
INFORMATION, POWER, AND GRAND STRATEGY:
IN ATHENA'S CAMP—SECTION 2*

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IMPLICATIONS FOR GRAND STRATEGY

According to tradition, power considerations drive strategic choices, and grand strategy consists of the “knitting-together” of a nation’s political, economic and military resources and capabilities in pursuit of its overall aims.¹ Indeed, the major dimensions of grand strategy have long been the political, economic, and military ones—anything else has been deemed secondary, significant only as it affected the major dimensions. Information and related technologies and systems play a role in this tradition, but mainly a supporting one.

Yet even though information is generally deemed a subsidiary factor, it sometimes has transformative effects. Examples abound throughout history. With regard to political power, one need only look at the effect the printing press had on society. Aside from being a catalyst for the Renaissance, the printed word succeeded in empowering individuals and states in ways previously unknown. An example is provided by the Protestant Reformation in which, despite efforts to restrict the dissemination of the Bible into the various vernaculars, the word did get out. This resulted in a movement which held, first,

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that the individual could enjoy a direct experience with God, as opposed to one filtered through a religious hierarchy. Second, the liberation of the individual from centralized control encouraged a number of emerging states to seek their own political independence from Rome. Thus, Lutheranism in Germany and Anglicanism in England were movements that fostered national political sovereignty as well as individual freedom of worship.²

In economic affairs, the letter of credit was well known and widely used in Roman times as an instrument for conveying information about the creditworthiness of a borrower or purchaser. It allowed for a range and velocity of commercial transactions that exceeded anything seen prior to its invention. Partly because of this instrument, the eastern Roman empire, which focused on the accumulation of wealth and the construction of extensive financial and trade networks, outlived by a thousand years its western counterpart, which denigrated commercial affairs in favor of conquest.³

An early example of information serving to enhance military power was the appearance of the written word, a few millennia prior to the invention of the printing press. This innovation enabled the preparation of complex orders, and the delegation of tactical, and eventually operational, command functions. As a result, larger armed forces could be mobilized and deployed effectively in combat. Extended operations by larger forces made the command and control function even more important, a trend that continued with the advent of the telegraph, telephone, and radio and remains unabated in the current revolution in military affairs, which revolves around informational factors.⁴

From its historically subsidiary position, information is now being moved into a transcendent, if not independent, role.⁵ As the information revolution progresses and its conceptual and policy implications expand, information is increasingly seen to have overarching, transforming significance for all the dimensions of power and strategy. For the time being, this role is often more rhetorical than demonstrable, because it is not yet precisely clear what "information" means for grand strategy. One intent is to discern and develop a definition that improves the U.S. capacity for combined political, economic, and military strategies—be those, for example, to foster democracy, promote commercial openness, curtail a given

conflict or generally strengthen (or retrench) U.S. power and presence abroad. Another intent is to develop information as an independent fourth dimension of national power.

Thus, the political, economic, and military building blocks of grand strategy may depend increasingly on information to realize their power potential. Once again three views emerge: The traditional one—that information is a subsidiary aspect of the three major dimensions of grand strategy—is being succeeded by the contemporary view that information has transcendent, overarching effects on them. Meanwhile, a third view—that information (and communications) should be developed independently as a fourth major dimension of grand strategy—is gaining strength. For example, current thinking is that information has modifying effects on the traditional dimensions of strategy. As power and information become more fused under the Athenan view, it may become a moot point as to which drives strategy. Indeed, as this fusion occurs, it may become advisable to move toward the view that information is a distinct dimension.

In our view, information should now be considered and developed as a distinct fourth dimension of national power—an element in its own right, but still one that, like the political, economic, and military dimensions, functions synergistically to improve the value and effects of the others. Table 18.1 provides a glimpse of the various ends and means of grand strategy, taking its cues on ultimate aims from President Clinton's doctrine of democratic enlargement.⁶

Given the explosive growth in the means of communication in recent years, versus the inherent constraints on either the use of force or

Table 18.1

American Grand Strategy: Ends and Means

Dimensions	Ends	Means
Political	Spread of democracy	Treaties, alliances
Economic	Growth of free markets	Sanctions, subsidies, trade, GNP increases
Military	Two-war capability	Armed services
Informational	Open access and connectivity	Telecommunications, the media, public diplomacy

economic coercion, it may well be that policymakers will increasingly want to resort to information strategies before, or instead of, more traditional approaches to state craft.⁷ The preference for informational means may be even more pronounced in situations dealing with friends or allies, as opposed to adversarial crises. One can see the difference in the Persian Gulf region, where hostility to the Iraqi regime has led U.S. policy to rely on economic and limited military pressure to try to compel a democratizing change. In contrast, Saudi Arabia, a close, but non-democratic American ally, faces neither economic nor military pressure to liberalize, and political pressure is muted. Informationally, however, the United States has supported the sale, by AT&T, of a cellular communications network of enormous bandwidth. This could give Saudi citizens hitherto unknown capacities for interconnectivities, both domestically and internationally, that may unleash vibrant democratizing possibilities.

