each step, identify stakeholders in positions to help or thwart the action, and appeal to their objectives or interests to persuade or dissuade their involvement
3. Sequencing matters	• Effective use of sequencing creates opportunities otherwise not possible; it can also minimize friction or mistakes • To develop a sequencing strategy, begin with the desired end point and map backward. Begin with the party most difficult to persuade, who is also critical; consider what would maximize the chances of them agreeing and who needs to be supportive. Repeat the process through a mapping process. When implementing the strategy, reevaluate the map after each step is taken.
4. Avoid reflexive responses to every action by your rival	• Have a clear sense of priorities and red lines to highlight issues and actions that should generate strong direct response • Place individual actions into context of long-term strategy and moderate reactions to specific issues • Develop criteria to assess significance of rival actions; be willing to live with lower-significance actions
5. Codify changes with institutions	• Institutions serve as essential "scaffolding" and supports for the international order, through time, outlasting individual leaders and governments and providing the basis upon which to build • Prioritize capturing relationships, rules, expectations, and processes on through institutional agreements
6. Support system entrepreneurs and builders	• Within government, identify, recognize, and create established processes to generate senior-leader backing for innovators • Invest in innovation contests, entrepreneurial programs in science and technology, and other means of getting resources into the hands of entrepreneurs
7. Emphasize widespread participation	• Support reform of international institutions that would broaden inclusiveness of developing nations • Recruit diplomatic proposals
8. Build formal nodes of experimentation into governance institutions	• Enhance investments in such experimentation-oriented offices such as the Defense Advanced Research Projects Agency (DARPA) and the Intelligence Advanced Research Projects Activity (IARPA) • Create more experimental technology development and procurement offices freed from most bureaucratic red tape and regulatory barriers • Expand funding for outside research and analysis, nonprofit and private sector innovation labs, and other sources of ideas

Notes

1   This focus is reflected in all U.S. national security documents since roughly 2017, including, for example, The White House, *Interim National Security Strategic Guidance*, March 2021, p. 20.

2   One influential recent example in terms of the rivalry with China is Rush Doshi, *The Long Game: China's Grand Strategy to Displace American Order*, New York: Oxford University Press, 2021.

3   Michael J. Mazarr, *Understanding Competition: Great Power Rivalry in a Changing International Order—Concepts and Theories*, Santa Monica, Calif.: RAND Corporation, PE-A1404-1, 2022.

4   Michael J. Mazarr, "The Essence of the Strategic Competition with China," *PRISM*, Vol. 9, No. 1, October 2020.

5   Margaret Wheatley, *Leadership and the New Science: Learning About Organization from an Orderly Universe*, San Francisco: Berrett-Koehler, 1994, p. 9.

6   See, for example, Michael J. Mazarr, Miranda Priebe, Andrew Radin, and Astrid Stuth Cevallos, *Understanding the Current International Order*, Santa Monica, Calif.: RAND Corporation, RR-1598-OSD, 2016; Michael J. Mazarr, *Summary of the Building a Sustainable International Order Project*, Santa Monica, Calif.: RAND Corporation, RR-2397-OSD, 2018; and Michael J. Mazarr, Jonathan S. Blake, Abigail Casey, Tim McDonald, Stephanie Pezard, and Michael Spirtas, *Understanding the Emerging Era of International Competition: Theoretical and Historical Perspectives*, Santa Monica, Calif.: RAND Corporation, RR-2726-AF, 2018.

7   These are summarized in Mazarr, 2020.

8   Recent books that provide overviews of the process of order-building over time include Henry Kissinger, *World Order*, New York: Penguin, 2014; G. John Ikenberry, *Liberal Leviathan: The Origins, Crisis, and Transformation of the American World Order*, Princeton, N.J.: Princeton University Press, 2011; and Kyle M. Lascurettes, *Orders of Exclusion: Great Powers and the Strategic Sources of Foundational Rules in International Relations*, New York: Oxford University Press, 2020. On Roman regional order-building and networks, see Michael P. Fronda, *Between Rome and Carthage: Southern Italy during the Second Punic War*, New York: Cambridge University Press, 2010.

9   Derek Croxton, *Westphalia: The Last Christian Peace*, New York: Palgrave Macmillan, 2013.

10   See Lawrence James, *The Rise and Fall of the British Empire*, New York: St. Martin's Press, 1997, and Niall Ferguson, *Empire: The Rise and Demise of the British World Order and the Lessons for Global Power*, New York: Basic Books, 2004.

11   Richard B. Elrod, "The Concert of Europe: A Fresh Look at an International System," *World Politics*, Vol. 28, No. 2, 1976. For an analysis of its theoretical foundations, see Matthew Rendall, "Defensive Realism and the Concert of Europe," *Review of International Studies*, Vol. 32, No. 3, 2006.

