

A Reaffirmation of Strategy

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June 29, 2015

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In January 2015, age 94, Andrew Marshall retired as Director of ONA, and we are fortunate that this event coincides with the publication of a splendid strategic-intellectual biography, *The Last Warrior: Andrew Marshall and the Shaping of Modern American Defense Strategy* (Basic Books), written by Andrew Krepinevich and Barry Watts, both of whom worked for Marshall and were close associates of his for many years. Theirs is not only a history of Marshall's career and the Office of Net Assessment, but also a major contribution to the history of the strategic thought during the Cold War.

This inside account is important because Marshall was never well known outside of a relatively small circle of defense cognoscenti. You will search in vain for his name in the indexes of most prominent histories of U.S. national security policy. And he was certainly not without his official critics and bureaucratic adversaries. Some of them were at very high levels of the Department of Defense, and they thought long-range strategic analysis to be pretentious or positively harmful to their day-to-day agendas. They kept trying to disestablish his tiny office, or ensure that he would not have access to the highest levels of the Department.

There are also external critics of Marshall's style and substance. For them, the Krepinevich-Watts book is nothing more than a hagiography, a secular component to a chapter on St. Andrew in the *Lives of Saints*. Jeffrey Lewis of the James Martin Center for Nonproliferation Studies contends that Marshall's way of thinking fanned an unnecessary arms race with the Soviets and, moving forward, with the Chinese, thereby preventing the emergence of more stable political relations. According to Lewis, Marshall's analysis lacked any sense that nuclear weapons pose a shared danger that compel us to cooperate, even with our adversaries. Marshall's notion of competitive strategies is all about winning an arms race, without any emphasis on simply finishing it alive. <http://foreignpolicy.com/2014/10/24/yoda-has-left-the-building/> In a similar vein, Notre Dame Professor Michael C. Desch argues that Marshall's reputation as a publicly-silent oracle really covered up the fact that he never really had much to say, nor much real influence in the Pentagon; and that the arguments he did make were riddled with inconsistencies. When it suited Marshall to argue that the Soviets were strong, he did; when it suited to claim they were weak, he did. Anything in the service of his (wildly misguided) agenda, which was that "the United States needed to gird itself for a long-term rivalry with the Soviet Union in which it should be prepared to use military force to win." <http://nationalinterest.org/feature/the-church-st-andy-11867>

One could certainly argue that Krepinevich and Watt's proximity to, and obvious fondness for, their subject detracts from the objectivity of their account. For instance, they record no significant substantive failures on the part of Marshall or his office, outside of the inherent difficulties in characterizing a very messy world – the results of this or that war game or analytical exercise proved to be disappointing. Mr. Marshall was apparently never stupid. His mistakes, in their view, were largely bureaucratic in nature. Strikingly, the authors say little to nothing about the apparent lack of prescience by Marshall before 9/11 concerning the rise of Islamic fundamentalism, and the future challenges that this might to American national security. They also fail to mention any contribution that Marshall's office might have made subsequently to defining and understanding that threat, or the threat of terrorism in general. It is possible, of

course, that Marshall was indeed prescient in these respects but that his analysis remains shrouded by classification; or that he concluded that his methodology would not be particularly helpful in this case – there is only so much one smart man can do; or that Islamic fundamentalism does not represent a grave long-term strategic threat, compared to those posed by other trends and actors.

Be that as it may, Krepinevich and Watts argue strongly that Marshall’s analytic approach got three critically important issues right, or at least right enough: (1) framing the long-term U.S.-Soviet competition in a way that identified strategic opportunities, as well as risks, for the United States, thus leading to a successful ending of the Cold War; (2) recognizing an emerging discontinuity in the way that future wars will be fought; and (3) identifying China as a potential strategic competitor, at a time when common wisdom looked forward to the peaceful evolution of relations based on mutual economic interests.

During the 1940s, Andrew Marshall pursued graduate studies in economics at the University of Chicago (he never obtained his Ph.D.). His interests, however, were wide ranging, from mathematics to history to anthropology. He then spent several decades in California with the preeminent strategic think tank of the day, the RAND Corporation, where his colleagues included such famous figures as Bernard Brodie, James Schlesinger, Albert Wohlstetter, and Herman Kahn. At RAND, among other subjects, these men and women thought about the unthinkable – nuclear war in all its variations. Many of the concepts and ways of thinking that would later characterize Marshall’s approach were developed during this part of his career. In 1969, Marshall was recruited by Henry Kissinger to work on intelligence matters on the National Security staff. In 1972, he shifted to the Pentagon to establish the Office of Net Assessment, for what he assumed would be a year or two at the most, before he returned to California. He leased a small apartment with rental furniture in the Watergate Hotel complex, which remained his home (rental furniture included) for most of his historically long tenure in the Pentagon.