In addition, with regard to inferences to be drawn from Table 18.1, it is important to point out that, while one might pursue, say, some political ends by political means, it is not necessary to proceed in a symmetrical fashion. For example, the political goal of democratizing Haiti was pursued by means that included strong elements of economic and military coercion. Similarly, the ability to win two regional wars nearly simultaneously will rely, no doubt, upon a variety of means in addition to U.S. armed forces, including financial and manpower contributions from allies, as occurred in the recent Gulf War. Asymmetrical means may also be employed in the economic sphere, where, for example, the first American attempt to open Japanese markets in the 1850s was led by Commodore Perry's "black ships." Japan's own policies in the 1930s and early 1940s demonstrated a willingness to pursue economic ends by primarily military means. Also, American strategy has, in recent years, focused upon the use of economic leverage in pursuit of political ends. However, the limits of economic power can be glimpsed in the frequent failure of sanctions as a tool of coercive diplomacy. The stout resistance of the impoverished, from Cuba to North Korea, suggests important constraints upon this aspect of grand strategy.

Finally, we hypothesize that, in its integrative functions, information will serve more usefully, and be less attenuated, than the other dimensions of national power. Thus, when a good economy is not connected to a first-rate military, the likelihood is remote that the

armed forces, endowed with dominant informational capacities, will perform poorly. Examples of the often weak connections between political, economic, and military means abound. With regard to the economic-military connection, many prosperous nations and empires have suffered military decline despite their wealth, leading to their defeat by economically backward opponents. Rome fell to barbarians whose economies might best be described as “subsistence plundering.” The nomadic Mongols had only the most rudimentary notions of markets and trading, yet they conquered the leading Sinic, Muslim, and Orthodox Christian civilizations of their day. Revolutionary France arose from economic collapse to overthrow virtually all of its wealthy neighbors. Finally, Vietnam's peasant economy withstood and defeated the United States while the latter was at the height of its Cold War-era power. Thus, one can see that the connections between the three primary elements of power are often attenuated.

Information, however, has integrative effects on the political, economic, and military aspects of power that are robust and persistent. The other side of this notion is that, as beneficial as information is, the lack of it may have equally serious negative consequences for state power. With this in mind, we turn briefly to the Cold War as a period that allows for some testing of this hypothesis. Given its recent conclusion, this case certainly meets the standards of relevance to the analytic issue at hand. Also, it affords a “tough test,” because the leading actors—the United States and the Soviet Union—had, throughout their rivalry, large economies and militaries, and stable political institutions. To fully understand the collapse of one and the triumph of the other, it is necessary to become aware of the deep and enduring effects that information had on the national power and grand strategies of both rivals.

The Cold War As an Information-Based Conflict

The Cold War affords a laboratory for assessing the relationship between information and national power. For over 40 years, an “open system” rich with information, the United States, strove to prevent the domination of the international community by a “closed system,” whose grand strategy was often aimed at preventing the generation and dissemination of information. The protracted struggle

between these contending systems resulted in triumph for the nation whose levers of power and suasion enjoyed the higher information content—politically, economically, and militarily.

At the political level, for example, the United States mobilized for the long struggle by disseminating information and debating it openly. The decision to pursue a strategy of containment occurred after extensive public discussion, including the notable exchanges between George Kennan and Walter Lippmann. Indeed, Kennan's "long telegram" became the principal instrument for mobilizing the national will and guiding overall policy.⁸

Throughout the Cold War, American political strategy held to the notion that the truth would, as the Bible suggests, "set men free." Thus were born the United States Information Agency, Radio Free Europe, Radio Liberty and Radio Martí, among others. The Soviet Union, however, adopted a contrary political strategy: It restricted access to information and to technologies such as the typewriter, both at home and abroad. If information could not be suppressed, propaganda and other dictatorial measures served to control and reshape its meaning in ways congenial to the Kremlin's interests. As the Cold War played out, openness proved a more viable instrument of political power, while efforts at suppression only postponed the eventual eruption of demand for information. The policy of openness, or *glasnost*, enacted during the tenure of Mikhail Gorbachev, came too late to prevent a political implosion, whose effects still bedevil Russia.

In the economic realm, similar forces were at work. The United States led an international coalition of states in pursuit of commercial openness, principally via the General Agreement on Tariffs and Trade (GATT). To counter this pro-market system, the Soviet Union cobbled together a competing system, the Council on Economic Cooperation (COMECON), that aimed to centrally control all economic information and transactions, including throughout the satellite states of the Soviet imperium. Since these two systems had little to do with each other, their economic competition offers a clear test of open and closed information systems in the economic sphere also. The outcome of this "test" is well known. The open, informationally driven system brought its bloc a level of economic prosperity unri-

valed in history. The closed system presided over the deepening impoverishment of its denizens, fomenting their eventual revolt.

In the arena of military competition, a similar pattern emerges. The United States and its allies developed flexible doctrines, strategies, and weaponry that emphasized the importance of information. This drive reached its apotheosis with the advent of precision-guided munitions (PGMs), which were seen as a way to defend with fewer forces against a conventional Soviet attack with superior forces. Meanwhile, the Soviet Union pursued an overall strategy based on massing the greatest amount of firepower possible. This meant bigger weapons, including nuclear missiles, whose destructive power, it was hoped, would offset the vitiating factor of their relatively greater inaccuracy. In the conventional realm, the Soviet style relied, in traditional fashion, on attrition, even within the context of the adoption of many of the tenets of mechanized warfare.⁹ The one protracted conflict in which the Red Army did fight during the Cold War, in Afghanistan, featured the defeat of Soviet brute force strategies by an indigenous resistance, the mujahideen, that turned the tide of victory with the information-laden Stinger missile.

