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## 30 Takin' It to the Streets: Hydra Networks, Chaos Strategies, and the "New" Asymmetry

P. H. Liotta

*"A ghost is stalking the corridors of general staffs and defense departments all over the 'developed' world—the fear of military impotence, even irrelevance."*

—Martin van Creveld  
*The Transformation of War*

*"If only the little bastards would just come out . . . and fight like men, we'd cream them."*

—Remarks made by a military officer to journalists in Southeast Asia, 1964

War is a fraught subject. As the anthropologist Anna Simons has noted in her thinking about war, "Those who study it often fight about it." Yet, as the two epigraphs above suggest, we are hardly uniform in our approaches to war—and we are not resolved in our best means to combat adversaries.

These epigraphs above also suggest that, as far as the over-used term asymmetry goes in thinking about war, there is actually nothing "new" under the sun. The American way of war brings a definite style and weight to its execution. In the crudest terms, it

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P. H. Liotta is professor of humanities and executive director of the Pell Center for International Relations and Public Policy, Salve Regina University, Newport, Rhode Island. Prior to assuming directorship of the Pell Center in 2004, Dr. Liotta served as the endowed Jerome E. Levy Chair of Economic Geography and National Security at the U.S. Naval War College. He also served as Fulbright lecturer and poet-in-residence (*slobodan umjetnik*, 1988–89) in former Yugoslavia and has traveled widely throughout the former Soviet Union, particularly the Caucasus and central Asia—to the Altai region of Siberia, Tajikistan, the Afghan front, Uzbekistan, Turkmenistan, Georgia, and Iran. The author of 17 books and numerous articles in fields as diverse as poetry, criticism, education, international security, intervention ethics, and foreign policy analysis, Liotta has also published a novel, *Diamond's Compass*, about Iran. His research interests include the study of geography and geopolitics (particularly in southeast Europe, the Euro-Mediterranean, and central and South Asia) as well the reexamination of environmental, human, and demographic security issues in the contemporary environment. Since 2004, Dr. Liotta has regularly lectured on demographics, migration, and security at the NATO Defense College in Rome, Italy. In 2005, he was appointed adjunct professor in comparative politics and international relations in the Department of Social Sciences, United States Military Academy, West Point, New York; became an associate of the Global Environmental Change and Human Security (GECHS) project of Oslo, Norway; and joined Working Group II (Impacts, Adaptation and Vulnerability of Climate Change) of the United Nations Intergovernmental Panel on Climate Change (IPCC). In 2008, he served as expert consultant on endemic community violence for the Canadian government and Department of Foreign Affairs and International Trade's Human Security and Cities Initiative. As a member of the IPCC, he shares in the award of the 2007 Nobel Peace Prize.

represents nothing less than Old Testament warfare, applied with overwhelming force and done with quickly.

There are also weaknesses for the American way of war. Over four decades ago, the French counterinsurgency expert Roger Trinquier (with service in China, Indochina, and Algeria) claimed in *Modern Warfare: A French View of Counterinsurgency* that modern war is an interlocking system of political, economic, psychological, and military actions and conflicts. Yet Trinquier argued that armies tend to fight traditional warfare, and that in modern war they are doomed to failure despite overwhelming firepower.<sup>1</sup> Trinquier (who some suggest served as inspiration for the character of the brutal French colonel in the classic film *The Battle of Algiers*) had a particular interest in terrorism and advocated the use of torture to extract specific information from terrorists.<sup>2</sup>

In the netherworld we have now entered in the “long war” on terror, however, we have handed ourselves any number of problem sets. First, due to national security criteria, there are no externally objective means to assess the “value” of the alleged brutal interrogations of enemy combatants whose eventual status as either criminals or prisoners of war remains as clear as mud. Secondly, with the unfortunate reality that the term “IED” has now entered the vernacular and that severe head injuries from the detonations of these devices affect an alarming number of soldiers and Marines deployed in Iraq and Afghanistan, war has truly come to the streets—and vicious urban warfare may well be a pattern of future combat. Finally, despite the extraordinary investment and sacrifice of people and resources since September 11, 2001, the Iraqi jihad has, as a recent national intelligence estimate suggests, spawned a “new generation of terrorist leaders and operatives.”<sup>3</sup> Although no one has phrased it in such stark terms, the loose organization and diffusion of groups such as al-Qa’ida have created the conditions for “hydra networks.” Drawing from the mythological chthonic beast that Hercules was sent to kill, this term makes reference to the hydra, which displayed the unfortunate ability to sprout two new heads whenever one of its many heads was cut off.