The Krepinevich-Watts account details Marshall’s time at RAND, and especially his tenure in the Pentagon, to the extent possible, given the fact that many of the documents and reports produced in his office remain classified. For our purposes, we will focus on Marshall’s approach – what he termed net assessment – to cull out those features that enrich our own views about what strategy is and what it might, and might not, accomplish. This is our take-away– it does not necessarily reflect the authors’ viewpoint, or even those of Marshall himself.

We hesitate to call his approach a “methodology” in any formal sense because, as someone once observed, net assessment is “whatever Andy Marshall does” – it was his way of approaching the world, of asking the right questions of the right people at the right time. “I’d rather have decent answers to the right question than great answers to irrelevant questions,” he remarked. The authors characterize net assessment as “an analytic framework for comprehending the fundamental character of a competitive situation.” Net assessment is a necessary step to formulate sound strategies, “particularly ones that seek to impose disproportionate costs and difficult challenges on the other side.”

The first element of net assessment is to appreciate that international politics is marked by conflict, sometimes in the form of war, but more typically in the form of a long-term strategic competition for power and security. Western academic writings, and the dominant ethos in the U.S. national security bureaucracy, tend to posit a sharp analytical distinction between peacetime, marked by efforts to establish or maintain cooperative political relationships; and wartime, marked by open hostility and physical violence, and governed by a different logic than that of peacetime. Academic scholarship and official planning typically focus on one pole or the other. Political crises, such as the Cuban Missile Crisis, are generally regarded as aberrations from the peacetime norm, to must be “managed” successfully, ideally in a way that points back towards normality, a state of political cooperation.

For Marshall, this academic conceptualization of international politics is a vast oversimplification of what actually takes place. “Peacetime” typically involves an intense, and highly complex, competition between rival states or blocs, often taking place over a period of decades. (For most of Marshall’s career, the principal strategic adversary of the United States was the Soviet Union, but in recent years he identified that as China). This is the norm, not an aberration to be wished or negotiated away. It was this area – “peacetime” competition – which represented Marshall’s distinctive concern.

The closest conventional approximation to Marshall’s perspective is the notion of an “arms race” – typically characterized by Western scholars as the accumulation of weaponry by both sides in a thoughtless cycle of action and reaction (“apes on a treadmill”). This cycle must be broken through transparency, restraint, and negotiation (arms control). For Marshall, the “peacetime” strategic competition is far more complex and subtle than the stereotypical “arms race;” it involves investments in advanced technology, changes in military doctrine and force structure, economic warfare, psychological operations and disinformation – whatever human imagination can conjure up. In the course of this long-term competition, adversaries will logically seek to gain significant, even decisive, strategic advantages, which could determine the outcome of a war. Or, they will find ways during “peacetime” to translate those strategic advantages into geopolitical capital which enhances their security and prosperity, while undermining or destroying the position of their opponent.

Of course, given the destructiveness of nuclear weapons, American national security policy aimed principally to deter the Soviets from war, and Marshall concurred with this goal. But this did not preclude or solve the problem of strategic competition: war, in some fashion, might still occur, and it was important to be prepared to fight it as effectively as possible, even if only to strengthen deterrence. This was clearly a long-term challenge: the ideological and geopolitical conflict between the two sides seemed deeply entrenched; and the lead-times associated with changes in military technology, force structure, and operational concepts, were inherently lengthy. Further, the shadow of nuclear weapons increased the importance of the “peacetime” dimension – even if war was deterred, Marshall assumed that it was still possible for one side to gain such advantages in the strategic competition that it would force the other to make fundamental concessions in their relationship, including abandonment of the strategic competition altogether (effectively, to surrender). For Marshall, the key to proper net assessment is to identify important long-term trends in the competition, so that the assessor can alert senior policymakers and military planners to emerging dangers and opportunities. These assessments

must be made in sufficient time so that policymakers and planners can make informed decisions about the future – to make the proper investments, or changes in doctrine or policy, which alleviate emerging risks, or maximize strategic opportunities.