12   More generally, one fine treatment of the emergence of the postwar order is Stewart Patrick, *The Best Laid Plans: The Origins of American Multilateralism and the Dawn of the Cold War*, Lanham, Md.: Rowman and Littlefield, 2009.

13   John A. McKesson, "The Schuman Plan," *Political Science Quarterly*, Vol. 67, No. 1, 1952; K. K. F. Zawadzki, "The Economics of the Schuman Plan," *Oxford Economic Papers*, Vol. 5, No. 2, 1953; A. W. Lovett, "The United States and the Schuman Plan. A Study in French Diplomacy 1950–1952," *The Historical Journal*, Vol. 39, No. 2, 1996.

14   See Mazarr et al., 2016.

15   Quddus Snyder, "Integrating Rising Powers: Liberal Systemic Theory and the Mechanism of Competition," *Review of International Studies*, Vol. 39, 2013.

16   Michael J. Mazarr and Ashley L. Rhoades, *Testing the Value of the Postwar International Order*, Santa Monica, Calif.: RAND Corporation, RR-2226-OSD, 2018.

17   To be sure, the legitimacy of the U.S.-led postwar order, and especially its neoliberal aspects, is now the subject of major contention. The appeal of the liberal model stemmed in part from its rule of law, protection of minority rights, and—for democracies—basis in popular elections. The shortcomings are many internal contradictions, inequality and concentration of wealth, vulnerability to exploitation, and lack of responsiveness to many systemic challenges. This has opened the system up to criticism and skepticism.

18   This analysis does not aim to offer a theory of international politics from a structural standpoint—a sort of updated neorealism. Like those theories, we do assume that structural aspects of world politics help to set the conditions for state behavior. But we offer no generalizable causal theory for how this takes place. Our argument is merely that states can gain competitive advantage from the character of the system—not that

all actions in terms of war and peace and other major geopolitical decisions are dominantly governed by structural considerations.

[19] Barry R. Posen, *Restraint: A New Foundation for U.S. Grand Strategy*, Ithaca, N.Y.: Cornell University Press, 2014.

[20] Michael J. Mazarr, "Preserving the Post-War Order," *Washington Quarterly*, Vol. 40, No. 2, 2017, argues that the post–Cold War era has seen the rise of a "guiding coalition" of over 45 countries, representing three-quarters of world GDP and military spending, which agree on such basic systemic goals.

[21] Evidence on Chinese and Russian systemic strategies, including the details listed in the tables, is drawn from prior RAND work, including Timothy R. Heath, Derek Grossman, and Asha Clark, *China's Quest for Global Primacy: An Analysis of Chinese International and Defense Strategies to Outcompete the United States*, Santa Monica, Calif.: RAND Corporation, RR-A447-1, 2021; Michael J. Mazarr, Timothy R. Heath, and Astrid Stuth Cevallos, *China and the International Order*, Santa Monica, Calif.: RAND Corporation, RR-2423-OSD, 2018; Michael J. Mazarr, Abigail Casey, Alyssa Demus, Scott W. Harold, Luke J. Matthews, Nathan Beauchamp-Mustafaga, and James Sladden, *Hostile Social Manipulation: Present Realities and Emerging Trends*, Santa Monica, Calif.: RAND Corporation, RR-2713-OSD, 2019; Michael J. Mazarr, Bryan Frederick, John J. Drennan, Emily Ellinger, Kelly Elizabeth Eusebi, Bryan Rooney, Andrew Stravers, and Emily Yoder, *Understanding Influence in the Strategic Competition with China*, Santa Monica, Calif.: RAND Corporation, RR-A290-1, 2021; Lyle J. Morris, Michael J. Mazarr, Jeffrey W. Hornung, Stephanie Pezard, Anika Binnendijk, and Marta Kepe, *Gaining Competitive Advantage in the Gray Zone: Response Options for Coercive Aggression Below the Threshold of Major War*, Santa Monica, Calif.: RAND Corporation, RR-2942-OSD, 2019; Michael J. Mazarr, Nathan Beauchamp-Mustafaga, Jonah Blank, Samuel Charap, Michael S. Chase, Beth Grill, Derek Grossman, Dara Massicot, Jennifer D. P. Moroney, Lyle J. Morris, Alexander Noyes, Stephanie Pezard, Ashley L. Rhoades, Alice Shih, Mark Stalczynski, Melissa Shostak, David E. Thaler, and Dori Walker, *Security Cooperation in a Strategic Competition*, Santa Monica, Calif.: RAND Corporation, RR-A650-1, 2022; and Samuel Charap, Dara Massicot, Miranda Priebe, Alyssa Demus, Clint Reach, Mark Stalczynski, Eugeniu Han, and Lynn E. Davis, *Russian Grand Strategy: Rhetoric and Reality*, Santa Monica, Calif.: RAND Corporation, RR-4238-A, 2021.