These ugly truths have created the “new” asymmetry in warfare. Whether we have the means and the will to tackle this asymmetry is a matter of pressing debate. The truth may be hard to accept—not the least because the “long” war may turn out to be the “endless” war.

## **HOW CHAOS STRATEGY WORKS AND HYDRA NETWORKS OPERATE**

In theory, at least, the U.S. national security decision-making process is rational. During this process, the decision maker establishes the desired goals of policy and develops a strategy for employing often-scarce resources to achieve these goals. This rational calculus seeks to balance both ends and means.

But this rational decision-making process is also vulnerable, and the “chaos strategist” will target this vulnerability in challenging America. To plan a strategy of direct engagement with American military forces, as Iraq learned in Desert Storm and the Taliban did in Afghanistan, is lunacy. The chaos strategist, by contrast, must manipulate the scenario to his best advantage while striving to *prevent* the introduction of American military force.

Adversaries who do not practice a similar process of decision making—balancing resources and constraints, means and ends—will increasingly look for innovative ways to “attack” without attacking directly the brick wall of American military predominance. The chaos strategist thus targets the American national security decision-making process and, potentially, the American people, rather than American military force, in order to prevail. Such a strategist seeks to induce decision paralysis.

In a strategy of chaos, the key objective will be to convince American political leaders that no clear solution, end state, or political objective (other than the cessation of chaos) exists in the strategist's sphere of dominance—and that sphere of dominance may be at home or abroad. In large measure, the most direct way to “convince” political leaders of the futility of further engagement is to target the will of the people. In a savage application of the Clausewitzian principle of war as the continuation of politics by other means, the fracturing of popular support for prolonged engagements with uncertain outcomes is an application of chaos strategy.

Chaos strategy, employed by all warring parties in the former Yugoslavia and by Saddam Hussein in Iraq until 2003, serves to initially discourage yet may ultimately provoke American intervention. Yet future adversaries will almost certainly use the leverage of chaos as a strategy for gain.

It is critical to stress that the focus of this chapter is particularly on “stateless” agents, rather than on states themselves as chaos strategists. While some have rightly focused on long-term strategic chaos options of the People's Republic of China (PRC), in particular, the emphasis here is on direct and troubling actions by hydra networks of stateless agents such as al-Qa'ida and the Taliban and the literally hundreds of splinter groups that have sprung up in their collective wakes.<sup>4</sup>

In the ongoing “long war,” the practice of chaos strategy by nonstate actors, rather than by the leaders of recognized nation-states, only complicates the security calculus for the United States and its allies. On the one hand, we will practice preemption against those who seek to harm us. Military forces will increasingly be in the business of shooting archers, and not just catching arrows. That is to say, we cannot just wait for chaos provocations to occur before we react.

On the other hand, nonstate chaos strategists may soon recognize our overwhelming preemption capability and strive to shift from being “archers” and to disappear as quickly as possible. The most effective nonstate adversaries that we will face will likely display some of the following characteristics: the facility to operate effectively as a lateral (and noncentralized) hydra network, the ability to learn, the capacity to anticipate, and the capability to “self-organize” or reconstitute after being struck.

Stateless agents, in particular (whether or not they are sponsored by “nation-states” or by easily targetable organizations), can accomplish vanishing acts with far greater ease than adversarial leaders of problematic states. The implications are important as we assess new challenges in future war. Moreover, we should seriously question if we were ever asking the right questions about military transformation in the post–September 11 security environment. After all, we are not the only ones asking “What went wrong?”

In the case of the September 2001 attacks on New York and Washington, a feasible chaos strategy was meant to induce not only fear but also a sense of extreme vulnerability

in the American homeland. As such, the United States entered a new security era in which attacks by nonstate actors on the homeland proved possible and U.S. citizens, their way of life, and the specific liberties that they had been accustomed to were now vulnerable and at risk.