The critical practical problem for Marshall was that the U.S. national security bureaucracy resists such long-range thinking, or takes a good idea and dumbs it down. Dealing with today's crisis, and there is always a crisis of some sort, overwhelms the need to think about tomorrow, much less the day after tomorrow. If there is a war to fight, be it Vietnam, Afghanistan, or Iraq, it sucks the intellectual and bureaucratic energy out of doing anything but dealing with that conflict. Long-range thinking, such as it is, usually involves preparing to fight that particular war again, which almost never happens. So there is no career reward for being ahead of the game, only for mastering the game at hand.

In peacetime, long-standing military service and agency rice bowls must be filled; so resistance to new investments and programs, based on innovative concepts, is bound to be fierce, especially when defense spending goes through one of its periodic declines. Military officers rotate in and out of critical posts, so good ideas may not be seen through. Presidents and their appointees come and go. Marshall's solution within DoD – only partially successful – was to develop a good working relationship with forward-looking Secretaries of Defense, of whom there have been precious few, and to convince those individuals that their legacy would depend on making smart mid- to long-term investments in research and weapons production; and on identifying and promoting people, especially bright military officers, whose full potential would be realized only long afterwards. But even forward-looking Secretaries have to fight day-to-day wars, bureaucratically as well as in the real world, which limits their time and energy.

Perhaps the more successful element of Marshall's efforts to promote strategic net assessment is what Krepinevich and Watts refer to as his "hidden hand" – the encouragement of mid-level military officers who served in his office, and defense intellectuals (especially younger scholars) whom he supported, to develop his ideas and to explore interesting new research paths of their own. (They are known, affectionately or not, as members of "St. Andrews's Prep"). In this sense Marshall's influence will continue long after his retirement.

Second, as part of this process of identifying dangers and opportunities, a proper net assessment must be prepared to challenge the common wisdom. This is not a matter of being a contrarian for contrarian's sake, but applying common sense, asking, as did Sherlock Holmes, why the dog did not bark in the night, when the dog should have barked in the night. Marshall's most famous push-back against accepted opinion was his conviction that the standard CIA estimate of Soviet defense spending – 6-7 percent of GDP, roughly the same percentage as the United States – was far too low; and the assumed size of the Soviet economy – estimated to be roughly half that of the United States – was far too high.

Marshall's argument went as follows: the Soviets were unquestionably out-producing the United States substantially in most key metrics of military hardware. If one accepted the CIA's analysis, which was embraced by most of the intelligence community, the Soviets must be industrial wizards, even if one granted that the equipment they produced was inferior to that of the West. Further, the Soviets must be under no great economic strain, given the fact they had a command

economy that could be ratcheted up at will, without meaningful political opposition. Time, therefore, was on the Soviet side because any increase in U.S. military spending – which was sure to meet American political opposition – could easily be offset by the Kremlin. The fact that the USSR was spending roughly the same proportion of GDP on defense as the United States also suggested that the Soviets were not committed to an all-out arms race. Thus, if a U.S. policymaker accepted the CIA's position, he or she might reasonably conclude that it was both necessary and possible to reach some sort of modus vivendi with the Soviets while things were still manageable.

Marshall thought otherwise about the situation. Common sense and careful analysis indicated that total Soviet defense spending (including the costs of empire) must be far greater than that estimated by the CIA, perhaps on the order of 40 percent of GDP, or even higher. Not 6-7 percent. Interviews with emigrants from the Eastern bloc, among other sources, pointed to a Soviet economy that was actually much smaller than that of the United States – perhaps 25-30 percent of U.S. GDP. Not half the size.

Marshall and other officials of his persuasion engaged in a running battle for years with the intelligence community over these estimates. (Even today, there are arguments over exactly what the ground truth was, and who actually held which view in the intelligence debate.) We should note that, in Marshall's mind, Hawks as well as Doves often misunderstood the strategic situation. Doves tended to downplay the extent and seriousness of the Soviet military buildup; Hawks tended to downplay the constraints on the Soviet juggernaut. Both overlooked the opportunities that existed to regain the geopolitical and military initiative.