Afghanistan aside, the Cold War nuclear rivalry provides perhaps an even better contrast of the two styles. The United States strove for highly accurate delivery systems and actually reduced megatonnage substantially (by over 40 percent) during the last two decades of the Cold War. This accuracy also allowed for the development of a “counterforce” nuclear strategy that provided, possibly, a way never to have to implement a declaratory policy that threatened to hold Soviet civilians hostage to big, inaccurate, city-busting warheads.¹⁰ The Soviets simply couldn't match American advances in accuracy and had to maintain larger, more destructive weapons and a declaratory policy of all-out nuclear war.¹¹

Finally, while we have briefly recounted the manner in which information entered into each side's political, economic, and military strategies, it is important to note that information also facilitated synergies among these basic dimensions of national power and grand strategy. A notable example appears in the market system's ability to foster, along with business wealth and investment capital, a multitude of innovations in defense technology. The Soviets, however, generated less capital with their suppressive central control

mechanisms, and innovated little. This meant that they could sustain the competition neither quantitatively nor qualitatively.

As the information revolution gained strength in the closing decades of the Cold War, the “open” societies of the West proved better suited than the “closed” societies of the East to take advantage of the new technologies and to adapt to the challenges they posed to established concepts of sovereignty and governance. Moreover, the deliberate fostering of information and communications flows proved a powerful instrument for compelling closed societies to open up. Thus, U.S. Secretary of State George Shultz, writing in 1985, before the revolutions of 1989 proved the point in Eastern Europe, observed that

The free flow of information is inherently compatible with our political system and values. The communist states, in contrast, fear this information revolution perhaps more than they fear Western military strength . . . Totalitarian societies face a dilemma: either they try to stifle these technologies and thereby fall farther behind in the new industrial revolution, or else they permit these technologies and see their totalitarian control inevitably eroded . . . The revolution in global communications thus forces all nations to reconsider traditional ways of thinking about national sovereignty.¹²

If the Soviet regime risked pursuing the new technologies, Shultz and others predicted (correctly) that its leaders would eventually have to liberalize the Soviet economic and political systems.¹³

In sum, the American triumph in the Cold War was not only a victory for our political, economic, and military systems and strategies, but also for our overall approach to information. Information variables crucially affected all the major dimensions of power—political, economic, and military. This was a key, overarching difference between the Western and Soviet systems.¹⁴ Should one infer from this success in the Cold War that the same strategy of openness is necessarily the right one in the emerging new era?

Openness Reconsidered

Openness—the open society—is an ideal that permeates American interests and objectives, including all the political, economic, mili-

tary, and informational ends and means discussed above. It is so potent an American ideal that George Soros lucidly proposes

that we declare the creation and preservation of open societies as one of the objectives of foreign policy I propose substituting the framework of open and closed societies for the old framework of communism versus the free world.¹⁵

One could extrapolate from the foregoing that the decisive role of information in the Cold War, linked to a grand strategy of openness, should serve as a model for American grand strategy in the post-Cold War world. Indeed, the current doctrine of “democratic enlargement”¹⁶ appears to grow logically from the opportunity provided by the dissolution of the Soviet Union. In terms of its power relative to others, the United States enjoys a position of preponderance unlike any in its previous experience. Also, in the ideological realm, a broad-based strategy of openness has close links with the most essential aspects of 20th century American political and philosophical thought.

However, the strategy of openness that won the Cold War may not be the same one that will best serve U.S. objectives and interests in the emerging era. First, though, it is important to recognize that the American grand strategy of openness during the Cold War had many closed aspects as well. For example, in the late 1940s and early 1950s, vigorous efforts were made in the United States to prevent the diffusion of communist ideology, much as the Soviets tried to keep liberal ideas from gaining a hearing, or a following. By the mid-1950s, though, the United States grew aware of the ethical and political bankruptcy of this policy and began to change course, fostering an open competition between the rival political ideologies. In the economic sphere, as much as the United States was open to its allies, it remained closed to its enemies, actual or potential. This policy mellowed only at the margins and persists today in such policies as the continued embargo on Cuba. Finally, with regard to military matters, advanced technologies were consistently treated in “closed” fashion. They were classified in the hope that the diffusion of knowledge could be precluded. While this effort failed in the nuclear weapons area, it succeeded, to some extent, in the realm of computerization, information systems, and, most notably, radar-evading Stealth technology.

Despite these aspects of closed approaches to information (about ideas, markets, or weapons), the overall American approach remained devoted to openness. From the increasing willingness to compare and contrast ideologies, to the creation of the greatest free-trading economic regime the world had ever seen, to the development of interoperable military systems for common use among allies, the United States fostered the free movement of information in all its incarnations. There was even a sustained effort to share information with the Soviet Union, to help promote stability and change. From the "hot line" that allowed for clear communication in crisis, to the transparency of information about nuclear arsenals, there was a strong belief, apparently on both sides, that openness was a condition well attuned to the needs of the bipolar international system.

In the post-Cold War era, however, the inherent stability provided by rough parity between two superpowers has given way to a period of flux and uncertainty. While the dissolution of the Soviet Union has left in its place a less powerful Russia, and the United States has seen some diminution of its own absolute military and economic power—a variety of states, great and small, are rising to recast the structure of the international system. In East Asia alone, for example, Japan and China show every sign of movement toward great power status; and even the smaller states, such as Vietnam and the Koreas, have robust capabilities.

Is the Cold War strategy of openness appropriate in such a setting? Or does the shift from a stable bipolar to a volatile polycentric world imply taking a new approach to openness? Should we be more guarded than we were, or at least become guarded in different ways than we were in the Cold War period? A key issue here may be that, in any era, the informational aspect of grand strategy may consist of a skillful blend of open and closed sectors. The challenge for the post-Cold War era will be to find the informational mix appropriate for a much "fuzzier" international environment, one in which the very meaning of openness may have to be reconsidered.