[22] The United States operated in more formally systemic ways during the Cold War—laying out a strategy based on the system, organizing international institutions to achieve such effects, and building tools (such as the U.S. Information Agency) to attend to systemic dynamics. Yet even then, day-to-day U.S. policy was typically focused on individual issues and goals and often did not place those choices in the context of a larger systemic assessment. The systems-based success the United States came about as much from the unplanned accumulation of individual steps as from any truly systemic mindset.

[23] See, for example, Charap et al., 2021; Heath, Grossman, and Clark, 2021; and Mazarr, 2022, pp. 22–34.

[24] This position is discussed in Rush Doshi, *The Long Game: China's Grand Strategy to Displace American Order*, New York: Oxford University Press, 2021.

[25] The notion that a rising power will seek to delegitimize the position of the existing system leader is made persuasively in Randall L. Schweller and Xiaoyu Pu, "After Unipolarity: China's Visions of International Order in an Era of US Decline," *International Security*, Vol. 36, No. 1, 2011.

[26] Doshi, 2021.

[27] Examples include Alastair Iain Johnston, "China in a World of Orders: Rethinking Compliance and Challenge in Beijing's International Relations," *International Security*, Vol. 44, No. 2, 2019; Ryan Hass, *Stronger: Adapting America's China Strategy in an Age of Competitive Interdependence*, New Haven, Conn.: Yale University Press, 2021; and Mazarr, Heath, and Cevallos, 2018.

[28] Mark Leonard, "The Real End of Pax Americana," *Foreign Affairs*, June 13, 2022.

[29] Anne-Marie Slaughter, *The Chessboard and the Web: Strategies of Connection in a Networked World*, New Haven, Conn.: Yale University Press, 2017, p. 74.

[30] Robert Jervis, *System Effects: Complexity in Political and Social Life*, Princeton, N.J.: Princeton University Press, 1997, pp. 6–7, 10, 18, 39.

[31] Paul K. Davis, "Uncertainty Sensitive Planning," in Stuart Johnson, Martin C. Libicki, and Gregory F. Treverton, eds., *New Challenges, New Tools for Defense Decisionmaking*, Santa Monica, Calif.: RAND Corporation, MR-1576-RC, 2003.

[32] Michael J. Mazarr, "How Should the US, Its Allies, and Its Partner Nations Manage These Challenges Globally?" in Nicole Peterson, ed., *Chinese Strategic Intentions: A Deep Dive into China's Worldwide Activities*, U.S. Department of Defense, 2019, p. 131.

33 Susan Strange, *The Retreat of the State: The Diffusion of Power in the World Economy*, Cambridge, UK: Cambridge University Press, 1996, pp. 25–30.

34 Christopher Chase-Dunn and Peter Grimes, "The Development of World-Systems," *Sociology of Development*, Vol. 1, No. 1, March 1, 2015.

35 The temptation to cheat and lie in competition is strong, and the Russian Federation's state-sponsored doping in the Olympics is metaphorical for its approach to international relations more broadly.

36 Roger Fisher, William Ury, and Bruce Patton, *Getting to Yes: Negotiating Agreement Without Giving In*, Houghton Mifflin, 1981.

37 One useful survey of the rise of complexity-based thinking is Fritjof Capra and Pier Luigi Luisi, *The Systems View of Life: A Unifying Vision*, New York: Cambridge University Press, 2014. See also Robert Axelrod and Michael Cohen, *Harnessing Complexity: Organizational Implications of a Scientific Frontier*, New York: Basic Books, 2000; and David Byrne and Gillian Callaghan, *Complexity Theory and the Social Sciences: The State of the Art*, New York: Routledge, 2013.

38 In defense, see Sean Lawson, *Nonlinear Science and Warfare: Chaos, Complexity and the U.S. Military in the Information Age*, New York: Routledge, 2013. In business, see Rick Nason, *It's Not Complicated: The Art and Science of Complexity in Business*, Toronto: Rotman-UTP Publishing, 2017.

39 John H. Holland, *Emergence: From Chaos to Order*, New York: Basic Books, 1999; John Holland, *Complexity: A Very Short Introduction*, Oxford: Oxford University Press, 2014; John Miller and Scott Page, *Complex Adaptive Systems: An Introduction to Computational Models of Social Life*, Princeton, N.J.: Princeton University Press, 2009; Melanie Mitchell, *Complexity: A Guided Tour*, Oxford, UK: Oxford University Press, 2009; Mitchell, Sandra, *Unsimple Truths: Science, Complexity, and Policy*, Chicago: University of Chicago Press, 2009.

40 Seva Gunitsky, "Complexity and Theories of Change in International Politics," *International Theory*, Vol. 5, No. 1, March 2013.