What were the strategic consequences if Marshall was right? The massive investment in the Soviet military pointed towards an effort by the Kremlin to gain a dominant position in the Cold War competition – the USSR indeed seemed to be engaged in an all-out arms race. At the very least, the strategic trends during the 1970s and into the early 1980s were clearly adverse to the United States – most notably in the balance of long-range nuclear forces, but also in the NATO-Warsaw Pact balance in Central Europe, and, perhaps most tellingly, in the maritime arena, where the Soviets seemed determined to challenge what had been unquestioned American supremacy. Marshall did not believe that the Soviets were thereby on the verge of obtaining a nuclear war-winning capability, as some conservatives feared, or that they wanted to start a nuclear war. His research indicated that the Soviets actually had a more pessimistic view of their position in the strategic balance than American analyses would predict. He also believed that the United States still had important and unrecognized advantages in the nuclear arena (one component of which the authors still cannot discuss because of its sensitivity, and perhaps do not know themselves to this day).

Still, the Soviets gave every indication that they were determined to try to shift the correlation of forces more in their favor, for whatever reason. There was therefore a growing risk, if the present trends continued unchecked, that the Soviets might eventually convince themselves that a first-strike was feasible. But more to the point: Marshall assumed – and assumed that the Soviets assumed – that favorable changes in the peacetime military balance would provide the USSR with increased options to challenge American interests, and with increased political confidence that they could do so successfully. For example, U.S. allies would lose confidence in the

willingness and ability of the United States credibly to come to support them in a crisis. Also, high-level war games involving Marshall's office demonstrated that many elements of existing U.S. military strategy were unsound, in that they led unavoidably to an all-out, catastrophic nuclear exchange with the Soviets.

If these elements were taken in isolation, this was a bleak picture. But a careful net assessment indicated otherwise. Here was the kicker – Marshall concluded that Soviet efforts to achieve military superiority across the board must be placing an enormous and unsustainable strain on the USSR's economic system. Marshall's insight, coming from questioning the common wisdom and careful analysis, created an entirely different picture of the long-term status of the U.S.-Soviet competitive relationship.

For Marshall, resource constraints must play a critical role in fashioning long-term strategic choices, a fact that is widely underappreciated. Both civilian and military leaders have a tendency to conflate the stating of desired objectives with the wherewithal to accomplish them. But as Marshall and his RAND colleagues realized in the 1950s, based on their experience in planning for the U.S. Air Force's structure, resources are always limited compared to wants and therefore constrain choices. The same must be true for one's adversaries. In addition to the obvious financial limitations, there are more subtle resource constraints than those that can be measured in dollars or rubles. In the late 1970s, Marshall began supporting Murray Feshbach's research on Soviet demographics. By 1982 Feshbach was reporting that male life expectancy in the USSR had dropped from a high of 67 years in 1964 to 61.9 years in 1980, due to such causes as alcoholism and limited and shoddy medical care. In Marshall's eyes the decline in male longevity was a concrete manifestation of the reality of macroeconomic resource constraints.

That brings us, thirdly, to the pointed end of net assessment: the identification of strategic opportunities – the weaknesses of an adversary that can be exploited – which allows one to gain advantages in a long-term competition. If the Soviets were indeed under the growing resource constraints that Marshall postulated, then time was potentially on the side of the United States, assuming it could devise and follow a strategy that aimed selectively to increase that burden on the USSR. Marshall thought that the Western economic system was far more productive and adaptable than the planned economy of the Soviet Union, especially if the latter was operating at or beyond its limits. This was not simply a matter of indiscriminately increasing the U.S. defense budget to "win an arms race," however, but rather of one channeling the competition into areas dominated by the enduring strengths of the United States (those easiest to sustain over time) while exploiting the enduring weaknesses, vulnerabilities, and inefficiencies of the Soviet Union (those most difficult for the Soviets to overcome). It was definitely not a matter of simply finding more cost-effective ways to put a weapon on a target, which the Pentagon's dominant systems analysis methodology was designed to accomplish.

This competitive strategies approach, over time, would lessen the military options available to the Soviets and also presumably encourage a change in their political behavior, as their leadership lost confidence that things were moving in their favor. The United States would thereby regain the strategic initiative. Here Marshall was influenced by studies about the strategy of highly successful businesses, in particular the notion of exploiting a firm's particular strengths in order to capture markets and drive rivals out of specific business areas.