In the political realm, for example, the tenets of political liberalism once served as a rallying cry to oppose Soviet expansionism. Now these ideas, which form the core of the rhetoric of democratic enlargement, might be received as a subtle form of American ideological imperialism. To any number of state and non-state actors, this

may seem quite threatening, encouraging them to balance against us.¹⁷ Thus, one might expect, in response to current U.S. political strategy, a variety of opponents to rise. A few examples would include China, as the most likely nation-state competitor to resent pressures to democratize, and transnational Islamic revivalists, as archetypal non-state actors who will be encouraged to resist American blandishments. The implication here is not to cease efforts to spread democracy, but to recognize that Cold War-style openness may have to give way to a subtler form of spreading information about democracy throughout the world.

In terms of strategic foreign policy, a declaratory policy of openness designed to reduce uncertainty, a condition highly prized during the Cold War, might actually weaken deterrence and crisis stability in the future. The American style in international interactions remains closely tied to the Wilsonian dictum: “open agreements, openly arrived at.” Most often, this means that U.S. reasoning is openly provided to opponents, allowing them to calculate their risks and opportunities quite accurately.¹⁸

The current Balkan imbroglio provides an example of the manner in which an adversary has been able to maximize its range of maneuver, based on information freely and regularly provided by the U.S. government about U.S. intentions and capabilities toward the Serbs. In the post-Cold War world, there may be virtue in creating, and fostering, uncertainty about possible U.S. actions. Certainly, there are times when deterrence will be enhanced, if an adversary has to worry about the possibility of an early, credible use of force by the United States, or that the chances for American intervention, at some point, might be high. Interestingly, this is something of a reversal from the Cold War, during which uncertainty about the likely U.S. response tended to encourage aggression, a point supported by attacks on South Korea in 1950, South Vietnam in 1965, and Kuwait in 1990, in the wake of ambiguous American signaling.¹⁹

In the economic arena, the recent creation of a World Trade Organization (WTO) devoted to the expansion of free trade and the dissemination of intellectual innovation seems a clear indicator that the market principles that served so well during the Cold War will be expanded upon, especially given the demise of the former Soviet economic bloc. Upon reflection, though, one may want to consider the

need for a more nuanced economic strategy—one not as clearly demarcated between open and closed areas, as existed during the Cold War, but one flexible enough to allow for the protection of intellectual property and for the use of suasion to obtain a “fair” as well as a “free” market for international trade. The recent, and apparently successful, efforts of the Clinton Administration to obtain an agreement to grant greater access to the key automotive sector of the Japanese market are indicative of the manner in which this more nuanced approach might be applied. Indeed, the rapid follow-up of the automotive agreement with a similar U.S. claim on behalf of the photographic film industry suggests that a consistent strategy has been formulated and will be acted upon.

The key problem to address, in this regard, is that, in relative terms, the United States remains far more open than most other states, allowing them to amass wealth through trade, while U.S. debts build. This pattern began before the end of the Cold War but appears to be accelerating, as the roughly \$150 billion U.S. trade deficit in 1994 indicates. It should be noted that the United States initially rose in prosperity and great power status between the end of the Civil War and the 1890s, when it had the most protected economy on earth. All this happened during a period in which the British empire, slavishly devoted to free trade, suffered decreasing market shares and increasing dependence upon foreign financial support.²⁰

On this last point, one sees, even in the writings of Adam Smith, a sensitivity to the need for nuanced approaches. For example, in discussing the use of sanctions to force closed markets to open up, Smith argued that “there may be good policy in retaliations of this kind, when there is a probability that they will procure the repeal of the high duties or prohibitions complained of.”²¹ In the post-Cold War world, U.S. policymakers should heed Smith’s admonitions, given the diminution of military threats in the wake of the Soviet dissolution, and the corresponding rise in serious economic challenges. Indeed, the information age may carry the risk of transforming the international free market system into a much more conflictual one, implying a need to develop the capability to combat neo-mercantilist networks that are designed to perform well against market-oriented competitors.²²

Another questionable aspect of an economic strategy based on free flows of information concerns intellectual property. The openness that encouraged the industrial renaissance of post-war Germany and Japan, and allowed the rise of the Asian “tigers,” served the purpose of helping them become viable counterweights to the Soviet threat. Today, however, the American gift of ideas may be contributing to the difficulties of many U.S. industrial sectors. As Peter Drucker has pointed out in a variety of fora for years, “knowledge workers” will predominate the future economic landscape; and their best use will require partnership with a new generation of innovative and wily captains of industry.²³ A world in which ideas may be swiftly, cheaply duplicated elsewhere is one in which the American economy will have difficulty competing on equal terms.

Regarding the implications for “open” strategies in the military realm, there is much room for reconsideration, particularly of such issues as interoperability, forward basing, and the introduction of innovations. During the Cold War, there was a distinct tilt in the direction of openness in these key areas, which tied in closely with the political demands of U.S. alliance structures. For example, NATO sought ever better levels of interoperability of weapons systems among coalition partners and required the forward presence in Europe of an entire U.S. field army (over 300,000 troops) to enhance crisis and deterrence stability. Thus a great deal of information was conveyed openly both to U.S. allies and adversaries. Even the advances in precision guided munitions were openly touted, both to shore up alliance cohesion and to dishearten those Soviets who might still contemplate aggression.