41 Gunitsky, 2013, p. 43.

42 Donella Meadows, "Leverage Points: Places to Intervene in a System," Sustainability Institute, 1999.

43 Robert J. Lempert, Steven W. Popper, David G. Groves, Nidhi Kalra, Jordan R. Fischbach, Steven C. Bankes, Benjamin P. Bryant, Myles T. Collins, Klaus Keller, Andrew Hackbarth, et al., *Making Good Decisions Without Predictions: Robust Decision Making for Planning Under Deep Uncertainty*, Santa Monica, Calif.: RAND Corporation, RB-9701, 2013.

44 Jervis, 1997, p. 125.

45 This field offers ideas that can be useful in generating specific ideas for designing strategies to manage systems. For example, studies of social networks have highlighted various ways of measuring how central an actor is in a network: how many total network connections it has (degree centrality), how close it is to other nodes (closeness centrality), how many intersections within the networks it resides at (betweenness centrality), and the degree to which an actor's main connections are themselves well networked (eigenvector centrality).

46 Slaughter, 2017, p. 2.

47 Slaughter, 2017, p. 7.

48 Slaughter, 2017, p. 12.

49 Indeed, Slaughter (2017, p. 49) contends that the very essence of networks is that they are "based on mutually beneficial, recurrent exchanges among flexible yet interdependent actors."

50 David Singh Grewal, *Network Power: The Social Dynamics of Globalization*, New Haven, Conn.: Yale University Press, 2008, pp. 2–3, 10, 25.

51 Grewal, 2008, p. 4.

52 Grewal, 2008, p. 122.

53 Grewal, 2008, p. 4.

54 The historian of Japan Carol Gluck has argued that nations are strongly influenced by their perception of the "available modern" at any given time—the patterns of modern life on display in the leading powers that they seek to emulate, or, to put it another way, the prevailing global paradigm. Nations that strive to succeed try to model themselves on this perceived paradigm, pursuing "aspirational modernity" under the influence of the dominant model of successful modernity. After 1945, this was the American model (Carol Gluck, *Japan's Modern Myths: Ideology in the Late Meiji Period*, Princeton, N.J.: Princeton University Press, 1985, pp. 26–30).

55 Grewal, 2008, p. 5.

56 In fact, there is a way to use the same form of power to help generate better social outcomes—more equitable, more ecologically sound. For example, the constraining effects of predominant standards and

the resulting lock-in effect are already beginning to force countries and companies in the direction of more climate-friendly approaches.

57   Grewal, 2008, p. 9.

58   An example of such efforts is provided by campaigns to use strategies of "nudging" people toward desired social outcomes, using the insights of behavioral economics, rather than enforcing direct coercive mandates or leaving choices to sometimes biased individual selection. See Richard H. Thaler and Cass B. Sunstein, *Nudge: Improving Decisions about Health, Wealth, and Happiness*, New Haven, Conn.: Yale University Press, 2008.

59   Grewal, 2008, pp. 13, 172.

60   Grewal, 2008, p. 26.

61   Grewal, 2008, pp. 38–41. He describes the tipping point on the way up as a "threshold of inevitability," which is "the point past which a network has become so dominant that we can expect virtually all non-users to adopt its standard" (p. 40).

62   Grewal, 2008, p. 27.

63   Grewal, 2008, p. 28.

64   Malcolm W. Hoag, *An Introduction to Systems Analysis*, Santa Monica, Calif.: RAND Corporation, RM-1678-PR, 1956.

65   One analysis defined *systems analysis* as "the systematic examination and comparison of alternative future courses of action in terms of their expected costs, benefits, and risks. The main purpose of systems analysis is to provide information to decision makers that will sharpen their intuition and judgment and provide the basis for more informed choices" (Warren Walker, Gene Fisher, and Michael Rich, "RAND Corporation," in Saul I. Gass and Michael C. Fu, eds., *Encyclopedia of Operations Research and Management Science*, Springer, 2013).

66   Forrester, Jay Wright, *Industrial Dynamics*, 1st ed., Cambridge, Mass.: MIT Press, 1963.

67   Forrester, Jay Wright, *Urban Dynamics*, 1st ed., Cambridge, Mass.: MIT Press, 1969; and Forrester, Jay Wright, *World Dynamics*, 1st ed., Wright-Allen Press, 1971.

68   Paul K. Davis and Angel O'Mahony, "Improving Social-Behavioral Modeling," in Paul K. Davis, Angela O'Mahony, and Jonathan Pfautz, eds., *Social-Behavioral Modeling for Complex Systems*. John Wiley & Sons, Inc., 2019.

69   Walter McClure, *Policy Design for Large Social Systems: Toward a More Systemic Approach to Policy Design*, St. Paul, Minn.: Center for Policy Design Press, 2021, pp. 7–40.

70   Herbert A. Simon and John E. Laird, *The Sciences of the Artificial*, 3rd ed., Cambridge, Mass.: MIT Press, 2019; and Daniel Kahneman, *Thinking, Fast and Slow*, Farrar, Straus and Giroux, 2011.