Krepinevich and Watts use the example of the long-range penetrating bomber programs (the B-1 and B-2), which were widely criticized by many in the Pentagon and the external defense community as wasteful, high-tech dinosaurs. There were much cheaper and more reliable ways to put a weapon on target. But Marshall's analysis pointed out the extraordinary (and to our standards, irrational) emphasis that the Soviet military put on homeland air defense, presumably from a combination of bureaucratic imperatives and historical experience. As long as the United States could pose a credible threat of this sort to the USSR proper – manned bombers being more threatening than distantly-fired cruise missiles – the Soviets would continue to pour massive resources into their air defense infrastructure, at disproportionately high costs compared with the investments that the United States was making in its bomber program. In a time of increasingly scarce resources, every ruble the Soviets put into air defense was one less ruble that the Kremlin could spend in ways that directly threatened American interests – for example, on offensive nuclear forces or in supporting its empire in places such as Afghanistan. During his tenure in the Pentagon, Marshall's office identified other areas of enduring comparative American advantage, such as submarine quieting and detection technology, and precision-guided munitions.

Marshall's historical studies indicated other ways in which one could affect a war or strategic competition with disproportionately small resources. Colonel Jimmy Doolittle's tiny raid on the Japanese home islands in April 1942 did almost no physical damage, so it was easy to write off as a publicity stunt designed to raise American morale. In fact, the Japanese overreacted to the strike on their sacred soil with a series of bad strategic decisions that culminated in their defeat at the Battle of Midway, the turning point in the Pacific War.

Putting such selective and unfavorable burdens on one's adversary depends on a fourth key element of net assessment – “know thy enemy.” Marshall was especially critical of the rational actor models that were so prevalent in the Defense Department and the strategic analytic community. These models assumed that the behavior of the other side was governed by a single, coherent mind, and that this mind would behave in a predictable fashion to minimize costs and maximize benefits according to some rational standard (for example, the deterrence of nuclear war through the creation of an assured second-strike capability).

To the contrary, different nations tend to exhibit distinct political and strategic cultures, as exemplified by the fact that the Soviets of the 1970s placed high value on air defense, while the United States did not. Marshall invested his office's limited resources in ground-breaking studies of Soviet military thinking. He paid attention to what could be learned about the perceptions and assessments of Soviet elites from émigrés such as sociologist Vladimir Shlapentok, as well as by American Russian specialists including George Washington University's Peter Reddaway, the Woodrow Wilson International Center's James Billington, and Duke University's Vladimir Treml. He was certainly familiar of the work of Nathan Leites on the “operational code” of the Politburo. These studies and activities contributed to Marshall's growing understanding of how much Soviet perceptions and assessments differed from those of most American defense officials and academics.

But perhaps even more importantly for Marshall, he believed that Soviet behavior could be understood as typical of that found in large organizations of any kind. The sheer size and

complexity of large organizations precluded any single central authority from having either enough time or all the information needed to make all the important decisions optimally. The individual actors and agencies have different strengths, weaknesses, access to resources, vested interests, and patterns of behavior. They also have particular goals— and strategies for attaining those goals— stemming from their histories and life experiences or cultures. Good net assessment recognizes the bureaucratic, budgetary, and historical factors that constrain incremental decisions by various stakeholders in peacetime, which in turn must affect the adversary's force posture. (To be sure, there are different factors at work when it comes to decisions made in crises or wars).

Good strategic assessment therefore involves delving into the history, propensities, strengths and weaknesses, rigidities, military doctrines, operational methods, and organizational complexities of the adversary's state, and even more.

. . . the distinctive goals, resources, cultures, and strategies of the competitors; contextual elements, such as technology or climate beyond the control of the competitors; long-term trends in many of these variables; enduring asymmetries between the participants that provided the basis for identifying, developing and exploiting areas of competitive advantage; and the risks that uncertainties about the future posed, particularly in peacetime.

To *defeat* an enemy, one had to understand the military balance from an American perspective. But to *deter* an enemy meant how understanding how the enemy, in this case the Soviets, viewed the balance.

To be sure, qualitative insights of this sort are open to different interpretations when it comes to predicting future behavior. Marshall was therefore interested in learning more about how the Soviet military understood war, an area where there was solid empirical evidence. The Soviets relied very heavily on quantitative modeling, some of which was available through open sources, some of which had to be acquired clandestinely. Marshall commissioned studies to evaluate the differences between the parameters that the Soviets used, and the resulting outcomes of Soviet war models, and those that the U.S. military used. Those studies revealed that the Soviets often had a very different view of the effectiveness of certain military systems (even disagreeing with American assessments over the physical effects of nuclear detonations, which meant, for example, that the two sides evaluated differently the vulnerability of ICBM silos). From the standpoint of net assessment, it mattered less who was objectively correct, than in identifying Soviet weaknesses and American strengths (and vice versa), as the Soviets understood them, so as to find ways to degrade Soviet confidence in their military performance.