In the post-Cold War environment, there are good reasons to question military openness as a predominant grand strategy. Given the quantum shifts in military capabilities inherent in the advances promised by the information revolution, should one still seek to share them with allies, or inform potential adversaries of their efficacy? The risk, of course, is that these advantages are “wasting assets,” susceptible to diminution as they diffuse. Thus, in a world where allies may lack the constancy they had during the Cold War, and where enemies may be both numerous and readily able to adapt to advances, once known, openness may have to give way to a certain degree of guardedness.²⁴

With regard to forward basing, which sends a clear signal of commitment to potential aggressors, one must now ask whether such an approach remains optimal. The continuance of a forward defensive strategy has two problems. First, in an information age in which adversaries may all too commonly possess cruise and ballistic missiles capable of bombarding U.S. forces in place, it may become necessary, in the interest of protecting these forces against surprise attack, to keep opponents in the dark as to their whereabouts. As early as the 1960s, Field Marshal Bernard Montgomery raised this issue, arguing that "armies must go to sea." Admiral William Owens has taken up this idea with his concept of "mobile sea bases."²⁵

The second problem with the amount of information conveyed by forward basing is that the emerging international system may be subject to unruliness in many regions. Potential aggressors may look at the U.S. force deployment scheme and, if their intended prey is not within some recognizable security complex, may be encouraged to try their luck. Even during the Cold War, this problem was considered a possibility and was confirmed, in the eyes of many, when North Korea invaded the South in 1950, not long after Secretary of State Dean Acheson left the latter out of the explicit American "defensive perimeter."²⁶ In a world with more "Koreas," continued forward basing may condemn those who lack the benefit of U.S. presence to become targets of opportunistic aggression.

Moving toward a more guarded approach could lengthen the period of U.S. military advantage and complicate the calculations of regional aggressors, particularly if American troops might be lurking over the horizon on some "floating fortress." However, new problems could emerge from this sort of shift. If we do not share information about military advances, we retain our predominance, but this might motivate allies, as well as adversaries, to enter into a new, information age arms race with the United States. In addition, a substantial shift from forward defense to a scheme more reminiscent of "depth defense" (i.e., one that rolls back aggression rather than precluding initial gains) might undermine deterrence substantially, particularly if aggressors engage in limited land grabs or *faits accomplis*.²⁷

These tensions imply the need to think carefully about any move away from the form of military openness employed during the Cold

War. However, the price of failing to adjust strategically may be a quicker erosion of American advantages, undermining deterrence anyway. Perhaps the solution lies in a nuanced approach in which allies and friends are not all treated as equals. In this manner, key military information might flow to some, but not to others (e.g., Britain, but not Gulf War ally Syria); and some regions might eventually have to fend for themselves (e.g., Western Europe and South Korea).

The development of a separate informational dimension for post-Cold War grand strategy is a task that is yet to be fully addressed. Just what should the key ends or goals of this dimension be? Open access and interconnectivity, from local to global levels, look like good choices, perhaps combined with an international declaration of a "right to communicate." What should the key means or instruments be? The list should probably include the promotion of all manner of advanced telecommunications network infrastructures around the world, as well as the development of new approaches to public diplomacy and to the media. A key consideration for the American government may be learning to work with the new generation of nongovernmental organizations (NGOs), whose growth individually and in vast transnational networks is a major consequence of the information revolution.²⁸ Indeed, a well-developed information strategy might do more to foster the worldwide spread of democracy than do America's commercial and economic development strategies. Recent research by RAND's Chris Kedzie concludes that

the priority of policies regarding international communication should be at least as high as the priority for foreign economic development and perhaps as high as that of some national security programs.²⁹

Yet, here again, a strategy of openness involves substantial risks as well as opportunities. To begin, information, wielded as an autonomous tool of strategic statecraft, may be well-suited to the process of seeking democratic enlargement. An information strategy designed to spread democracy may even reduce the need to resort to harsh economic or veiled military pressures as part of the grand strategic mix. An informational approach may be more discriminating and less likely to generate either domestic or international political criticism of the means employed, unlike the situation faced when

blunter instruments of suasion are utilized. U.S. policy toward Castro's Cuba looks like a case ripe for new thinking along these lines.³⁰

A key risk inherent in fostering greater interconnectivity is that the United States may expose itself to attacks on its own information infrastructure, which could in turn lead to serious economic, and even societal, damage. How can this risk be mitigated? Should the United States try to shield its "infosphere" by strictly controlling access, internally and externally? Or can careful mapping of the information infrastructure lead to a more guarded approach that protects critical nodes while allowing the vast majority of the traffic in commerce and ideas to continue to pass uninterrupted? The latter strategy allows ample room for working to spread democracy abroad, while the former might constrain such efforts.

CONCLUSION: IN FAVOR OF GUARDED OPENNESS

While the development of information and communications as a distinct, new fourth dimension of grand strategy is a major recommendation, our concluding admonition is that U.S. strategic choices be reviewed across the spectrum of alternative approaches to openness. That spectrum might be framed by complete openness at one end and preclusive security at the other. Something that might be called "guarded openness" would define the middle range of the openness spectrum.

Guarded openness was, in many respects, the strategy that the United States pursued during the Cold War, if not before. But it is not a static strategy; moreover, it has not even been discussed much as a strategy. A review might help reveal that, for dealing with the present and future world, the overall profile of where to be open and where closed should be based on different principles from what it was during the Cold War. A review might also help ascertain what contextual factors are most important in determining the advisability of moving in open, guarded, or sometimes preclusive directions in specific issue areas. A review could further help identify the mechanisms that should be emphasized for purposes of enhancing and protecting U.S. openness.