Admittedly, the attacks on September 11 represented an intelligence and interagency failure on a colossal scale; fortunately, the same intelligence network was able to track and prove the case against Osama bin Laden and al-Qa'ida with relative speed. Yet the vulnerability and transparency of the American system led military planners and former CIA officers to proclaim that, regarding the attacks themselves, "We couldn't do this. . . . I have never seen an operation go that smoothly."<sup>5</sup>

In the future, chaos strategists will increasingly seek gain through attacks that cause the excessive deaths of innocents and provoke further cultural/religious/ethnic fault lines among both contending adversaries and potential allies. Despite all claims to the contrary, it is not yet clear that the United States is capable of shifting from a style of warfare that might be described as the American way of war—essentially, the annihilation of an enemy—to a style of warfare that requires far more intense "closework." In simple terms, are we planning for the wars we want to fight rather than for the wars we will have to fight?

Former secretary of defense William Cohen, in reference to the future planning and the "transformation" of the American military, often claimed "We're not looking for a fair fight." Indeed, neither is the chaos strategist—and never will.

A chaos strategist finds tactical and operational success largely irrelevant; rather, he seeks to implant a sense of strategic futility in the mind of the opponent (where all wars are, after all, fought and won or lost). Recent declarations by Presidents Karzai and Bush that the Taliban in Afghanistan will never regain leadership of the country illustrate this point. The Taliban are not terribly interested in "running" Afghanistan; they simply wish to dictate the terms of who does rule and how the country is run.

Recent NATO thinking on the Taliban suggests a dawning realization, rather, that the Taliban have in effect "hydra-sized," becoming "not a homogeneous organisation [*sic*] but a series of interlocking groups that include drug traffickers and other criminals as well as religious zealots."<sup>6</sup> As NATO secretary-general Jaap de Hoop Scheffer noted, "We see that the Taliban have changed tactics: they realise [*sic*] they cannot win militarily and they are now deliberately forcing civilians into situations in which they get them killed to undermine support for ISAF [NATO's force] in Afghanistan." In direct terms, the Taliban have circumvented set-battle pieces and gone straight for inducing strategic futility, seeking to estrange Afghans from the NATO force and from their own government (whose support and development are the mission focus of the NATO force).

Thus, while the Taliban will never win hearts and minds, they can ensure that others don't win them as well. Employing often ruthless tactics, to include the slaughter of women and children (whose deaths they often blame on NATO), they have moved combat off the battlefield and into the streets.

## THE CHANGING FACE OF FUTURE WAR: IMPLICATIONS FOR NATIONAL SECURITY AND FORCE PLANNING

Any adversary that risks American-military-force engagement must employ a method that exploits the social dimensions of strategy to offset the disadvantages in the technical dimension.<sup>7</sup> Such an adversary proves most successful in targeting the process of decisionmaking within the policy (social dimension) sector rather than, as a first step, planning how to engage military force (the technical dimension) once the employment decision has been made.

Seeking to wreak havoc to strategic advantage in his sphere of influence, the chaos strategist must avoid treading into the arena of "vital" American interests. He works best in the shadows, behind the curtain, off stage.<sup>8</sup> In retrospect, with regard to the September 2001 attacks in the United States, the assailants made a crucial error. The attacks *did* affect vital national interests, the resulting American will to accept military casualties in response appeared to be high, and all roads—rightly or wrongly—almost immediately led to Kabul.

The normal response to an enemy's attack is to attack, of course, in kind and with a like ferocity. In conventional war, this has always been the symmetrical reaction. While admittedly all warfare tends toward asymmetry, in which one seeks to exploit the weakness of the opponent and to rely on one's own strengths, the notion of rough force parity between opponents has shifted remarkably in the post-cold war era. An opponent who can match the capabilities of U.S. armed forces does not exist, and will not appear any time soon.

As a result, technology and new operational concepts argue the need for American military forces to move toward the capacity to induce response paralysis on the part of adversaries. The post-cold war landscape of American force structure and planning is littered with concepts and beliefs now consigned to the ash heap of history: *Joint Vision 2020*, "Network-Centric Warfare," "Parallel Warfare," and the "Global Strike Force."<sup>9</sup> All of these visions of the face of future war hinged on the almost theological adherence to the use of overwhelming technological capability and its ability to paralyze an adversary's response. And, true to form, every adversary we have faced *directly* since the end of the cold war has been unable to fight back; most often they simply have had to hunker down and take the hit.

