

Thinking Straight: Cognitive Bias in the US Debate about China

Josh Kerbel

“
Application of linear approaches to nonlinear systems is a recurring theme in America’s national security debate in general and its China debate in particular.
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Of the axioms, dictums, and mantras echoing through the US foreign policy and intelligence debates in the wake of controversy over estimates of Iraqi weapons of mass destruction, none reverberates more than: *be wary of mind-set and bias and constantly reexamine assumptions*. The fact is, however, that *genuine* wariness and *thorough* reexaminations have been rare and attention has tended to focus on the more easily recognizable non-cognitive biases, the “low-hanging fruit,” that eclipse much more ingrained cognitive biases and the flawed assumptions they engender.¹

Nowhere is this tendency more clearly evident than in the continuing US debate over China, which has long been conducted as if single-outcome predictions of China’s long-term future are possible and that the United States is capable of promoting or alter-

¹ “Cognitive biases are mental errors caused by our simplified information processing strategies. It is important to distinguish cognitive biases from other forms of bias, such as cultural bias, organizational bias, or bias that results from one’s own self-interest. In other words, a cognitive bias does not result from any emotional or intellectual predisposition toward a certain judgment, but rather from subconscious mental procedures for processing information.” From Richards J. Heuer, *Psychology of Intelligence Analysis* (Washington, DC: Central Intelligence Agency, 1999), 111–12.

ing a predicted outcome. I will argue here that these two assumptions are largely the result of an unrecognized, deeply ingrained, and enduring cognitive bias that results in the misapplication of a linear behavioral template to China, which, like all nation-states, in reality behaves “nonlinearly.”²

In making my case, I will explain how cognitive bias fosters this misapplication, discuss the illusions of certainty—especially of predictability and influence—that this misapplication promotes, and examine the complementary non-linear perspectives that might correct the imbalance. Finally, I will suggest how such nonlinear perspectives might be cultivated and applied to—in the words of Sherman Kent—“elevate the level of debate.”³

² This largely unconscious application of a simplifying behavioral template is an excellent example of “bounded” or limited rationality, a concept first advanced by Herbert Simon. “Because of limits in human mental capacity . . . the mind cannot cope directly with the complexity of the world. Rather, we construct a simplified mental model of reality and then work with this model. We behave rationally within the confines of our mental model, but this model is not always well adapted to the requirements of the real world.” Cited in Heuer, 3.

³ Martin Petersen, “The Challenge for the Political Analyst,” *Studies in Intelligence* 47, no. 1 (2003).

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It's Not Rocket Science; It's More Complex.

The term “linear,” when applied to a system—any group of components that together interact to form a larger whole—describes behavior of the whole which is *additive*, that is to say equal to the sum of its parts.⁴ By extension, a linear approach to understanding a system holds that once the behavior of a system's component pieces are understood individually, one needs only to add them up to understand and predict the system's behavior as a whole. This analytical methodology (from the Greek *analyzein* meaning “to break up”), often termed “reductionism,” “linear reductionism” or “Newtonian reductionism” is, by and large, the default Western—and certainly American—approach to information processing.⁵

The main limitation of this approach, as the term reductionism suggests, is that it only works consistently with systems that are genuinely reducible.

⁴ What this article refers to as a “nonlinear” system is more commonly, and perhaps more accurately, referred to as a “complex” system. “Nonlinear” is more often used than “complex” because most people confuse the scientific distinction between the term complex (i.e., as it is used here to mean “having many interactions that can lead to untold changes in behavior”) and its more common usage (i.e., having many components). Plotted on a graph, linear equations form smooth lines—hence the name linear. See M. Mitchell Waldrop, *Complexity: The Emerging Science at the Edge of Order and Chaos* (New York: Simon and Schuster, 1992), 64.