Given the strong commercial flavor of so much of the American infosphere, part of the answer may lie in allowing market forces to work

out security arrangements. For example, with regard to telecommunications, consumers would presumably flock to companies that dealt best with security requirements, leaving the less adept competitors to founder for lack of customers. Eventually, only the informationally “fit” would survive. Could this pattern be pursued in other, or even most, sectors?

However, policies should hedge against the following kinds of problems: the potential damage that might be done in the “short run,” before market forces provide a secure environment; and the possibility of “market failure,” that is, the chance that the market might not be able to control risks adequately. Finally, the potential for more efficient alternatives to the market solution should be considered. These points call to mind similarities to the situation that the newly independent United States faced in the late 18th century. Many leaders thought that individual states should form their own industrial policies and take responsibility for protecting their own commerce. Alexander Hamilton, in his famous Report on Manufactures, took an opposing view, arguing that these separate approaches would prove both inefficient and likely to fail. His best-known illustration concerned maritime security, wherein he described the foolishness of creating 13 separate state navies, when one would be cheaper and better. We urge careful consideration of such Hamiltonian arguments, which should spark, for the emerging era, a Report on Information.

Overall, then, our analysis suggests that, in the political and economic spheres, it may prove useful to modify the Cold War strategy of maximizing openness, as circumstances require, or at least to develop a nuanced strategy that weaves skillfully between openness and more proprietary approaches. For the military aspects of national power, we urge the elucidation of a similarly flexible approach. The trend toward higher information-content in weapons systems and greater decentralization of military organizations should be continued, if not accelerated. At the same time, the emergence of an increasingly fluid, polycentric international system should make us wary of fostering the diffusion of military technological, organizational, and doctrinal innovations—yesterday's allies may not be tomorrow's.

Our notion here is that, while information has always “mattered,” today’s information revolution is creating overarching effects that raise “knowing” to a level of importance never before seen. As Richard Barnet once noted of this sea change, “[t]he world now taking shape is not only new, but new in entirely new ways.”³¹ Indeed, contrary to the popular view that military power may mean less in the information age, we think that it may become more important, owing to the revolutionary shifts in strategy, doctrine, and organization implied by advances in information technology. The oft-touted political and economic dimensions of national power³² may carry less weight, or have less utility than often thought. Meanwhile, developing information as an autonomous element of national power affords the possibility of a more efficient, effective statecraft, especially with regard to the strategic aim of spreading democracy. In sum, while the political and economic tools of power may prove less widely applicable than in the past, both the military and informational aspects of grand strategy appear to be moving in the direction of relatively greater utility.

If all this is sensible and achievable, then Athena will truly have assumed the mantle of Mars. And we shall be the better for it.

NOTES

¹Paul Kennedy, ed., *Grand Strategies in War and Peace* (New Haven: Yale University Press, 1991) adopts this definition in his volume on grand strategies from ancient Rome to the present-day United States.

²The classic studies are by Elizabeth L. Eisenstein, “Some Conjectures About the Impact of Printing on Western Society and Thought: A Preliminary Report,” *Journal of Modern History*, March 1968, pp. 1–56, and the book version, Eisenstein, *The Printing Press As an Agent of Change*, 2 vols. (Cambridge: Cambridge University Press, 1979). While the literature on the Reformation era is mountainous, a few studies focus on the informational bases of political power. In regard to the German case, the work of German historian-strategist Leopold Ranke, *History of the Reformation in Germany* (London: Oxford University Press, 1905) stands out. Hillaire Belloc, *How the Reformation Happened* (London: Longmans, 1950) provides a similar approach, with keen insight into the reformation in England.

³Edward Gibbon, *The Decline and Fall of the Roman Empire*, 7 vols. (London: J.B. Bury, 1900) provides a classic analysis of this crucial difference between the eastern and western empires. He notes that the former’s interest in protecting seagoing commerce remained constant, resulting in a first-rate navy that saved the eastern empire’s lines of communication time and again during the hard centuries following the collapse of Rome. Joseph A. Schumpeter, *History of Economic Analysis* (New York: Oxford University Press, 1954), pp. 68–73, addresses this point in some detail, noting that the staying power of the eastern empire was directly tied to its continuing

embrace of Hellenistic notions of the power of ideas, markets, and secure lines and means of communication.

⁴On this point, Van Creveld, *Technology and War*, as well as his *Command in War* (Cambridge: Harvard University Press, 1985), takes long historical views of these issues.

⁵See Manheim, *Strategic Public Diplomacy* . . . for the view that information may be evolving toward an ever more autonomous role as a tool of state craft in many settings.

⁶See William J. Clinton, *A National Security Strategy of Engagement and Enlargement* (Washington, D.C.: Government Printing Office, 1994).