This belief in technology and its ability to win in conflict suffers from at least two not necessarily contradictory ideas. First, the notion popular among mid- and senior-level military officers holds that the military strategist can get inside the enemy's decision cycle (often called "the loop"), cut him off, and kill him. Second, the use of technology and American reliance (some would call an obsession) on firepower allows for high enemy damages and low friendly casualties. Edward Luttwak partially popularized this second idea with what he termed "Post-Heroic Warfare."<sup>10</sup>

One of the leading airpower proponents in the post-cold war era, Phillip S. Meilinger, suggested that warfare could be considered in four types: exhaustion, attrition, annihilation, and paralysis.<sup>11</sup> The conflict in Southeast Asia, a protracted war from which America sought to extricate itself after three decades of involvement with no lasting goals achieved, is an example of warfare of exhaustion; Operation Allied Force in

Kosovo and Operation Enduring Freedom in Afghanistan—through coalition employment of high-intensity strikes, high-technology weapons, precise targeting, and the integration of special operations forces with indigenous forces to support and help direct firepower—are examples of warfare of paralysis.

Yet the opposing chaos strategist is fully aware of America's asymmetric, unmatched power predominance. His correct "target," as it were, is the "social dimension" of the national-level policy decision-making process as well as perhaps the population itself. In essence, the chaos strategist attacks what we value most.

The shift in chaos strategy is not subtle, but it is crucial that we recognize the shift. In the future, successful chaos strategists may target us where we are most vulnerable and will work to avoid presenting themselves as any direct threat. Stateless agents, in particular, will find this strategy shift acting to their advantage.

Moreover, since our military forces are not sized and structured as a countervalue force,<sup>12</sup> the chaos strategist will increasingly recognize that new vulnerabilities will present themselves through targets and methods such as

- Critical infrastructure degradation or collapse, to include not only physical systems and structures but also contamination of food supplies or resources in ways difficult or impossible to detect;
- The spread of infectious disease that cannot be controlled, whether or not through the use of biological agents;
- Intrastate as well as interethnic conflict in failed or failing states;
- Environmental stress, resource scarcity, and depletion;
- The trafficking of drugs, small arms, and inhumane weapons, often coupled with conflicts that are claimed as insurgencies;
- Cyber-war;
- Terrorism.

All these elements provide breeding grounds for future warfare. These nightmare zones present targets of opportunity. Moreover, while none of these aspects are necessarily new, the capacity to induce chaos is greater today than ever before.

We know, for example, that the Soviets experimented with strategic biological weapons, such as smallpox that could be delivered with intercontinental ballistic missiles (ICBMs).<sup>13</sup> Soviet weapon experts recognized, however, that smallpox could be released far more secretly on enemy territory; thus, in an age of globalization where disease knows no borders, chaos strategists recognize this advantage as well. Further, the capacity and power of modern laptop computers is roughly equivalent to the entire computational power that the U.S. Defense Department had in the mid-1960s.<sup>14</sup>

In the past, state-led chaos strategists have at least partially achieved their objectives even in the face of U.S. military force. As a result, Somalia was a failure; Iraq remains "unsolved"; Bosnia and Herzegovina is ethnically cleansed and, like Gaul before it, divided in three parts; Kosovo is an international protectorate but still part of Serbia; and Afghanistan's viability as a future state remains in question. To make matters worse, the disease of chaos strategy has now spread to Pakistan—a nuclear-armed state.

The chaos strategist wants to avoid force engagement. Even when force is introduced and troops are stationed on the ground, as in Bosnia, Saudi Arabia, Iraq, and

Afghanistan, the chaos strategist wants to prolong ambiguity. Above all, the desired outcome remains decision paralysis.

Most American defense planners naturally consider military predominance to be a major strength. But, ironically, there is an inherent weakness in it. The immense advantages of American firepower, technology, and forces available require clear and distinct application of means to reach ends. The Weinberger and Powell defense doctrines, which mandated clear definitions of political goals and American interests prior to intervention, worked in Desert Storm because they fit Desert Storm.<sup>15</sup> These same defense doctrines would not work today—in the face of chaos.