Krepinevich and Watts point to Reagan's Strategic Defense Initiative (SDI). American critics of SDI argued that such a missile defense must have an extraordinarily high success rate – 90 percent or better – to make any real difference in the strategic balance. But conversely, Soviet defense planners demanded a very high rate of missile defense warhead penetration (on the order of 90 percent) to achieve their military objectives (whether those objectives were “rational” or not was beside the immediate point). Thus, if SDI could achieve modest levels of effectiveness

(say, 10-30 percent), the Soviets would have to invest enormous, and scarce, resources to restore the high confidence that their exchange models demanded.

Fifth, good net assessment should identify and evaluate major discontinuities in the strategic environment that change the nature of the peacetime strategic competition. New strategic competitors may emerge, while old one fade or collapse. The relative importance of geographic regions may change fundamentally. The character (not the nature) of war may undergo dramatic alterations, whereby a large lead in one nation's military capabilities can vanish quickly. Such discontinuities are perfectly obvious – in retrospect. The challenge for net assessors is to anticipate fundamental changes in the strategic-military environment far enough in advance for policymakers and military planners to get ahead of the curve.

In a September 1987, over two years before the fall of the Berlin Wall and four years before the dissolution of the Soviet Union, Marshall sent a memo to the Undersecretary of Defense, Fred Iklé, discussing the work he and others were doing to support the Defense Department's Commission on Integrated Long-Term Strategy Marshall wrote: “[T]he world really is going to be quite different twenty years from now. . . . [T]he structural changes connected with the rise of China and the military technical revolution do not seem to be getting across to the Commission or to the other working groups as fully as they might. Their focus appears still to be on the Soviet Union, the US-Soviet competition, the European theater, etc.” About this same time, Marshall was privately describing the USSR as “bankrupt.” He did not assume that a particular strategic competition would endure in perpetuity – net assessment can provide insights into opportunities to close out a competition, and to move on to the next set of challenges.

Here Marshall anticipated two major discontinuities in strategic-military affairs that required intense analysis: (1) the potential advent of a new long-term strategic competition between the United States and China (then regarded by many in Washington as a quasi-ally, but in any case one with limited power and a backward economy), which also pointed to the rising relative importance of the Asian theater; and (2) a fundamental shift in the future character of warfare. He thought that the two discontinuities, viewed in the perspective of decades, could become interrelated. (As we noted above, from the public record, Marshall apparently did not urge greater long-range attention to the threat of Islamic terrorism and the stability of the Middle East.) His positions on both of these matters twenty years on remain as controversial as the arguments he once used about the character of U.S.-Soviet relations.

Beginning in the early 1980s, Marshall began to suspect that the character of warfare over the coming decades was going to undergo a crucial shift. His thinking was stimulated by the writings of Soviet military theorists, who argued that just as airplanes, tanks, and massed artillery linked by radio had given rise to a new operational concept— blitzkrieg— that revolutionized land warfare during World War II, so, too, nuclear weapons had ushered in another revolution during the 1950s and 1960s. These Soviet writers were anticipating yet another revolution, driven by “automated reconnaissance-and-strike complexes, long-range high-accuracy terminally guided combat systems . . . and qualitative new electronic control systems.” Such generic discontinuities in war were initially termed a “military-technical revolution,” MTR, but Marshall would come to favor “revolution in military affairs,” RMA, to emphasize that it involved not

merely major advances in technology, but the changes in military organizations and operational concepts needed to incorporate those technologies into dramatically different ways of warfare.

In the context of the Cold War, if the Soviets were right – and Marshall, after study, believed they were – then the side that was first to the post in applying the new RMA, based on reconnaissance-strike capabilities, would enjoy major and possibly decisive strategic advantages. The Soviet collapse did nothing to alter the objective possibility of a high-tech conventional RMA, the first fruits of which seemed to be on display in the First Gulf War. At first blush, it might seem that the United States would enjoy an insurmountable lead in a military revolution driven by the integration of cutting edge computers, sensors, precision-weapons, and the like. Only America had the economic resources, technological sophistication, and cultural affinity to master the new way of warfare (PFCs grew up playing computer games, after all). Some in the U.S. military went so far as to claim that such a RMA would lead to a perfectly transparent battlefield, which would obviate the Clausewitzian effects of fog and friction in war. But other senior military officials resisted the radical changes to force structure and organization that full-scale adoption of RMA thinking implied. Marshall, as always, did not believe it was in his charter to tell the armed forces what to do. Their lives were on the line, he reasoned, not his. Nevertheless, his advocacy of the RMA line of analysis added to the roster of his critics inside and outside the Pentagon, and Marshall eventually lost control of the RMA narrative.