71   McClure, 2011.

72   David A. Lax and James K. Sebenius, *3D Negotiation: Powerful Tools to Change the Game in Your Most Important Deals*, Harvard Business Review Press, 2006, p. 31.

73   R. J. Lempert, "Robust Decision Making (RDM)," in Vincent A. W. J. Marchau, Warren E. Walker, Pieter J. T. M. Bloemen, and Steven W. Popper, eds., *Decision Making under Deep Uncertainty: From Theory to Practice*, Springer International Publishing, 2019, p. 28.

74   Meadows, 1999.

75   These individual principles reflect a broader theme in systems: as Jervis put it, "behavior changes the environment" (Jervis, 1999, p. 48). The goal of a systemic strategy would be to assemble a package of actions designed to mold the environment in favorable ways, rather than merely solve individual problems.

76   Wheatley, 1994, pp. 133–134.

77   Capra and Luisi, 2014, pp. 394–397.

78   Dennis H. Wrong, *Power: Its Forms, Bases, and Uses*, New Brunswick, N.J.: Transaction Publishers, 1995, p. 2. This is the concept of direct power offered by Robert Dahl (Robert A. Dahl, "The Concept of Power," *Behavioral Science*, Vol. 2, No. 3, July 1957).

79   Wheatley, 1994, p. 47.

80   Peter Bachrach and Morton S. Baratz, "The Two Faces of Power," *American Political Science Review*, Vol. 56, No. 4, December 1962.

81   Steven Lukes, *Power: A Radical View*, 2nd ed., New York: Palgrave Macmillan, 2005.

82   Capra and Luisi, 2014, pp. 398–400.

83   Slaughter, 2017, pp. 77–86.

84   Slaughter, 2017, pp. 90, 117.

85   European Council, "Conclusions of the Presidency," SN 180/1/93, June 21–22, 1993, p. 21.

86   Jervis, 1997, p. 255.

87   Wheatley, 1994, p. 104.

88   McClure, 2001.

89   David A. Lax and James K. Sebenius, "Deal Making 2.0: A Guide to Complex Negotiations," *Harvard Business Review*, November 2012.

90   Jean Monnet, *Memoirs*, Doubleday & Company, 1978, Chapter 3.

91   Grewal, 2008, pp. 284–286.

92   Wheatley, 1994, pp. 59–73, argues that participative approaches are more appropriate in dealing with complex systems.

93   Eric D. Beinhocker, *The Origin of Wealth: The Radical Remaking of Economics and What It Means for Business and Society*, Boston: Harvard Business Review Pres, 2007, p. 449.

References

Axelrod, Robert, and Michael Cohen, *Harnessing Complexity: Organizational Implications of a Scientific Frontier*, New York: Basic Books, 2000.

Bachrach, Peter, and Morton S. Baratz, "The Two Faces of Power," *American Political Science Review*, Vol. 56, No. 4, December 1962.

Beinhocker, Eric D., *The Origin of Wealth: The Radical Remaking of Economics and What It Means for Business and Society*, Boston: Harvard Business Review Pres, 2007.

Bousquet, Antoine, and Simon Curtis. "Beyond Models and Metaphors: Complexity Theory, Systems Thinking and International Relations," *Cambridge Review of International Affairs* Vol. 24, No. 1, 2011, pp. 43–62.

Byrne, David, and Gillian Callaghan, *Complexity Theory and the Social Sciences: The State of the Art*, New York: Routledge, 2013.

Capra, Fritjof, and Pier Luigi Luisi, *The Systems View of Life: A Unifying Vision*, New York: Cambridge University Press, 2014.

Charap, Samuel, Dara Massicot, Miranda Priebe, Alyssa Demus, Clint Reach, Mark Stalczynski, Eugeniu Han, and Lynn E. Davis, *Russian Grand Strategy: Rhetoric and Reality*, Santa Monica, Calif.: RAND Corporation, RR-4238-A, 2021. As of September 1, 2022: https://www.rand.org/pubs/research_reports/RR4238.html

Chase-Dunn, Christopher, and Peter Grimes, "The Development of World-Systems," *Sociology of Development*, Vol. 1, No. 1, March 1, 2015, pp. 149–172.

Croxton, Derek, *Westphalia: The Last Christian Peace*, New York: Palgrave Macmillan, 2013.

Dahl, Robert A., "The Concept of Power," *Behavioral Science*, Vol. 2, No. 3, July 1957.

Davis, Paul K., "Uncertainty Sensitive Planning," in Stuart Johnson, Martin C. Libicki, and Gregory F. Treverton, eds., *New Challenges, New Tools for Defense Decisionmaking*, Santa Monica, Calif.: RAND Corporation, MR-1576-RC, 2003, pp. 131–156. As of September 1, 2022: https://www.rand.org/pubs/monograph_reports/MR1576.html

Davis, Paul K., and Angel O'Mahony, "Improving Social-Behavioral Modeling," in Paul K. Davis, Angela O'Mahony, and Jonathan Pfautz, eds., *Social-Behavioral Modeling for Complex Systems*, John Wiley & Sons, Inc., 2019.