## THE “ENGINEERING APPROACH” TO WAR

In American warfighter terminology, deception and surprise are standard checklist items in thinking about war. But American intelligence assets—in terms of technology and capabilities the most superior in history—fall short when it comes to the unclear art of human intelligence and human unpredictability. In truth, despite all our progress with conventional and unconventional war, there still rings an identifiable empathy with how the debacle of recent engagements was, in some respects, not different from the debacle of Vietnam: “If only the little bastards would just come out . . . and fight like men, we’d cream them.”<sup>16</sup> Such comments make the chaos strategist beam with pleasure.

One Asian expert has provided a description of war in the ideal type as having three distinct phases: engagement, chaos, and chopping of heads (*jiaofeng*, *luan*, *zhan*). The master of this “intellectual” approach to warfare, of course, is Sun Tzu, who employs *jiaofeng*, *luan*, and *zhan* through instantaneous, differential shock-wave application. This same authority refers to Clausewitz’s theory of warfare victory as an “engineering” approach, with equally distinct phases: battle, campaign, and warfare termination—all occurring in cumulative, integral stages.<sup>17</sup>

Thus, when American warfighters speak of “cutting off and killing” an enemy, they mean “to chop heads” in the metaphorical sense; when the chaotic warfighter speaks of *zhan*, or its linguistic equivalent in a different culture, he is being literal. The chaos strategist and the chaos warfighter prefer the removal of the enemy in the purest form. In former Yugoslavia, and Iraq, this manifested as ethnic and religious “cleansing.”

Ultimately, the best guarantee of success comes when the chaos strategist has brought chaos to his enemy without battlefield engagement. As Li Jing, remarking on Sun Tzu’s own warfare practices, noted: “From antiquity, the number of cases in which a chaotic army [that is, with chaos induced among its ranks] brought victory [to the enemy] can never be fully recorded.”<sup>18</sup> That, of course, is precisely what new operational concepts and employment sought to produce in crushing the Taliban and al-Qa’ida forces in 2001—through a network of unmanned aircraft that led to increased battlefield awareness, special operations forces used as forward spotters, motivated indigenous forces, precision major fires delivered by various means, and rapid maneuver to cause the enemy to break. This led to battlefield success, though not necessarily to strategic victory.

The Taliban and al-Qa’ida made a classic mistake in Afghanistan: they were stupid enough to fight back. They apparently had forgotten the lessons of chaos, or never learned them. The true chaos strategist would have looked for ways to never engage

American military force directly or would have employed methods that our emerging style of warfare is not able to handle well.

In reality, our strategy and force planning processes are laborious, methodical, and infinitely complex because they are planned for and fought with extraordinary precision and detail. The strategic theory that plans for force application as a paralysis of response does so because it wants—according to American strategic culture—fast, precise, and overwhelming conflict resolution. Such strategy and theory seek to eliminate chaos in order not to directly confront chaos.

Both the Weinberger and Powell doctrines reflect this American tradition. Vietnam did not fit this tradition; neither does Bosnia, Somalia, Iraq, Afghanistan, or many other plausible future war scenarios. The paradigm for many future battlegrounds, however, will draw on ambiguity and chaos rather than on American battlefield predominance.

Admittedly, with the advent of network warfare and remarkable advances in military technology, Colonel Trinquier's gloomy prophecy may not be as set in stone as some once believed. At the same time, in view of the incredible American military successes since the end of the cold war, one might reasonably ask why we pushed so hard and so fast toward military "transformation." We now know that in pushing strategic transformation, there are clear and present vulnerabilities we overlooked, which transformation cannot affect, yet which the chaos strategist will likely target.

### **ADAPTING TO CHAOS**

This is not the first time in history that we have recognized our vulnerability, as well as questioned our ability to deal with that vulnerability. In the spring of 1946, scientist J. Robert Oppenheimer, who had directed the atomic bomb project, was asked in closed congressional testimony whether it would be possible to smuggle elements of such a bomb into New York and then blow it up. "Of course," replied Oppenheimer, "and people could destroy New York." When allegedly a nervous senator then asked how such a weapon smuggled in a crate or suitcase could be detected, Oppenheimer simply answered, "With a screwdriver."<sup>19</sup> The document that eventually came out of that testimony, known as the "Screwdriver Report," remains classified to this day. In essence, though, there seems to have been a recognition decades back that although there was no direct threat at the time, we were clearly vulnerable to chaos attack.