Since the components of linear systems do not change or adapt their fundamental behavior as interaction occurs, the components of such systems, and consequently such systems as a whole, can be readily understood via reductionist approaches. Moreover, as a result of this “constancy of behavior,” linear systems also tend to be predictable and subject to manipulation. For example, mechanical systems such as the solar system or ballistic missile systems tend to be highly linear. Consequently, the movements of the planets and the trajectories of ballistic

⁵ Although reductionism is usually associated with Newton, who, in effect, codified it in his laws of motion, the term is rooted in Greek philosophy and Aristotle, who emphasized “illumination through disaggregation.” Although this article focuses on American perspectives, it is worth noting that Chinese thought—at least that thought freed of Marxist-Leninist ideology—appears significantly less inclined toward reductionism than most Western intellectual approaches. (See Benjamin Schwartz, “On the Absence of Reductionism in Chinese Thought” in *China and Other Matters* (Cambridge, MA: Harvard University Press, 1996). This, in turn, points to contrasting US and Chinese approaches to foreign policy. Henry Kissinger has written that “Americans think in terms of concrete solutions to specific problems. The Chinese think in terms of a process that has no precise culmination.” See *Does America Need a Foreign Policy? Toward a Diplomacy for the 21st Century* (New York: Simon and Schuster, 2001), 137–38.

missiles are theoretically, if not always in practice, predictable and pliant.⁶

Linear reductionist approaches are significantly less useful for understanding nonlinear systems—those systems in which the behavior of the whole is not necessarily equal to the sum of the parts. For one thing, nonlinear systems are not readily reducible because the behavior of their components can change, evolve and adapt as interactions occur. As a result, the components of nonlinear systems cannot realistically be considered without regard to the others. A good example of a nonlinear system is the international system, which has components (supra-national organizations, nation-states, non-state actors, etc.) that are also systems in themselves and unique subcomponents (nation-states, individuals, families, social/political/commercial organizations, etc.), which often are systems as well.

As a result of this “system of systems” character and the

⁶ It has been argued that CIA is particularly guilty of misapplying linear, “hard science” approaches: “In his 1949 book *Strategic Intelligence for American World Policy*, [Sherman] Kent argued that the truth is to be approached through a systematic method, ‘much like the method of the physical sciences.’ This was at the time, just after the war, when economists, urban planners and social engineers believed that human affairs could be understood scientifically, and that the social sciences could come to resemble hard sciences like physics.” David Brooks, “The C.I.A.: Method and Madness,” *New York Times*, 3 February 2004.

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Nonlinear systems tend to be messy and resistant to thorough understanding via excessively neat, linear, reductionist approaches.

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interactivity, dynamism, and adaptability to which it leads, nonlinear systems tend to be messy and resistant to thorough understanding via excessively neat, linear, reductionist approaches. Rather, what is required is a *complementary* (not necessarily substitute) approach that is based on developing a broader, big-picture perspective—what Nobel Prize-winning physicist Murray Gell-Mann has termed a “crude look at the whole” or, in a word, a synthesis.⁷ As renowned China scholar Jonathan Spence has put it:

[T]he more blurred and multifaceted our perceptions of China become, the closer we may be to that most elusive thing: the truth.⁸

Development of such a “synthetic” perspective is usually more easily said than done. Since synthesis is the antithesis of analysis and most Americans lack a well-developed nonlinear/synthetic intuition, the intuitive response when confronted with significant complexity (numerous components, interactions, and feedback loops) is to default to the artificial but comforting simplicity and manageability (read predictability and malleability) of linear reductionism. It is this applica-

⁷ Murray Gell-Mann, “The Simple and the Complex,” *Complexity, Global Politics and National Security* (Washington, DC: National Defense University), 19.

⁸ Jonathan Spence, *Chinese Roundabout: Essays in History and Culture* (New York: Norton, 1992), 90.

tion of linear approaches and perspectives to what are essentially nonlinear systems that is a recurring theme of America’s foreign policy debate in general and its China debate in particular.⁹

Unrealistic Expectations

In addition to *additivity*, linear systems also have *identifiable cause-and-effect relationships*, *repeatability* and *proportionality* between inputs and outputs—the properties that make linear systems susceptible to prediction and manipulation, the hallmarks of America’s China debate.¹⁰ In the recent argument, predictions of China’s future have tended to fall on a broad spectrum bounded by extremes that might best be

⁹ This reductionist mind-set is clearly illustrated in the terms with which foreign policy tends to be discussed. For instance, one often hears of foreign policy *analysis* or intelligence *analysts* but rarely, if ever, of foreign policy *synthesis* or intelligence *synthesists*. Moreover, when synthesis is mentioned, it is usually thought of as organizing and summarizing information and not as a distinct intellectual approach or perspective.

