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A Word from

Revolutions fall into two categories. Some are abrupt, raucous, chaotic. They wreak great havoc and cannot be ignored. Political revolutions are frequently of this sort. Others are steady, subtle, hard to discern. Often the damage of these silent revolutions is only felt afterward and causes grief for those who failed to see them coming. When the American auto industry was caught off guard by the Japanese revolution in production techniques, the penalty was two decades of marketshare losses and declining profits before Detroit recovered. When the French underestimated the revolution in military affairs set in motion by the advent of the airplane, radio, and tank—a revolution that the Germans fully grasped—the result was swift, humiliating defeat.

Today, those of us who serve in the Armed Forces are caught up in the coincidence of three revolutions. One is noisy and obvious while two are silent and far more subtle. The first began with Mikhail Gorbachev and accelerated when Boris Yeltsin stood on a tank in front of the Soviet White House. The ramifications of the end of the Cold War and collapse of the Soviet Union still reverberate through the international system. They are sparking conflicts in regions formerly at peace, even as peace breaks out in areas long at war. Among the direct influences on this Nation are the changing role of long-standing alliances and a range of situations in which we are called on to use military force.

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the Chairman

Joint Combat Camera Center (Heather M. McMurry)

Fielding questions in Port-au-Prince.

The impact on our planning processes is equally profound. In the past, we took planning and programming cues from our projections of Soviet military capabilities, projections the Soviets made easier and more calculable by their methodical and incremental approach. Now perceptions of military threats are far less certain. From a planner's perspective, what we gained in losing a threat of the magnitude of the Soviet Union has been offset by the ambiguity and proliferation of threats around the world. We have traded frightening certainty for dangerous uncertainty.

The second revolution is a byproduct of this change in world affairs. Because of our new strategic situation, defense budgets are declining along with military resources. This has instigated a silent revolution, albeit a revolution nonetheless. Before this century ends, defense budgets will shrink to less than half of their 1988 Cold War apogee. A drop of this magnitude will inevitably change how we think about, plan, and build our defenses.

The Armed Forces traditionally responded to dramatic resource reductions by falling back on their core competencies—components of land, sea, and air forces that make each service dominant in its domain. After all, by law and custom, all the services are charged with training, organizing, manning, and equipping forces to perform the missions and functions assigned to them. However, our challenge is to do it differently, to drive our logic to a higher plane of thinking.

The third revolution is what some have dubbed the revolution in military affairs and others call the military technical revolution. Like previous revolutions that were technologically driven, whether a revolution is occurring at all is debatable. But as the debate rages, advances like broad area surveillance, effective communications, and precision guided weaponry have transformed the battlefield to such an extent that American forces using them four years ago were able to achieve the most lopsided victory in modern history. We prevailed against an Iraqi force that would have been far more evenly matched with our own only a decade before. In the pace of this revolution it does not take long for a force to go from state-of-the-art to obsolescence.

Unfortunately, this revolution runs counter to the strains of the second, namely, the steady decline in defense budgets. Thus far we have taken the lead in this technology-driven revolution. It was American invention, after all, that was validated in the sands of Kuwait. But revolutions are fickle. Once begun, they have a tendency to drift into the hands of those who are willing to stoke the fires of change. We must now either stay ahead of this revolution or watch our position erode.

Combined, these revolutions pose a daunting challenge. Our Armed Forces are the best in the world. We must ensure that they remain the best, but on a much more modest diet. The heart of the challenge is this: as we move into an uncertain future we must get better as we get smaller.

EJROC and the Chairman's Program Assessment

It is to tackle this formidable challenge that the Joint Chiefs and I directed—and strongly encouraged—developing a new approach to planning and programming. Much of this approach is embodied in the activity of the Expanded Joint Requirements Oversight Committee (EJROC) which is chaired by the Vice Chairman, Joint Chiefs of Staff, and comprised of the vice chiefs of staff of the services. EJROC and the analytic efforts supporting it have been described previously in *JFQ,* and I do not want to rehearse that discussion here. But I would like to say a bit about the effort.

Two outcomes result from this new approach. First, the corporate wisdom and expertise of the Nation's senior military leaders is tapping productive ways to recommend how we can best meet the challenges posed by the revolutions outlined above. Second, a clearly articulated consensus emerges about where we should go from here.

