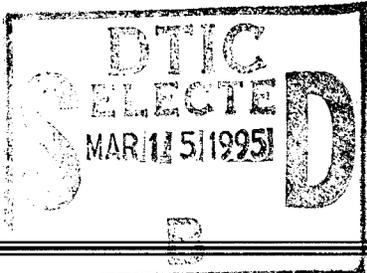


REPORT DOCUMENTATION PAGE

Form Approved
OMB No. 0704-0188

Joint reporting burden for this collection of information is estimated to average 1 hour per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and reviewing the collection of information. Send comments regarding this burden estimate or any other aspect of this collection of information, including suggestions for reducing this burden, to Washington Headquarters Services, Directorate for Information Operations and Reports, 1215 Jefferson Davis Highway, Suite 1204, Arlington, VA 22202-4302 and to the Office of Management and Budget, Paperwork Reduction Project (0704-0188), Washington, DC 20503

| | | | |
|--|--|---|---|
| 1. AGENCY USE ONLY (Leave blank) | | 2. REPORT DATE FEBRUARY 1995 | 3. REPORT TYPE AND DATES COVERED FINAL - From 1994 to 1994 |
| 4. TITLE AND SUBTITLE EVOLUTION IN MILITARY AFFAIRS | | | 5. FUNDING NUMBERS |
| 6. AUTHOR(S) BRADD C. HAYES | | | |
| 7. PERFORMING ORGANIZATION NAME(S) AND ADDRESS(ES) US NAVAL WAR COLLEGE STRATEGIC RESEARCH DEPARTMENT (CODE 30) CENTER FOR NAVAL WARFARE STUDIES 686 CUSHING ROAD NEWPORT, RI 02840-1207 | | | 8. PERFORMING ORGANIZATION REPORT NUMBER RESEARCH MEMORANDUM 01-95 |
| 9. SPONSORING/MONITORING AGENCY NAME(S) AND ADDRESS(ES) US NAVAL WAR COLLEGE 686 CUSHING ROAD NEWPORT, RI 02840-1207 | | | 10. SPONSORING/MONITORING AGENCY REPORT NUMBER |
| 12a. DISTRIBUTION/AVAILABILITY STATEMENT APPROVED FOR PUBLIC RELEASE; DISTRIBUTION IS UNLIMITED | | | 12b. DISTRIBUTION CODE |
| 13. ABSTRACT (Maximum 200 words) This memorandum argues for a cautious approach in changes to military doctrine, force structure and organizations. | | | |
| 14. SUBJECT TERMS REVOLUTION IN MILITARY AFFAIRS; NAVAL FORCE STRUCTURE | | | 15. NUMBER OF PAGES 09 |
| | | | 16. PRICE CODE |
| 17. SECURITY CLASSIFICATION OF REPORT UNCLASSIFIED | 18. SECURITY CLASSIFICATION OF THIS PAGE UNCLASSIFIED | 19. SECURITY CLASSIFICATION OF ABSTRACT UNCLASSIFIED | 20. LIMITATION OF ABSTRACT NONE |



NSN 7540-01-280-5500

Standard Form 298 (Rev 2-89)

Prescribed by ANS. Std 239-18
298-102

**An Occasional Paper of
The Center for Naval
Warfare Studies**

EVOLUTION IN MILITARY AFFAIRS

Bradd C. Hayes

19950313 039

**Strategic Research Department
Research Memorandum 1-95**

U.S. Naval War College



**UNITED STATES NAVAL WAR COLLEGE
Newport, Rhode Island**

~~R~~EVOLUTION IN MILITARY AFFAIRS

by

**Captain Bradd C. Hayes, United States Navy
Assistant Director (Code 30A)
Strategic Research Department
Center for Naval Warfare Studies
Naval War College
686 Cushing Road
Newport, RI 02842-1207
(401) 841-4444**

*The views expressed herein are strictly the author's and have not
been endorsed by any agency of the US Government.*