Davis, Paul K., Tim McDonald, Ann Pendleton-Jullian, Angela O'Mahony, and Osonde A. Osoba, "Reforming the Teaching and Conducting of Policy Studies to Deal Better with Complex Systems," *Journal on Policy and Complex Systems*, Vol. 7, No. 1, 2021, pp. 119–139.

Doshi, Rush, *The Long Game: China's Grand Strategy to Displace American Order*, New York: Oxford University Press, 2021.

Elrod, Richard B., "The Concert of Europe: A Fresh Look at an International System," *World Politics*, Vol. 28, No. 2, 1976, pp. 159–174.

European Council, "Conclusions of the Presidency," SN 180/1/93, June 21–22, 1993.

Ferguson, Niall, *Empire: The Rise and Demise of the British World Order and the Lessons for Global Power*, New York: Basic Books, 2004.

Fisher, Roger, William Ury, and Bruce Patton, *Getting to Yes: Negotiating Agreement Without Giving In*, Houghton Mifflin, 1981.

Forrester, Jay Wright, *Industrial Dynamics*, 1st ed., Cambridge, Mass.: MIT Press, 1963.

Forrester, Jay Wright, *Urban Dynamics*, 1st ed., Cambridge, Mass.: MIT Press, 1969.

Forrester, Jay Wright, *World Dynamics*, 1st ed., Wright-Allen Press, 1971.

Fronda, Michael P., *Between Rome and Carthage: Southern Italy during the Second Punic War*, New York: Cambridge University Press, 2010.

Gluck, Carol, *Japan's Modern Myths: Ideology in the Late Meiji Period*, Princeton, N.J.: Princeton University Press, 1985.

Grewal, David Singh, *Network Power: The Social Dynamics of Globalization*, New Haven, Conn.: Yale University Press, 2008.

Gunitsky, Seva, "Complexity and Theories of Change in International Politics," *International Theory*, Vol. 5, No. 1, March 2013, pp. 35–63.

Hass, Ryan, *Stronger: Adapting America's China Strategy in an Age of Competitive Interdependence*, New Haven, Conn.: Yale University Press, 2021.

Heath, Timothy R., Derek Grossman, and Asha Clark, *China's Quest for Global Primacy: An Analysis of Chinese International and Defense Strategies to Outcompete the United States*, Santa Monica, Calif.: RAND Corporation, RR-A447-1, 2021. As of September 1, 2022: https://www.rand.org/pubs/research_reports/RRA447-1.html

Hoag, Malcolm W., *An Introduction to Systems Analysis*, Santa Monica, Calif.: RAND Corporation, RM-1678-PR, 1956. As of September 1, 2022: https://www.rand.org/pubs/research_memoranda/RM1678.html

Holland, John H., *Emergence: From Chaos to Order*, New York: Basic Books, 1999.

Holland, John H., *Complexity: A Very Short Introduction*, Oxford: Oxford University Press, 2014.

Ikenberry, G. John, *Liberal Leviathan: The Origins, Crisis, and Transformation of the American World Order*, Princeton, N.J.: Princeton University Press, 2011.

James, Lawrence, *The Rise and Fall of the British Empire*, New York: St. Martin's Press, 1997.

Jervis, Robert, *System Effects: Complexity in Political and Social Life*, Princeton, N.J.: Princeton University Press, 1997.

Johnston, Alastair Iain, "China in a World of Orders: Rethinking Compliance and Challenge in Beijing's International Relations," *International Security*, Vol. 44, No. 2, 2019, pp. 9–60.

Kahneman, Daniel, *Thinking, Fast and Slow*, Farrar, Straus and Giroux, 2011.

Kissinger, Henry, *World Order*, New York: Penguin, 2014.

Lascurettes, Kyle M., *Orders of Exclusion: Great Powers and the Strategic Sources of Foundational Rules in International Relations*, New York: Oxford University Press, 2020.

Lawson, Sean, *Nonlinear Science and Warfare: Chaos, Complexity and the U.S. Military in the Information Age*, New York: Routledge, 2013.

Lax, David A., and James K. Sebenius, *3D Negotiation: Powerful Tools to Change the Game in Your Most Important Deals*, Harvard Business Review Press, 2006.

Lax, David A., and James K. Sebenius, "Deal Making 2.0: A Guide to Complex Negotiations," *Harvard Business Review*, November 2012.

Lempert, R. J., "Robust Decision Making (RDM)," in Vincent A. W. J. Marchau, Warren E. Walker, Pieter J. T. M. Bloemen, and Steven W. Popper, eds., *Decision Making under Deep Uncertainty: From Theory to Practice*, Springer International Publishing, 2019, pp. 23–52.