What makes our vulnerability so frightening at this stage in history, nonetheless, is the new means for chaos now available. Chaos strategists that are stateless agents will impact the future security of states and regions—with access to new capacities and technologies previously held only under the tight restriction of privileged states. Consider nuclear weapons, for example. While classic realists such as John J. Mersheimer may well be correct in asserting that states possessing nuclear weapons tend to act in ways that reduce rather than aggravate state-to-state security relationships, we have today truly entered the time of dirty, criminal, often ruthless warfare. Stateless agents with nuclear weapons may—unlike states—be driven to a "use it or lose it" mentality because of the hazards in holding such devices.

In 1991, published just as Desert Storm's ground offensive took place, Martin van Creveld's *The Transformation of War* did not deserve the ridicule thrown at it from pundits



and scholars alike. In retrospect, Van Creveld was prescient. Desert Storm, on the other hand, looks archaic—the last of the big ones in terms of battlefield engagements.

In recognizing as well the classic principles embedded in *On War*, we would do well to recall how Clausewitz described war as a “remarkable trinity” composed of “primordial violence, hatred, and enmity” (the realm of the people); “chance and probability within which the creative spirit is free to roam” (the realm of the commander and his army); and the “element of subordination, as an instrument of policy, which makes [war] subject to reason alone” (the realm of the government).<sup>20</sup>

While this author does not intend to suggest that chaos strategists will inevitably defeat the United States, such strategists can—and often do—bedevil the national security decision-making process. Used with the right measures of surprise and undetectability, a chaos strategy could disrupt and possibly destroy the Clausewitzian trinity. In this scenario the people’s faith in government could be erased and the third leg of the trinity, that of the commander and the army, could do little or nothing to prevent that destruction.

In truth, chaos strategists cannot defeat the United States or its allies in any traditional sense. We will be targeted, however, where the symbols of our strength reside. Although the World Trade Center was not an irreplaceable node in terms of economic power, and even with the astounding resiliency that the United States displayed in recovering from the September 11 attacks, the total cost of lost worldwide economic growth and decreased equity value as a result of the attacks exceeded one trillion dollars.<sup>21</sup>

Even as the United States has the capacity to bring massive firepower on the battlefield—along with an increasingly sophisticated network of intelligence systems, information architecture, unmanned systems, and joint and combined force operations—we should expect to see chaos strategies come into play in future engagements. Too exclusive an emphasis on technological solutions in warfare—and in determining political outcomes—may well prove problematic. Although a cliché, it remains true that we must prepare for the wars we may find it necessary to fight, and not plan for the wars we want to fight.

Every single military engagement since the end of the cold war suggests that we have dispatched our adversaries with ease on battlefields and in direct engagements. This would seem to be an argument *against* rapid transformation of the armed forces. Why bother, after all, to change the military when no one else can stand up to it?

What may well be lacking is our need to recognize “closework.” As Larry K. Smith phrases it:

Overwhelming force implies, almost by definition, a lack of precision. That won’t work now. What we’re going to need is a much greater emphasis on the concentrated application of street smarts. I call these sorts of operations “closework.” They are extremely precise missions that are used when the results are absolutely crucial. They demand the very highest standards of intelligence, of training, of preparation, of timing and execution. We haven’t been particularly good at this in the past.<sup>22</sup>

Closework also suggests that urban warfare and often brutal forms of engagement will be far more likely in the future. Rather than relying more on distance warfare and precision engagement, we may fundamentally have to turn in a new direction. If it is true, for example, that one of two people on the face of the earth *already* lives in

urban environments and one of two people will live in “water-stressed” areas at some point within the next two decades, then the complexity of intersecting forces can bring about profound and often vicious consequences. These consequences might include—but certainly not be limited to—critical infrastructure collapse, the outbreak of infectious disease that cannot be controlled, and intrastate as well as interethnic conflict related to resource scarcities (such as water) and environmental stress. We may well be entering into chaos.

We need to debate about how best to meet these challenges. Admittedly, there is a danger of overestimating one’s real or potential enemy. There is a greater danger of not recognizing one’s enemy at all.