The first significant product of this effort has already been completed. Based largely on the first six months of work by EJROC, extensive discussions between its members and the unified commanders in chief (CINCs), and between myself, the CINCs, and Joint Chiefs, I submitted my recommendations on the FY96–FY01 Defense Program in September. They were forwarded to the Secretary of Defense as part of the Chairman's Program Assessment (CPA), an innovation of the Goldwater-Nichols Act.

There are specific recommendations in this CPA, some programmatic in nature, regarding future military capabilities. What is perhaps most important and gives the CPA special merit is that these recommendations are based on a consensus of our four-star leaders. Those familiar with the history of joint intervention in the realm of programming can appreciate the significance of this stride. It is the outcome of a new process—one that will be continued and strengthened in the years ahead.

The fate of my specific recommendations is still being mulled by the Secretary of Defense et al. as the defense portion of the President's budget proposal is completed. Without infringing on either the President's or the Secretary's prerogatives, I can sketch the major thrust of this year's CPA and summarize the programmatic directions which emerged from the superb work of EJROC.

Hedge Against the Future, Not the Past

We must take prudent risks by investing in resources for the future. Accordingly, I have recommended four steps: retire some old systems earlier than originally planned, slip introduction of selected weapons until their potential is enhanced by advanced systems and munitions, reduce the bloated infrastructure to levels commensurate with force structure and basing requirements, and screen out some older R&D projects. The resources made available by these actions should then be applied to bolstering military strength. There are three areas in which the Armed Forces lead the militaries of other nations:

readiness, joint operational capabilities, and technology. Certainly our advantages can be debated, and all of these measures of military excellence have remarkably short half lives; but we do lead in all three areas today.

When it comes to readiness, however, comparisons are dangerous. The readiness of our Armed Forces to respond quickly and effectively to a range of contingencies—from peacekeeping to major conflicts—is unmatched; but the challenges to readiness are unmatched as well. No other nation is on a hair trigger to deploy forces across the world to a threatened South Korea or a still tense Southwest Asia. Joint operational capabilities are also an area where we have no peer. Since the end of World War II we have steadily progressed along the path of jointness by a combination of pushing and pulling. Our ability to operate jointly is simply unequalled. Notwithstanding such excellence, this work has far to go. And, while some high leverage technologies are proliferating, the United States still sets the standards. My programming recommendations are therefore formed around readiness, joint operating capabilities, and high leverage technologies.

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Readiness. There are two dimensions of force readiness which equate to broad categories of requirements: short-term force readiness—that is, over the next two years or so—and long-term force readiness where it is nearly impossible to predict threats. We know how to define and assess short-term readiness. By most measures the military is ready to conduct current missions as well as those it expects over the next few years, and DOD is already committed to increase spending on short-term readiness. Long-term readiness is harder to measure in any detail. But past experience has given us a general understanding of actions that exhaust or degrade long-term readiness. Many times we have seen DOD eat its seed corn to feed a current appetite. We cannot let that happen this time. To use a phrase that has gained currency in the marketplace, we must recapitalize for the future. This means investing in three components which are the brick and mortar of readiness by assuring that the quality of our men and women who serve in the Armed Forces remains superb; that equipment and weapons are well maintained, modern, and technologically unmatched; and that investments allow future forces to respond quickly to crises abroad.

Joint Operational Capabilities. The Army, Navy, Marine Corps, and Air Force are without doubt the most powerful and competent individual services in the world today. This is the result of a long-standing national commitment to superior military capability across the broad spectrum of warfare. Moreover, no other nation can match our ability to combine forces on the battlefield and fight jointly; but for all our progress, a great deal more has to be done. If one compares the way the services train and prepare forces to perform service missions with the way the joint world prepares its forces to operate, there is a gap. For example, the use of computer driven simulations in training has steadily increased over the past fifteen years. Today all services have refined models and software to test and train their forces to execute service doctrine. Yet, despite the importance we have attached to simulations, nobody has yet developed a fully tested, reliable, single joint warfighting model. Also, consider the fact that even in one of the high profile priorities of jointness—namely, C^4I—there are joint operating forces

that cannot talk directly to one another. There are two paths to improving joint operational capabilities. One is to expand and refine those programs that promote joint exercises, training, and doctrine. The other is to move toward greater standardization aimed at improving systems interoperability even as it reduces overall costs.