¹⁰ Thomas J. Czerwinski, *Coping with the Bounds: Speculations on Nonlinearity in Military Affairs* (Washington, DC: National Defense University), 8–9.

characterized as “rising China” and “doomed China.”¹¹ If one can get beyond the ominous images those characterizations evoke, what really needs to be seen is the severe contrast and enormous uncertainty they represent. Given this evident uncertainty, how is it that individual predictors feel confident enough to make firm, single-outcome predictions—with all the certainty implicit in them? A clue is to be found in the prevalence of one (little thought about) linear term/concept: trajectory.

The Newtonian term “trajectory” almost invariably accompanies American discussion of futures; it is typically a manifestation of the misapplication of a linear, behavioral template. Formally defined, the term describes smooth, evolutionary, continuous—and predictable—movement over time, such as those of the planets in accordance with Newton’s laws of motion. By contrast, the term does not apply to the abrupt, revolutionary, or discontinuous perturbations that inevitably—but unpredictably—occur in nonlinear systems. In other words, the use of the word “trajectory” is really just another

¹¹ In the popular literature, these extremes have probably been best captured (if only by the juxtaposition of their titles) by *The Coming Conflict with China* (Richard Bernstein Ross Munro, Knopf, 1997), which posits an increasingly powerful China on track to challenge US primacy, and *The Coming Collapse of China* (Gordon Chang, Random House, 2001), which argues that China’s many internal difficulties will soon plunge it into another of its periodic internal paroxysms.

way of predicting continuity or evolutionary change. In common practice these terms are often used together, as the following quotation both illustrates and explains:

...knowledge of why and how things have gone as they have day after day for years naturally inclines the analyst to estimate that developments will continue along the same trajectory. It is always a safer bet to predict that the situation tomorrow will be like it has been for the past dozen years than to say that it will change abruptly.¹²

There are essentially two, distinctly linear processes that underpin creation of single-outcome trajectories: First is the removal (i.e., reduction) of a specific trend or set of factors from their context, allowing them to be projected with continuity and immunity from the course-altering influences that context might otherwise provide; second is the expectation of clearly identifiable cause-and-effect dynamics—a characteristic of linear systems—which allows prognosticators to predict larger systemic effects based on the projected continuation of a single trend.

If one accepts that this ingrained (linear) cognitive bias leads to the projection of single-outcome

¹² Richard K. Betts, "Fixing Intelligence," *Foreign Affairs*, January/February 2002: 49. (Emphasis added.)

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Cognitive (linear) bias explains *how* single outcome predictions are made; non-cognitive biases determine *what* predictions are made.

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trajectories in the first place—as the following examples will show—one also needs to recognize that it is the much more apparent non-cognitive biases—ideological, cultural, religious, organizational, self-interest, among others—that largely incline predictors to their predictions. For one thing, non-cognitive biases tend to determine which trends, factors, or dynamics a prognosticator will select for extrapolation. Moreover, non-cognitive biases also tend to shape the linear cause-and-effect chains predictors will envision. Take the following “rising China” prediction:

Conventional wisdom now holds that the Chinese economy is on a trajectory of rapid growth likely to last for many more years, perhaps decades. Expectations of continued rapid growth undergird the predictions of China as a looming world power and rival to the United States.¹³

¹³ Michel C. Oksenberg; Michael D. Swaine, Daniel C. Lynch, *The Chinese Future* (Honolulu, HI: Pacific Council on International Policy and RAND Center for Asia-Pacific Policy, 1997). (Emphasis added.)

This characterization of the so-called “conventional wisdom” isolates and extrapolates the economic trends—rapid economic growth rates—that support the projection. Moreover, the projected trajectory clearly is connected to the non-cognitive bias that anticipates a cause-and-effect between continued economic growth and world power and rivalry with the United States.

Had the non-cognitive biases of those holding the “common wisdom” in this instance been different—say, inclined to the “doomed China” scenario—the trajectory they would have projected would certainly have been quite different as well. A predictor with a more pessimistic view of China’s future might have focused on (i.e., isolated and extrapolated) a completely different set of readily available economic trends (rising unemployment, teetering banks, endemic corruption, etc.). Moreover, such a predictor would probably have been inclined to anticipate a very different cause-and-effect dynamic, even if he had started from the same isolated trend as the “rising China” forecaster. For example, the cause-and-effect chain of the “doomed China” predictor might envision the continuation of rapid economic growth leading to unfulfilled high expectations and social and political unrest, internal turmoil, and conceivably, collapse. To sum up this predictive process, linear cognitive bias explains *how* single-outcome predictions are made and

non-cognitive biases largely determine *what* predictions are made.