To suggest that we actually understand the challenges of the future and can adapt our armed forces with relative ease is a flawed assumption. To the contrary, the science of complexity, future uncertainty, and minimizing our vulnerabilities should prove central to what should be one of the most vigorous debates in our nation’s history.

As Ralph Sawyer has noted, Mao Tse-tung once compared strategy to a game of *weiqi* (*weich’i*) (better known under the Japanese name of *go*).<sup>23</sup> The link to chaos strategy—in corporate business (a form of economic warfare, to some) and real warfare—is apt. According to several sources, the strategy of *weiqi* directly influenced software development of chaos strategy and applies principles that remain worthy in the public and political arenas.<sup>24</sup>

We need to adapt to counter future “chaos strategies,” where our adversary’s essential aim is to achieve victory through avoiding defeat. Potential, though plausible, national security responses include the increased use of covert actions, as well as special forces, in place of more traditional wartime forces and resources. While this unquestionably will impact strategic military culture—sometimes with disastrous results—it is unacceptable for us to simply shrug and mutter, “Well . . . you can’t change the culture.”

In the end, it does not matter much if future chaos attacks will be illogical or disjointed. Chaos—and its intended effects—will prove more significant than a cohesive strategy that viably links means to ends. As an adage in India claims, one way to kill a tiger is to distract it from so many different sides that it tries to run in every direction at once.

Will we adapt to hydra networks, chaos strategy, and the “new” asymmetry? That remains to be answered in the wars that are still to come.

## NOTES

Earlier versions of this work appeared in *Dismembering the State: The Death of Yugoslavia and Why It Matters* (Lanham, MD: Lexington Books, 2001) and as “Chaos as Strategy” in *Parameters: The U.S. Army War College Quarterly* (Summer 2002): 47–56.

1. Roger Trinquier, *Modern Warfare: A French View of Counterinsurgency* (New York: Praeger, 1964). The entire text is available online from the U.S. Army Command Staff College, Fort Leavenworth, Kansas, [www.cgsc.army.mil/carl/resources/csi/trinquier/trinquier.asp](http://www.cgsc.army.mil/carl/resources/csi/trinquier/trinquier.asp).
2. See, in particular, chapter 4 of *Modern Warfare*.
3. “Declassified Key Judgments of the National Intelligence Estimate ‘Trends in Global Terrorism: Implications for the United States’ Dated April 2006,” news release, 26 September 2006, 2, [www.dni.gov/press\\_releases/Declassified\\_NIE\\_Key\\_Judgments.pdf](http://www.dni.gov/press_releases/Declassified_NIE_Key_Judgments.pdf).