Lempert, Robert J., Steven W. Popper, David G. Groves, Nidhi Kalra, Jordan R. Fischbach, Steven C. Bankes, Benjamin P. Bryant, Myles T. Collins, Klaus Keller, Andrew Hackbarth, et al., *Making Good Decisions Without Predictions: Robust Decision Making for Planning Under Deep Uncertainty*, Santa Monica, Calif.: RAND Corporation, RB-9701, 2013. As of September 1, 2022:
https://www.rand.org/pubs/research_briefs/RB9701.html

Leonard, Mark, "The Real End of Pax Americana," *Foreign Affairs*, June 13, 2022.

Lovett, A. W., "The United States and the Schuman Plan. A Study in French Diplomacy 1950–1952," *The Historical Journal*, Vol. 39, No. 2, 1996, pp. 425–455.

Lukes, Steven, *Power: A Radical View*, 2nd ed., New York: Palgrave Macmillan, 2005.

Mazarr, Michael J., "Preserving the Post-War Order," *Washington Quarterly*, Vol. 40, No. 2, 2017, pp. 29–49.

Mazarr, Michael J., *Summary of the Building a Sustainable International Order Project*, Santa Monica, Calif.: RAND Corporation, RR-2397-OSD, 2018. As of September 1, 2022:
https://www.rand.org/pubs/research_reports/RR2397.html

Mazarr, Michael J., "How Should the US, Its Allies, and Its Partner Nations Manage These Challenges Globally?" in Nicole Peterson, ed., *Chinese Strategic Intentions: A Deep Dive into China's Worldwide Activities*, U.S. Department of Defense, 2019.

Mazarr, Michael J., "The Essence of the Strategic Competition with China," *PRISM*, Vol. 9, No. 1, October 2020.

Mazarr, Michael J., *Understanding Competition: Great Power Rivalry in a Changing International Order—Concepts and Theories*, Santa Monica, Calif.: RAND Corporation, PE-A1404-1, 2022. As of September 1, 2022:
https://www.rand.org/pubs/perspectives/PEA1404-1.html

Mazarr, Michael J., Nathan Beauchamp-Mustafaga, Jonah Blank, Samuel Charap, Michael S. Chase, Beth Grill, Derek Grossman, Dara Massicot, Jennifer D. P. Moroney, Lyle J. Morris, Alexander Noyes, Stephanie Pezard, Ashley L. Rhoades, Alice Shih, Mark Stalczynski, Melissa Shostak, David E. Thaler, and Dori Walker, *Security Cooperation in a Strategic Competition*, Santa Monica, Calif.: RAND Corporation, RR-A650-1, 2022. As of September 1, 2022:
https://www.rand.org/pubs/research_reports/RRA650-1.html

Mazarr, Michael J., Jonathan S. Blake, Abigail Casey, Tim McDonald, Stephanie Pezard, and Michael Spirtas, *Understanding the Emerging Era of International Competition: Theoretical and Historical Perspectives*, Santa Monica, Calif.: RAND Corporation, RR-2726-AF, 2018. As of September 1, 2022:
https://www.rand.org/pubs/research_reports/RR2726.html

Mazarr, Michael J., Abigail Casey, Alyssa Demus, Scott W. Harold, Luke J. Matthews, Nathan Beauchamp-Mustafaga, and James Sladden, *Hostile Social Manipulation: Present Realities and Emerging Trends*, Santa Monica, Calif.: RAND Corporation, RR-2713-OSD, 2019. As of September 1, 2022:
https://www.rand.org/pubs/research_reports/RR2713.html

Mazarr, Michael J., Bryan Frederick, John J. Drennan, Emily Ellinger, Kelly Elizabeth Eusebi, Bryan Rooney, Andrew Stravers, and Emily Yoder, *Understanding Influence in the Strategic Competition with China*, Santa Monica, Calif.: RAND Corporation, RR-A290-1, 2021. As of September 1, 2022:
https://www.rand.org/pubs/research_reports/RRA290-1.html

Mazarr, Michael J., Timothy R. Heath, and Astrid Stuth Cevallos, *China and the International Order*, Santa Monica, Calif.: RAND Corporation, RR-2423-OSD, 2018. As of September 1, 2022:
https://www.rand.org/pubs/research_reports/RR2423.html

Mazarr, Michael J., Miranda Priebe, Andrew Radin, and Astrid Stuth Cevallos, *Understanding the Current International Order*, Santa Monica, Calif.: RAND Corporation, RR-1598-OSD, 2016. As of September 1, 2022:
https://www.rand.org/pubs/research_reports/RR1598.html

Mazarr, Michael J., and Ashley L. Rhoades, *Testing the Value of the Postwar International Order*, Santa Monica, Calif.: RAND Corporation, RR-2226-OSD, 2018. As of September 1, 2022:
https://www.rand.org/pubs/research_reports/RR2226.html

McClure, Walter, *Policy Design for Large Social Systems: Toward a More Systemic Approach to Policy Analysis and Design*, St. Paul, Minn.: Center for Policy Design Press, 2001.