Illusions of Influence

Lest one believe that excessive reliance on linear perspectives leads only to illusory single-outcome predictions, it is important to recognize that linear bias also fuels the illusion that the United States can effectively influence (promote or prevent) projected outcomes.¹⁴

US policies aimed at shaping outcomes have long been framed and debated in the largely linear and mechanistic terms of linkages, levers, inertia, momentum, tension, etc. In this context, China tends to be discussed as if it were a physical object that can be pressured, pushed, pulled, or propelled. Examples were painfully (to me) plentiful in the debate over the extension of Normal Trade Relations (NTR) to China. Those favoring the extension argued that NTR and the economic engagement it presumably promotes would inevitably leverage China to make desirable (from the US perspective) economic, political, and social reforms. Those opposed argued that denial of NTR would be an equally, or even more, effective lever for desired change in

¹⁴ Simultaneously believing in predicted continuity and the ability to decisively influence or change China's course requires a significant degree of "cognitive dissonance." It is another indicator of linear bias.

China. As contrasting as these arguments were, they had in common the fundamental belief that NTR gave the United States an effective and predictable "lever" with which to achieve a specific outcome in China.

This notion of leverage was underlined clearly in the flurry of commentary that surrounded the collision of an American surveillance aircraft and a Chinese fighter aircraft in April 2001. Take, for instance, this editorial from the *New Republic* that took to task those who questioned the assumption of American leverage:

*Also abounding was the bizarre notion that the United States has little or no leverage over China.... This is nonsense. The United States buys 33 percent of China's exports. China buys 1 percent of the United States' exports. This looks like a lot of leverage to us. There is also the matter of China's membership in the World Trade Organization, and of the Olympics that Beijing fervently desires to host, and of the sophisticated weaponry that Taiwan wishes to acquire from America. Levers, levers, levers.*¹⁵

For all its passion and apparent good sense, this passage's emphasis on economic leverage and levers illustrates how the linear template (in this case one provid-

¹⁵ *The New Republic*, 23 April 2001.

ing for proportionality and identifiable cause-and-effect), when erroneously applied to a nonlinear system, provides the illusion of calibrated influence. Economies, like the nation-states and international system to which they are intertwined, are nonlinear and notoriously resistant to precise manipulation (never mind prediction). Despite this fact, however, the public continues to expect, and policymakers continue to claim (at least at opportune moments), that such precise manipulation is possible. Why this disconnect? Well, the answer, not surprisingly, is that when looked at through a linear prism, the economy takes on a mechanical character that permits it to be discussed—however artificially—as though it were a ball of clay that can be mechanically manipulated, physically propelled, or mathematically predicted *à la* Newton's laws of motion.¹⁶

Linear processes have their own logic and can make sense, but they really only give those who look at systems in such ways arguments for a single *possible* scenario—not the much wider array of *plausible* outcomes or effects that exist in complex sys-

¹⁶ Whereas Newton's linear laws of motion came to shape so much Western thinking and thus were practically applied universally to just about any system—including China. Some of Newton's Enlightenment contemporaries, notably Leibniz and Montesquieu, searched for systematic "keys" specific to China. Jonathan Spence, *The Chan's Great Continent: China in Western Minds* (New York: W.W. Norton & Co., 1998), chapter 5.

tems. Thus, in the broader sense, these approaches fail to achieve Gell-Mann's "look at the whole" and in doing so wash out complex dynamism, with its alternative outcomes, double-edged swords, and unexpected effects that are inherent in the behavior of nonlinear systems.