This is a long and complicated story that need not detain us here. Certainly the ultimate course and outcome of the wars in Afghanistan and Iraq, and the subsequent rise (and fall) of operations designed to deal with insurgencies, seemed to muddy the intellectual waters about the value of high technology in wars of the future. What is worth noting is that Marshall, far from taking it for granted that the new RMA would favor the United States, believed that its effects might cut both ways. To project military power, the United States relies on large, fixed bases, and relatively few and very expensive military assets (e.g., aircraft carriers, satellites), on the assumption of its enduring superiority in the sea, air, and space. Many of these weapons have very short legs, as the saying goes. But what if potential American enemies decided to exploit advanced technologies (which were bound to proliferate and become less expensive), or weapons of mass destruction, to deny the United States access to vital regions? In that case, as Krepinevich wrote in a study for Marshall in 1992:

Forward bases— those huge, sprawling complexes that bring to mind such places as Malta, Singapore, Subic Bay, Clark Air Base, and Dhahran— will become great liabilities, not precious assets. The reason is simple: as Third World states acquire significant numbers of . . . [long-range strike] systems (i.e., ballistic and cruise missiles, high-performance aircraft) and enormously more effective munitions (i.e., smart bombs; nuclear[,] chemical, and biological weapons), these bases will become very lucrative targets. . . . Forward-deployed naval forces may be able to offset the future liabilities of forward bases, but only partially and probably not for very long, as currently configured. The traditional carrier task force or surface action group possesses neither the mobility nor the stealth to function as the spear tip of forcible entry operations.

When one postulates the marriage of advanced anti-access technologies, not with a Third World country, but with a national economy that is projected to surpass the United States, then one

perhaps faces a most serious challenge. Marshall therefore began to fund research into China's strategic culture by scholars such as Michael Pillsbury and Aaron Friedberg. Again, the details need not detain us here but several facts from this analysis stand out. First, there was a good chance that the United States would find itself engaged in an open and intense geopolitical rivalry with the PRC. Second, Chinese leaders hope to achieve hegemony in the Asia-Pacific region without fighting. But should war become unavoidable, the Chinese military seems intent upon fighting in a way that would disrupt America's advantage in intelligence and command and control (central elements of the RMA), and to render it difficult and eventually impossible for the United States to project power close to China's shores. Third, the differences between Chinese and American modes of military thought and strategic culture are just as great, if not greater, than that between the USSR and the United States.

For the post-Cold War application of the competitive strategic approach as a whole, Marshall put forward the idea of moving defense portfolios away from a threat-driven to a capabilities-driven paradigm. The Defense Department should identify and invest in a limited number of core competencies that address a small, well-identified number of truly key military competitions. Again, this idea drew from business strategy – world leading corporations typically have five or six fundamental competencies in which they invest to dominate their competitors. But with the Department's need to deal with the Middle East crises and wars compressing its time-horizon, Marshall's ideas seemingly have not gained any real traction.

Sixth, there is great uncertainty about the future, and therefore modesty is in order when it comes to one's ability to predict the outcome of a war, or to shape the course of events. Marshall never thought that he, or anyone else, has fully solved the basic problem of net assessment, that of measuring the relative military power among nations. Further, surprises happen. Although Marshall believed that the United States could gain decisive advantages in the U.S.-Soviet strategic competition, he evidently did not expect the speed and extent of the USSR's collapse. Far-sighted net assessors can anticipate certain long-term discontinuities, such as a RMA, but they can never be certain precisely how and when the technologies will mature, which nations will take advantage of them, and what other factors might complicate the picture. And the uncertainties compound upon each other.