High Leverage Technologies. While advanced military technologies steadily find their way into the wrong hands in many regions of the world, America still leads other nations in two critical areas of technology and systems competence which shape the battlefield. We excel in advanced weapons and hardware, like precision guided munitions, high-speed digital communications, and sensors; and we also lead in the ability to tie intelligence-surveillance-reconnaissance architecture to advanced and responsive C^2 architecture to give our forces staggering acuity, speed, lethality, and potency. We must extend our edge and increase our advantages. This requires introducing new intelligence and surveillance systems and more advanced programs to C^4I architecture, systems that cut across service boundaries and improve our ability to fight and operate jointly. Other obvious areas of improvement include adding precision guided weapons and adjusting existing organizations to fully exploit the technology and training that accompanies change.

The program assessment that I submitted to the Secretary of Defense was an important and encouraging step. It was a result of super work and cooperation among the Joint Chiefs, CINCs, and EJROC members. Now the focus has shifted to the FY97–FY02 Defense Program. EJROC will revisit the CINCs in February armed with insights on requirements that are now being refined by joint warfare capabilities assessments. By March 1995 I hope to submit my recommendations for future programs to the Secretary for incorporation into next year's *Defense Planning Guidance* and service Program Objective Memoranda. And the work will continue into summer 1995 as we prepare for the next CPA.

Revolutions are challenging enough when faced singly; but contending with three at once is a truly monumental task. Yet we cannot retreat, we must go forward. I am confident that we will triumph in these revolutions and that our Armed Forces will remain the most formidable in the world.

JOHN M. SHALIKASHVILI
Chairman
of the Joint Chiefs of Staff

Joint Force Quarterly

ESSAY CONTEST ON THE Revolution in Military Affairs

To encourage innovative thinking on how the Armed Forces can remain at the forefront in the conduct of war, *JFQ* is pleased to announce the first annual "Essay Contest on the Revolution in Military Affairs" sponsored by the National Defense University Foundation, Inc.

The contest solicits innovative concepts for operational doctrine and organizations by which the Armed Forces can exploit existing and emerging technologies. Essays that most rigorously address one or more of the following questions will be considered for a cash award:

- The essence of an RMA is found in the magnitude of change compared with preexisting warfighting capabilities. How might emerging technologies—and the integration of such technologies—result in a *revolution* in conducting warfare in the coming decades? What will be the key measures of that change?
- Exploiting new and emerging technologies is dependent on the development of innovative operational concepts and organizational structures. What specific doctrinal concepts and organizations will be required to fully realize the revolutionary potential of critical military technologies?
- How might an adversary use emerging technologies in innovative ways to gain significant military leverage against U.S. systems and doctrine?

Contest Prizes

Winners will be awarded prizes of $2,000, $1,000, and $500 for the three best essays. In addition, a special prize of $500 will be awarded for the best essay submitted by either an officer candidate or a commissioned officer in the rank of major/lieutenant commander or below (or equivalent grades). A selection of academic and scholarly books dealing with various aspects of military affairs and innovation will also be presented to each winner. JFQ

Contest Rules

1. Entrants may be military personnel or civilians (from the public or the private sector) and of any nationality. Essays written by individual authors or groups of authors are eligible.
2. Entries must be original and not previously published (nor under consideration for publication elsewhere). Essays that originate from work carried out at intermediate and senior colleges (staff and war colleges), service schools, civilian universities, and other educational institutions are eligible.
3. Entries must not exceed 5,000 words in length and must be submitted typewritten, double-spaced, and in triplicate. They should include a wordcount at the end. Documentation may follow any standard academic form of citation, but endnotes rather than footnotes are preferred.
4. Entries must be submitted with (1) a letter clearly indicating that the essay is a contest entry together with the author's name, social security account number (or passport number in the case of non-U.S. entrants), mailing address, telephone number, and FAX number (if available); (2) a cover sheet containing the contestant's full name and essay title; (3) a summary of the essay which is no more than 200 words; and (4) a brief biographical sketch of the author.
5. Entries must be mailed to the following address (facsimile copies will not be accepted): RMA Essay Contest, *Joint Force Quarterly*, ATTN: NDU–NSS–JFQ, Washington, D.C. 20319–6000.
6. Entries must be postmarked no later than August 31, 1995 to be considered in the 1994–95 contest.
7. *JFQ* will hold first rights to the publication of all entries. The prize-winning as well as other essays entered may be published in *JFQ*.
8. Winners' names will appear in *JFQ* and the prizes will be presented by the President of the National Defense University at an appropriate ceremony in Washington, D.C.