McKesson, John A., "The Schuman Plan," *Political Science Quarterly*, Vol. 67, No. 1, 1952, pp. 18–35.

Meadows, Donella, "Leverage Points: Places to Intervene in a System," Sustainability Institute, 1999. As of September 1, 2022:
https://donellameadows.org/archives/leverage-points-places-to-intervene-in-a-system/

Miller, John, and Scott Page, *Complex Adaptive Systems: An Introduction to Computational Models of Social Life*, Princeton, N.J.: Princeton University Press, 2009.

Mitchell, Melanie, *Complexity: A Guided Tour*, Oxford: Oxford University Press, 2009.

Mitchell, Sandra, *Unsimple Truths: Science, Complexity, and Policy*, Chicago: University of Chicago Press, 2009.

Monnet, Jean, *Memoirs*, Doubleday & Company, 1978, Chapter 3.

Morris, Lyle J., Michael J. Mazarr, Jeffrey W. Hornung, Stephanie Pezard, Anika Binnendijk, and Marta Kepe, *Gaining Competitive Advantage in the Gray Zone: Response Options for Coercive Aggression Below the Threshold of Major War*, Santa Monica, Calif.: RAND Corporation, RR-2942-OSD, 2019. As of September 1, 2022:
https://www.rand.org/pubs/research_reports/RR2942.html

Nason, Rick, *It's Not Complicated: The Art and Science of Complexity in Business*, Toronto: Rotman-UTP Publishing, 2017.

Patrick, Stewart, *The Best Laid Plans: The Origins of American Multilateralism and the Dawn of the Cold War*, Lanham, Md.: Rowman and Littlefield, 2009.

Posen, Barry R., *Restraint: A New Foundation for U.S. Grand Strategy*, Ithaca, N.Y.: Cornell University Press, 2014.

Prigogine, Ilya, *Order Out of Chaos: Man's New Dialogue with Nature*, New York: Verso, 2018.

Rendall, Matthew, "Defensive Realism and the Concert of Europe," *Review of International Studies*, Vol. 32, No. 3, 2006, pp. 523–540.

Schweller, Randall L., and Xiaoyu Pu, "After Unipolarity: China's Visions of International Order in an Era of US Decline," *International Security*, Vol. 36, No. 1, 2011, pp. 41–72.

Senge, Peter, *The Fifth Discipline: The Art & Practice of the Learning Organization*, Penguin Random House, 2006.

Simon, Herbert A., and John E. Laird, *The Sciences of the Artificial*, 3rd ed., Cambridge, Mass.: MIT Press, 2019.

Slaughter, Anne-Marie, *The Chessboard and the Web: Strategies of Connection in a Networked World*, New Haven, Conn.: Yale University Press, 2017.

Snyder, Jack, and Robert Jervis, eds., *Coping with Complexity in the International System*. Boulder, Colo.: Westview Press, 1993.

Snyder, Quddus, "Integrating Rising Powers: Liberal Systemic Theory and the Mechanism of Competition," *Review of International Studies*, Vol. 39, 2013, pp. 209–231.

Strange, Susan, *The Retreat of the State: The Diffusion of Power in the World Economy*, Cambridge, UK: Cambridge University Press, 1996.

Thaler, Richard H., and Cass B. Sunstein, *Nudge: Improving Decisions about Health, Wealth, and Happiness*, New Haven, Conn.: Yale University Press, 2008.

Walker, Warren, Gene Fisher, and Michael Rich, "RAND Corporation," in Saul I. Gass and Michael C. Fu, eds., *Encyclopedia of Operations Research and Management Science*, Springer, 2013.

Wheatley, Margaret, *Leadership and the New Science: Learning About Organization from an Orderly Universe*, San Francisco: Berrett-Koehler, 1994.

The White House, *Interim National Security Strategic Guidance*, March 2021.

Wrong, Dennis H., *Power: Its Forms, Bases, and Uses*, New Brunswick, N.J.: Transaction Publishers, 1995.

Zawadzki, K. K. F., "The Economics of the Schuman Plan," *Oxford Economic Papers*, Vol. 5, No. 2, 1953, pp. 157–189.

About This Perspective

The authors of this Perspective contend that the United States should view emerging strategic rivalries with Russia, and especially China, in systemic terms. The United States, they argue, is principally competing to establish the structure and context of the global system, including institutions, rules, and norms in which political, economic, and social activity occur. Policy initiatives should place individual actions in the context of systemic strategy, broadening from discrete, issue-specific approaches. The authors outline a set of principles for building institutions and practices to support this approach.

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