While at RAND, Marshall supported the famous research study by Roberta Wohlstetter on the Pearl Harbor attack, which suggested the cognitive difficulty of distinguishing true intelligence information from background "noise," and the need to avoid making analytically convenient but unwarranted assumptions that ignore the factor of uncertainty. Marshall and other scholars he mentored drew out this lesson further: the Japanese should have known that, with vastly inferior resources and industrial capabilities, they were almost certainly doomed to failure if they went to war with the United States. Yet that is exactly what they did. And rationally speaking, Soviet (and American) leaders should have understood that certain actions would almost certainly lead to global nuclear war, with horrific consequences. Leaders on both sides, in Marshall's opinion, well understood that. Yet, in certain situations, one side or the other might take those steps anyway. They might persuade themselves, as the Japanese did, that the least-worst outcome was the best available, or make rosy assumptions that everything would work in their favor. This was not Marshall's main area of research but good strategic assessment must at least account for such short-term as well as long-term discontinuities.

According to Krepinevich and Watts, Marshall has advanced three main suggestions for how net assessment can look ahead to identify emerging challenges and opportunities, given that uncertainty about the future cannot be eliminated. First, some aspects of the future are surer than others over time spans of years or decades. These include demographics, long-term macroeconomic trends such as differential rates of economic growth, and some aspects of technology. Second, scenarios can be valuable, not as predictions so much as tools to help decision makers envision alternative futures and think through how to respond to particular situations or challenges – as in the famous scenario approach that prepared Royal Dutch Shell’s managers to cope better than their industry rivals with the abrupt quadrupling of oil prices precipitated by the October 1973 Arab-Israeli war. Third, Marshall viewed war-gaming as a useful way of exploring higher-level strategic problems. Marshall funded war games as a way of gaining insights into the strategies competitors might adopt in specific situations; this involved the use of scenarios that included both well-established trends along with possible discontinuities.

We might pause here and ask how well these parts of fit together – to present a net assessment of the influence and strategic value of Mr. Marshall’s ideas.

Marshall was clearly in the forefront of the intellectual movement to rethink the foundations and objectives of U.S. Cold War strategy during the 1970s and early 1980s, even if he did so largely behind the scenes. To be sure, we should be wary of placing undue personal credit (or, in certain quarters, blame) for the collapse of the Soviet Union on Marshall. I am sure he would be modest on this account. As noted above, he never claimed to have foreseen that the Soviets would collapse as quickly and completely as they did. Others in different parts of government, including President Reagan of course, but also other officials, going back to the Nixon, Ford, and Carter administrations, had congruent ideas. Marshall had contact with and influence over some of these individuals, but not all, and certainly not on a sustained basis. Some of the tools to put pressure on the Soviets were outside the direct realm of the Defense Department, such as support for anti-Soviet guerrillas, working with the Vatican over matters in Poland, restricting Soviet access to Western technology, and driving down the price of oil. It was only in 1986 that Secretary of Defense Weinberger blessed the spirit of Marshall’s approach by announcing a Competitive Strategies Initiative in DoD. And in the end, the Pentagon bureaucracy managed to dumb down many of those ideas.

That is not to undervalue Marshall’s contribution, either. The questions he raised and the analytic concepts and conclusions he produced permeated the more intelligent and influential circles inside and outside of government, through the “hidden hand,” even if Marshall was not always recognized as their source.

We should also grant the argument that the demise of the Soviet Union was much more complicated than the straightforward result of a well-conceived American strategy. History is never quite so simple, as Marshall himself recognized. The end of the Cold War surely involved an unpredictable combination of far-sighted, or at least perceptive and determined, personalities

at the highest level, favorable local facts on the ground, major shifts in technology that were independent of political choice, and so on. Many scholars still insist that the apparent success of the Reagan policy was “an homage to plain dumb luck;” that major changes in the Soviet system were in the offing anyway; and that the “Marshall plan” (as it were) dramatically increased the risks of conflict while leading to an unnecessarily messy-end game with the Soviet Union, the negative consequences of which we are still suffering. These critics of Marshall argue that he failed to challenge his own most basic assumption – that of the existence, indeed the virtual necessity, of a long-term U.S.-Soviet strategic competition. His energies, they would argue, would have been better served in figuring out ways to overcome this

These complexities and challenges granted, the simplest and most obviously explanation of political events is usually the best, and the burden of proof is on those who would argue otherwise. Marshall comes out well in this net assessment. Perhaps as importantly, his work reaffirms our belief that strategy exists, that it is possible to execute (with all the attendant uncertainties), and that it matters. Although Marshall’s methodology relied heavily on analytical tools, it came down in the end to insight. Of course, statesmanship is needed ultimately to bridge the gap between brilliant insight and appropriate policy choices.