4. The best thinker on this topic remains Ralph Sawyer, in particular in his recent extensive work published in the *Journal of Military and Strategic Studies* (Winter 2007), titled "Chinese Strategic Power: Myths, Intent, and Projections," [www.jmss.org/2007/2007winter/articles/sawyer\\_cont-defence.pdf](http://www.jmss.org/2007/2007winter/articles/sawyer_cont-defence.pdf).
5. "September 11, 2001," *The New Yorker*, 24 September 2001, 60, 64.
6. Daniel Downby, "NATO Rethink as Taliban Proves Skilled Adversary," *Financial Times*, 29 July 2007.
7. Andrew F. Krepinevich, Jr., "Major Regional Conflicts: The Streetfighter Scenario," in *The Bottom-Up Review: An Assessment* (Washington: Defense Budget Project, February 1994), pt. 5, 42.
8. A debate about what constitutes "vital national interests" (also a frequently abused term, most often tossed around with complete lack of strategic calculus)—promotion of democracy, human dignity, natural resources, oil—in the future needs desperately to take place.
9. As an aside, it was Leon Trotsky—and not Ronald Reagan—who coined the term "ash heap of history." As Harrison Salisbury pointed out in a letter to the editor of the *New York Times*, 30 June 1985, Trotsky made the claim over the Mensheviks walking out of the Second Congress of Soviets in October 1917, thereby enabling the Bolsheviks to establish total control. Trotsky allegedly declared: "Go out where you belong—into the ash heap of history."
10. Luttwak argued that the significance of "Post-Heroic Warfare" lies in a "careful, purposeful patience" in the application of predominant American and American-led military force, as well as a return to the "casualty-avoiding methods of eighteenth century warfare"—nominally based on ancient Roman economically conscious war. Edward N. Luttwak, "Toward Post-Heroic Warfare," *Foreign Affairs* 74 (May–June 1995): 109–22. Economic embargoes and sanctions against adversary states may also prove more worthwhile than the traditional battlefield engagements that characterized previous wars. If so, they remain unpopular instruments of power (in contrast to the swift application of the military instrument) for policy makers. Economic sanctions against Serbia, for example, brought the Milošević regime to its knees; at one point during the last war in Bosnia and Herzegovina, by some estimates, inflation ran as high as 28 billion percent. The regime, nonetheless, stayed in place until after the "October Revolution" that took place five years later. Further, the individual prosperity of the average Serb plummeted while the vitality of Mafia elements, black-market smuggling, and "sanction busting" practices soared. One other aspect of economic sanctions points to American selectivity: the continuing embargo against the military dictatorship of Myanmar (Burma) proves less than effective because other nations, particularly ASEAN nations, continue to invest there. (One could make the same analogy, until recently, about European investment in Iran.) The standards applied by the United States as justification for sanctions against Myanmar could also have been applied against the PRC—which was not and will not be "punished" with economic sanctions. Myanmar does not represent a vital national interest for the United States; China does.
11. See "Air Targeting Strategies: An Overview," in *Airpower Confronts an Unstable World*, ed. Richard P. Hallion (Washington: Brassey's, 1997), 51–80.
12. By the use of "countervalue" as a possible military role, I am broadly referring to nuclear-weapon-targeting theories that refer to counterforce targets (hardened military systems and forces) and countervalue targets (that is, what we value most—our cities, our population, and our way of life). The U.S. military is not sized and structured as a countervalue entity; as such, we can expect to see organizational resistance to military forces playing the "home game" vice the "away game" in future engagements.
13. For an in-depth examination of the Soviet biological weapons program, one of the best available sources is Ken Alibek's *Biohazard* (New York: Random House, 1999).
14. Thomas Homer-Dixon, "The Rise of Complex Terrorism," *Foreign Policy*, no. 128 (January/February 2002): 54.
15. One of the best critiques of the Weinberger doctrine, with examples of its applicability to various interventions, can be found in Michael I. Handel, *Masters of War: Classical Strategic Thought*, 2nd ed. (London: Frank Cass, 1996), 185–203.

16. Remarks made by a frustrated military officer to journalists in Southeast Asia; drawn from a January 1996 lecture at the Naval War College by Professor William J. Duicker, Pennsylvania State University.
17. Based on lecture notes and drawn from discussions with Professor Arthur Waldron, Lauder Professor of International Relations at the University of Pennsylvania.
18. *The Seven Military Classics of Ancient China*, trans. Ralph D. Sawyer, with Mei-chün Lee Sawyer (Boulder, CO: Westview Press, 1993), 333.
19. Reported in Kai Bird and Martin Sherwin, "The First Line against Terrorism," *Washington Post*, 12 December 2001, available at [ebird.dtic.mil/Dec2001/e20011212line.htm](http://ebird.dtic.mil/Dec2001/e20011212line.htm).
20. The complete text in English and German is available online at [www.clausewitz.com/CWZHOME/VomKriege2/ONWARTOC2.HTML](http://www.clausewitz.com/CWZHOME/VomKriege2/ONWARTOC2.HTML). The best translation of Clausewitz remains Michael Howard and Peter Paret's *On War* (Princeton, NJ: Princeton University Press, 1989).
21. Homer-Dixon, "The Rise of Complex Terrorism," 58.
22. Quoted in Joe Klein, "Closework," *The New Yorker*, 1 October 2001, 45.
23. See, in particular, the extended consideration of this analogy in Sawyer, "Chinese Strategic Power," 31n50.
24. For examples, see L. B. S. Raccoon's "The Chaos Strategy" in *ACM Software Engineering Notes* 20, no. 5 (December 1995): 40–47; and Chet Richards' self-published *Certain to Win: The Strategy of John Boyd, Applied to Business* (Philadelphia, PA: Xlibris Corporation, 2004).