A Complementary Nonlinear Perspective

If the debates such as the one taking place over China are ever to reasonably reflect reality, they must first incorporate the nonlinear complements of the linear characteristics on which such debates have tended to focus. In other words, analysts, policymakers, and commentators must appreciate the distinct behavioral characteristics of nonlinear systems as well as their analytical and policymaking implications. Below are nonlinear complements and their implications, illustrated using the Chinese experience:

Nonlinear systems are synergistic, not additive; the big picture must be kept in mind and urges to simplify controlled. First and foremost, a complex system's essence lies in interaction of its parts, not in any individual component. These interactions may be direct or indirect, obvious or subtle. From both analytical and policymaking perspectives, this characteristic makes for a daunting and often messy challenges in that it requires a highly interdisciplinary perspective. Here, the NTR

debate again is instructive in that it attempted to separate economic issues from security and human rights issues. There were reasons for attempting this so-called "de-linkage"—including simplification, manageability, and outright political expediency—but any such separation was unavoidably artificial.

Nonlinear systems have uncertain cause-and-effect relationships; side effects and unintended consequences must be considered inevitable. The wide interconnectivity and interaction of most complex systems makes cause-and-effect relationships ever changing and often uncertain. With respect to China's entry into WTO, for example, no one can be certain of the precise social, political, and economic effects, even though contradictory prognostications are confidently bandied about. These include the judgment that the effects of WTO will be wrenching, causing rising unemployment and demands for political change, on the one hand, and the assertion that WTO will lead to exactly the opposite: extension of the political *status quo* because WTO-spurred economic growth will give the current regime greater legitimacy. Both of these judgments, often made with inordinate certainty, rely on dubious linear calculations that imply precision where none exists.

The behavior of nonlinear systems cannot be repeated; arguments by analogy will never apply precisely. The

dynamics of each system are unique, dependent on its own components, initial conditions, interactions and timing. In complex systems, *exact* circumstances do not repeat themselves; recreation or repetition of past dynamics in other instances is impossible. Policymakers in particular must be made to understand this because, too often, they seek precedents to validate their choices.¹⁷ Therefore, those who explain situations to policymakers must guard against stretching analogies to fit other circumstances. The benefits of considering historical precedents often come more from the recognition of contextual differences (contrasts) than from the illumination of apparent similarities (comparisons). Thus, for example, the successful containment of the USSR does not necessarily provide a valid or useful analogy for the application of similar strategy and tactics against China. The judgment that trade and economic engagement seemingly helped to advance Taiwan's democratic transformation and therefore will

¹⁷ As a philosophical basis for this assertion, nonlinear systems theorists often point to the Greek philosopher Heraclitus and his observation that "it is impossible to step in the same river twice." For an excellent side-by-side comparison of Heraclitian and Newtonian metaphors, principles, and terminology, see: Andrew Ilachinski, *Land Warfare and Complexity, Part II: An Assessment of the Applicability of Nonlinear Dynamic and Complex Systems Theory to the Study of Land Warfare* (Alexandria, VA: Center for Naval Analyses, 1996), 52–53.

necessarily do the same in China is equally debatable.¹⁸

Movements in nonlinear systems are the result of disproportionate inputs and outputs; ripeness (timing), reinforcement, and resistance must all be weighed. In order for any impulse, especially one introduced from outside, to prosper and ultimately reveal and/or sustain its effect on a complex system's behavior ("tipping" is the usual mechanical term applied to this), it must be reinforced by the system itself. Without positive feedback on some level, an impulse will not survive, much less flourish or emerge in the face of systemic resistance (negative feedback). Sometimes this process takes a long time. For example, Taiwan needed nearly four decades from the arrival in 1949 of Chiang Kai-shek and his Chinese Nationalists to experience a sustainable and systematic political reordering. Similarly, punitive sanctions in place for more than 50 years have not led to such a reordering in Cuba or North Korea. The confluence of circumstances and timing cannot be emphasized enough: no matter how carefully crafted or brilliant a policy might be, the moment and the conditions must be opportune—ripe—if the desired effect or outcome is to result.¹⁹

¹⁸ For an outstanding discussion of the "perils of analogy," see: Abba Eban, *Diplomacy for the Next Century* (New Haven, CT: Yale University Press, 1998).