⁷The notion of information as existing autonomously has received some support. See particularly, Anthony Smith, *The Geopolitics of Information: How Western Culture Dominates the World* (New York: Oxford University Press, 1980); Hans N. Tuch, *Communicating with the World: U.S. Public Diplomacy Overseas* (New York: St. Martin's, 1990); and Howard H. Frederick, *Global Communications & International Relations* (Belmont, CA: Wadsworth Publishing, 1993). With regard to the means by which information strategies may be pursued, attention has long been given to the role of the media. Two early studies whose insights remain very useful are found in Bernard Cohen, *The Press and Foreign Policy* (Princeton: Princeton University Press, 1963); and David M. Abshire, *International Broadcasting: A New Dimension of Western Diplomacy* (Beverly Hills: Sage Publications, 1976). Chris Kedzie, "Democracy and Network Interconnectivity" (Proceeding of INET '95, Honolulu, June 1995), attends to the important implications of connectivity to the Internet for U.S. interests in fostering democracy worldwide.

⁸Kennan articulated his vision of containment in a series of lectures during 1946–1947 at the National War College, the texts of which can be found in Giles D. Harlow and George C. Maerz, *Measures Short of War* (Washington, D.C.: National Defense University Press, 1991). Walter Lippmann, *The Cold War* (Boston: Little, Brown, 1947) provides a compendium of his articles critiquing Kennan. Both were sensitive to the strategic implications of the societal structures of the adversaries, especially Kennan, who noted that "the greatest danger that can befall us in coping with this problem of Soviet Communism is that we shall allow ourselves to become like those with whom we are coping" (cited in Louis Halle, *The Cold War as History* (New York: Harper & Row, 1967), p. 106).

⁹Nathan Leites, *Soviet Style in War* (New York: Crane Russak, 1969) made this case convincingly. The most significant Soviet effort to understand and adapt to the implications of the information-driven revolution in military affairs came from Marshal N. Ogarkov, *Istoriya uচিত bditel'nosti* (Moscow: Voenizdat, 1985). However, as noted in E.B. Atkeson, "Soviet Theater Forces on a Descending Path," in Derek Leebaert and Timothy Dickinson, eds., *Soviet Strategy and New Military Thinking* (Cambridge: Cambridge University Press, 1992), p. 94: "the Marshal's view of future warfare, incorporating high technology, may have carried with it the seeds of its own frustration. The devices envisioned are enormously costly and some may be beyond the capabilities of the Soviet Union to produce in the foreseeable future." Thus, a shift away from its traditional attritional approach, leavened with some elements of maneuver, may not have been possible.

¹⁰Though formalized in 1979 in Jimmy Carter's Presidential Directive #59, this view had been gaining currency since the 1960s.

¹¹See David Holloway, *The Soviet Union and the Arms Race* (New Haven: Yale University Press, 1984), especially Chapter 3.

¹²George Shultz, "New Realities and New Ways of Thinking," *Foreign Affairs*, Spring 1985, pp. 705–721, quote from p. 716.

¹³Tom Stonier, "The Microelectronic Revolution, Soviet Political Structure, and the Future of East/West Relations," *The Political Quarterly*, April–June 1983, pp. 137–151.

¹⁴On this point, see Scott Shane, *Dismantling Utopia: How Information Ended the Soviet Union* (Chicago: Ivan R. Dee, 1994), which provides a journalistic post mortem. Readers in search of more scholarly analysis by policymakers and futurists who anticipated the effects of the information revolution on closed societies should be aware of Peter Drucker, *The New Realities: In Government and Politics, In Economics and Business, In Society and World View*, (New York: Harper and Row, 1989); George Shultz, "New Realities . . ."; and Walter B. Wriston, *The Twilight of Sovereignty: How the Information Revolution Is Transforming Our World* (New York: Charles Scribner's Sons, 1992). As Secretary of State during the Reagan Administration, George Shultz made a number of prescient speeches, notably in 1986, about the extreme difficulties that closed systems such as the Soviet Union's would have in coping with increased, freer flows of information.

¹⁵George Soros, "Toward Open Societies," *Foreign Policy*, #98, Spring 1995, pp. 65–75, quote from pp. 72–73. He wants U.S. policy to oppose all closed systems, including authoritarian dictatorships friendly toward the United States.

¹⁶President William J. Clinton, *A National Security Strategy of Engagement and Enlargement*.

¹⁷George Kennan, *The Cloud of Danger: Current Realities of U.S. Foreign Policy* (Boston: Atlantic Monthly Press, 1978) voiced this concern long before the current round of interest in spreading democracy. Christopher Layne, "The Unipolar Illusion," *International Security*, 17/4:5–51 (Spring 1993) picks up on this, and other points, to argue that an American drive for primacy will inevitably provoke a powerful countervailing response to curtail it.

¹⁸See especially Michael H. Hunt, *Ideology and U.S. Foreign Policy* (New Haven: Yale University Press, 1987) and Robert Dallek, *The American Style of Foreign Policy* (New York: Oxford University Press, 1983).

¹⁹The connection between ambiguous communications and conventional deterrence failure is examined in detail in John Arquilla, "Louder than Words: Tacit Communication in International Crises," *Political Communication* 9:155–172 (Winter 1992).

²⁰Paul Kennedy, *The Rise and Fall of the Great Powers* (New York: Random House, 1987), p. 149, notes that, during the Victorian heyday, Britain's share of world manufacturing output fell from 23 percent to 18 percent. This drop was severe, in that global economic product grew explosively during this period (1880–1900). He also points out two dangerous long-term consequences of an economic strategy of unswerving openness: "[Britain] was contributing to the long-term expansion of other nations . . . [and] weakness lay in the increasing dependence of the British economy upon international trade and, more important, international finance" (p. 157). Aaron Friedberg, *The Weary Titan: Britain and the Experience of Relative Decline, 1895–1905* (Princeton: Princeton University Press, 1988) examines these trends, and their consequences, in detail.