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Metaphors both reflect and reinforce the mind-set from which they spring—no matter how unrealistic that mind-set may be.
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Changing the Metaphor, Methodology, and mind-set

Evolution, adaptation, side effects, interactions, ripeness, etc.: these are the terms and concepts of biologists, psychologists, and medical doctors, and the metaphors of the life sciences must replace the mechanical metaphor of the mechanical and physical sciences if nonlinear systems are to be better understood and better debated. For foreign policy practitioners, this means learning to think, converse, and act more like the professionals in the life sciences. For instance, just as doctors need to think about interactions (drug combinations), side-effects (allergic reactions), particularity (patient specifics: age, weight, blood type, etc.), and timing (stages of a particular illness, age of patient, etc.), analysts must think similarly. Correspondingly, policy-makers need to formulate and prescribe policies that, like effective medical treatments, demonstrate balance (both curative and preventative elements), flexibility (adjustable), and nuance (subtlety), and both must

¹⁹ "Ripeness" in a foreign policy/strategic context receives exceptional treatment in: Steven R. Mann, "Chaos Theory and Strategic Thought," *Parameters*, Autumn, 1992: 54–68.

abandon the prevailing mechanical lexicon (trajectories, leverage, inertia, momentum, tension, tipping, delinking, etc.).

Selection of new metaphors is bound to be controversial as many who read this will undoubtedly be inclined to dismiss this discussion as much ado over figures-of-speech or semantics. After all, mechanical terms and concepts seem inextricably infused in the foreign policy lexicon. Failure to try, however, would be a mistake. Metaphors both reflect and reinforce the mind-set from which they spring—no matter how unrealistic that mind-set may be—and realistic policy cannot be expected to emerge from unrealistic discourse.²⁰

I will concede that changing metaphors and mind-sets will take time—the US national security establishment is, after all, a complex system and the time may not be ripe for a radical change in customs and language. For the near-term, more immediately applicable approaches will need to be found.

Fortunately, proven *methodological* approaches exist to help set the stage for a transition. For instance, the alternative

²⁰ Metaphors are only one approach to "modeling" nonlinear systems. Another promising approach is agent-based computer modeling (ABM). For an excellent, concise survey of the advances being made in this field and potential applications, see: Jonathan Rauch, "Seeing Around Corners," the *Atlantic Monthly*, April 2002.

TOOLS TO COUNTER LINEAR BIAS AND MIND-SET IN THE INTELLIGENCE COMMUNITY

Culturally embrace uncertainty.

Thematically: Emphasize the understanding of possibilities, not prediction.

Methodologically: Make alternative scenarios/futures a “mainstream,” not an “alternative,” approach to tradecraft. Emphasize the explication of the assumptions, key variables, and signposts for *each* scenario.

Editorially: Resist the temptation to try to wash out analytical uncertainty by eliminating caveats.

Managerially: Do not necessarily pressure analysts to “make a call” in the face of significant uncertainty.

Metaphorically: Recognize that language both reflects and reinforces bias/mind-set, and consequently, consciously adopt more nonlinear terminology and metaphors. (A good symbolic starting point for CIA might be modification of the Kent School’s name to read: The Sherman Kent School for Intelligence Analysis *and Synthesis*.)

Training: Require *all* analysts, managers, and editors to take a course in linear/nonlinear thinking and dynamics. Such a course should be developed and taught by the Kent School.

Increase computer modeling, visualization, and simulation.

Make a concerted and serious effort to pursue the development of agent-based modeling (ABM), visualization, simulation, and other advanced computer tools/techniques for exploring and explaining the dynamics of highly complex/nonlinear systems.

scenario/outcome/future methodology, with its illumination of key uncertainties and potential discontinuities, is an approach that acknowledges complexity/nonlinearity and identifies warning issues and policy opportunities—things policymakers expect from useful analysis. Of course, there will always be policymakers who resist this approach on the grounds that the provision of alternative scenarios simply muddies the water and reveals hesitancy on the part of analysts to take risks or make calls. If confronted with such a charge, however, an analyst might do well to offer policymak-

ers the following statement of one of their own:

*Policymakers benefit when they can take into account what the analysts see as the full range of possible outcomes on a tough issue . . . analysts should not usurp the decision role of policymakers by prematurely limiting the options on the table.*²¹

²¹ Jack Davis, “The Challenge of Managing Uncertainty: Paul Wolfowitz on Intelligence Policy-Relations,” *Studies in Intelligence*, 1996 Unclassified Edition, accessed on <http://www.cia.gov/csi/studies/96unclass/davis.html>.