²¹Adam Smith, *An Inquiry into the Nature and Causes of the Wealth of Nations* (New York: Modern Library, 1937 edition), Book 4, Chapter 2, p. 445. Edward Mead Earle, "Adam Smith, Alexander Hamilton, Friedrich List: The Economic Foundations of Military Power," in Peter Paret, ed., *Makers of Modern Strategy* (Princeton: Princeton University Press, 1986), pp. 217–261 provides a view of Smith as being far less bound by his ideas than those who succeeded him: "His followers were more doctrinaire free traders than Smith was himself" (p. 222). The key point, according to Earle, was that Smith understood that "when necessary, the economic power of the nation should be cultivated and used as an instrument of statecraft" (p. 225).

²²The possible return of mercantilism has been a concern for some time. See especially Robert Gilpin, "Three Models of the Future," in C.F. Bergsten and L.B. Krause, eds., *World Politics and International Economics* (Washington, D.C.: The Brookings Institution, 1975), pp. 37–60. Gilpin shows particular concern about the possibility that a kind of "malignant mercantilism" will emerge.

²³Peter F. Drucker, "The Age of Social Transformation," *The Atlantic Monthly*, 274/5:53–80 (November 1994), puts the matter starkly: "Knowledge has become the key resource, for a nation's military strength as well as for its economic strength" (p. 76).

²⁴Bernard Brodie, *Sea Power in the Machine Age* (Princeton: Princeton University Press, 1944) explores in depth the dilemma of introducing innovations, in the context of 19th century British naval policy. The prevailing view at the Admiralty was of the need to monitor others' progress without revealing its own advances, thus stretching out the Royal Navy's advantages over its nearest competitors.

²⁵Field Marshal Viscount Montgomery of Alamein, *A History of Warfare* (New York: World Publishing, 1969), p. 564; and Admiral W.A. Owens, *High Seas: The Naval Passage to an Uncharted World* (Annapolis: Naval Institute Press, 1995), especially pp. 162–166. The idea of garrisoning large ground forces at sea was advanced in P. Dadant, W. Mooz, and J. Walker, *A Comparison of Methods for Improving U.S. Capability to Project Ground Forces to Southwest Asia in the 1990s* (Santa Monica: RAND, 1984), which elucidated a concept of "mobile large islands" (MOLIs). See especially Appendix E.

²⁶Dean Acheson, *Present at the Creation* (New York: Norton, 1969), p. 357, notes the problem and observes that only the "critical Russian error" of walking out of the Security Council, in a dispute over China, allowed the U.N. to respond at all to North Korean aggression without facing a certain Soviet veto.

²⁷Alexander George and Richard Smoke, *Deterrence in American Foreign Policy* (New York: Columbia University Press, 1974) consider these forms of aggression among the most difficult to deter, as does John Mearsheimer, *Conventional Deterrence* (Ithaca: Cornell University Press, 1984), who argues for the need to be able to prevent initial overruns in order to make deterrence work. Paul Huth, *Extended Deterrence and the Prevention of War* (New Haven: Yale University Press, 1988) provides an argument that maintaining a robust local balance of forces is also a key element of a healthy environment for deterrence.

²⁸On the rise of new networks of activist NGOs in civil society, see Howard Frederick, "Computer Networks and the Emergence of Global Civil Society," in Linda M. Harasim (ed.), *Global Networks: Computers and International Communication* (Cambridge: The MIT Press, 1993) pp. 283–295; James N. Rosenau, *Turbulence in World Politics: A Theory of Change and Continuity* (Princeton: Princeton University Press, 1990); Lester

M. Salamon, "The Rise of the Nonprofit Sector," *Foreign Affairs*, Vol. 73, No. 4, July/August 1994, pp. 109-122; David Ronfeldt and Cathryn Thorup, *Redefining Governance in North America: State, Society, and Security* (Santa Monica: RAND, DRU-459, August 1993); and Peter J. Spiro, "New Global Communities: Nongovernmental Organizations in International Decision-Making Institutions," *The Washington Quarterly*, Vol. 18, No. 1, Winter 1995, pp. 45-56.

²⁹Chris Kedzie, "Democracy and Network Interconnectivity," finds, based on quantitative indicator analysis, that democracy correlates more strongly with Internet connectivity than with other touted social and economic factors. His research may raise interesting new questions about Seymour Martin Lipset's famous "optimistic equation"—that democracy goes hand in hand with prosperity. See Seymour Martin Lipset, *Political Man* (Baltimore: The Johns Hopkins University Press, expanded edition, 1981). Kedzie recognizes that causality may operate in more than one direction, particularly since both democracy and connectivity link to wealth. But whether the point should be about correlation or causality, Kedzie's analytic and anecdotal evidence suggest that the positive effects for U.S. interests from the prevalence of communication technologies are too strong to discount if the United States wants to advance its international influence.

However, inasmuch as connectivity is linked with wealth, it is not yet clear whether Kedzie and others have demonstrated only a correlation, or found evidence of a causal relationship.

³⁰The concluding section of Edward Gonzalez and David Ronfeldt, *Cuba Adrift in a Postcommunist World* (Santa Monica: RAND, R-4231, 1992) recommends the development of a new information and communications policy to open up Cuba and strengthen civil society actors.

³¹Richard J. Barnet, "Defining the Moment," *The New Yorker*, July 16, 1990, pp. 46-60, quote from p. 48.

³²See the discussion of "soft power" in Nye, *Bound to Lead*, especially pp. 187-195.