In sum, the task before participants in a policy debate such as the one taking place on China is to embrace uncertainty in a way that permits analysts to acknowledge complexity and ambiguity but finds a way to satisfy a policymaker’s desire for analysis that is sufficiently focused to offer real utility in the policymaking process. In the near-term, greater use of alternative scenario methodology would help.²² From there, it would not be unreasonable to hope for successful, longer-term efforts in the Intelligence Community and elsewhere to change the metaphor and to establish a truly nonlinear mind-set.

An Uncertain Future? Hopefully.

Having so far discussed linearity/nonlinearity in theoretical, practical, metaphorical, and methodological terms, it is worth finishing the job in largely historical ones. For if there is one especially perverse way in which linear bias, mind-sets and assumptions have distorted the American China debate, surely it is the zero-sum perspectives, antagonism, hubris and stridency which they have promoted and made the debate’s defining features. In particular, linear notions of knowable and predictable cause and effect have

²² “Alternative scenario methodology” has not reached its full potential; in the not-too-distant future computer-enhanced “scenario generation” (another form of ABM) may permit significant advances in this methodology.

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When it comes to thinking about China (or any complex foreign policy challenge), it is important *not* to always think straight.

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encouraged the development of simplistic, artificially rigid, and false (“either-or/all-or-none”) policy constructs. This was apparent a half-century ago during the “who lost China” debate, and it is equally apparent in the continuing “containment/engagement” and “Red Team/Blue Team” debates that discount the potential for differing perspectives and more flexible approaches.²³

These examples, if taken as historical bookends for the modern debate, illustrate how excessively linear perspectives have helped feed the damaging cycle of unrealistic expectations, disappointment, infighting, and shrill incoherence to which the China debate has all too often succumbed. However, they also offer a useful contrast to the rare exceptions to this pattern that suggest things need not be this way. Mention of the “who lost China?” debate brings to mind historian Barbara Tuchman’s eminently reasonable treatment of that inane question and its implications when she concluded:

This assumption [that the U.S. had the wherewithal to save Nationalist China from her Communist fate] might

²³ Although temporarily focused on other things since 9/11, the self-styled “Blue Team” refers to those analysts, commentators, and policymakers for whom China’s future presents little uncertainty, especially in terms of the threat that it will pose. The “Red Team”—a term with McCarthyite overtones—is the moniker Blue Team members apply to those participants in the debate who are more ambivalent about China’s future.

have been true if Asia were clay in the hands of the West. But the “regenerative idea”... could not be imposed from outside.... [America’s] mission failed in its ultimate purpose because the goal was unachievable. The impulse was not Chinese. Combat efficiency and the offensive spirit, like the Christianity and democracy offered by missionaries and foreign advisers, were not indigenous demands of the society and culture to which they were brought.... China was a problem for which there was no American solution.²⁴

While Tuchman probably did not think of herself as a nonlinearist, this passage is brimming with nonlinearity: positive feedback/reinforcement, ripeness, uncertain cause-and-effect, and incompatibility with physical/mechanical manipulation. And just as this nonlinear perspective helped bring a dose of warming realism to a debate that had been largely frozen for some two decades, one hopes that it might also serve as an example of

²⁴ Barbara Tuchman, *Stilwell and the American Experience in China, 1911-1945* (New York: Macmillan, 1971), 531.

the much-needed realism that similarly nonlinear perspectives might inject into the contemporary debate as well.

Conclusion: Stop Trying to Think Straight

To end then, it is not unfair to expect the cultivation of nonlinear perspectives to help alleviate the excessive certainty that linear bias has infused into the debate. And while that alone would be an extraordinary accomplishment, it is nonetheless important that I not oversell the potential contributions of such perspectives. At the end of the day, nonlinear perspectives are, quite simply, not going to change the fact that the subjects of such thinking will remain inherently unpredictable and resistant to precise manipulation. Moreover, linear perspectives will remain necessary tools for simplifying and managing our understanding of complex issues, *provided their imperfections and artificialities are acknowledged.*

In the final analysis (or hopefully, synthesis), perhaps the most that can be hoped from nonlinear perspectives is a more “blurred” (to borrow Spence’s term), and greater, understanding of the many patterns, possibilities, and scenarios that China’s future may present, as well as the limits of US ability to influence China’s course. Put another way, when it comes to thinking about China (or any complex foreign policy challenge for that matter), it is important *not* to always think straight.