As the Iron Curtain lifted, many believed we were entering the era prophesied by Isaiah during which the people would "beat their swords into plowshares, and their spears into pruninghooks."¹ In this euphoria, modern-day Joel's who continued to admonish the people to "beat . . . plowshares into swords, and . . . pruninghooks into spears"² were ignored as alarmists until Saddam Hussein reverified the existence of rogues in the world. Even though I would welcome an era of peace, as one who has spent his majority in the profession of arms, I am skeptical that any time soon Isaiah's lamb will lay down with his lion. Even if that happens, I recommend being the lion and not the lamb. I believe Joel had much more practical advice when he urged, "Prepare war, wake up the mighty men, let all the men of war draw near . . . in the valley of decision."³

Unfortunately, the "valley of decision" in which we now find ourselves is an enormous and foggy chasm and the kinds of war for which we must prepare remain uncertain with some seers forecasting a continuation of regional skirmishes while others predict the rise of a new major competitor. Those who foresee a renewal of major international strife are forecasting remarkable war fighting capabilities for new competitors – so remarkable, in fact, that they are already delivering the eulogy for many of today's most modern weapon systems.⁴ We thus face a force structure dilemma – do we continue to meet today's challenges while hedging against tomorrow's threats (i.e., do we evolve) or do we stop investing in today's systems in order to restructure for an entirely new form of warfare (i.e., do we revolt). My fear is that those advocating revolutionary changes could get it all wrong – making today's dreams, tomorrow's nightmares. And in today's fiscally constrained environment, we do not have the luxury of developing two militaries – an evolutionary one and a revolutionary one. Therefore, I believe we must move with measured steps through the valley of decision.

As noted earlier, this is not the path that all would walk. The Vice Chairman of the Joint Chiefs of Staff has been quoted as saying, "It's a time you just can't iterate decisions. . . . You can't just gradually change."⁵ If he's serious about this, we could begin by throwing out the entire military leadership. That is exactly what needs to happen if one really wants radical and rapid change. As one "turnaround specialist," Albert J. Dunlap, averred, "[Y]ou must get rid of the people who represent the old culture, or they will fight you."⁶ As an

officer more likely to be SERBed* than promoted to Flag rank, throwing out the current crop of Flag officers holds a certain appeal for me. But, as I will argue below, that could be a tragic mistake. And I suspect that is not what the Vice Chairman has in mind either.

The dilemma facing those interested in promoting an RMA is that the true innovator is often found outside the military mainstream and is generally considered an anathema to the military hierarchy (i.e., a pain in the butt). Of course this is not a new thought, Machiavelli wrote centuries ago that "there is nothing more difficult to take in hand, more perilous to conduct, or more uncertain in success, than to take the lead in the introduction of a new order of things, because the innovator has for enemies all those who have done well under the old conditions, and lukewarm defenders in those who may do well under the new."⁷

For those reasons and others, evolutionary as opposed to revolutionary change is a better way to achieve a revolution in military affairs since it has a better chance of succeeding (i.e., getting accepted and implemented); and, it runs fewer risks for the nation. The latter point is extremely important since the only reason to foment an RMA is to avoid being caught short when faced with a new peer competitor. Change for change's sake is neither a sufficient nor compelling reason to promote an RMA — yet I am convinced not only that change must come but that it can't be stopped. I am also convinced that the RMA must be controlled and shaped. Moving hastily has little to recommend it as a course of action.

It has been noted that this interregnum marks a unique moment in history during which America should take advantage of available "time and resources for experimentation"; and because no peer competitor is looming over the horizon, "this is the period of least risk if wrong choices are made."⁸ We should not delude ourselves into thinking that wrong choices won't be made — they will. That is why caution is better than haste. There are also bound to be casualties. Those whose innovations are adopted (the winners) will be seen as intelligent and progressive. Those who oppose successful innovations (the losers) will be viewed as cautious, conservative, even reactionary. Only if one "assumes that all innovative proposals are equally sound and worthy," can such a judgment concerning winners

*One fortunate enough to be selected by a Selective Early Retirement Board.

and losers be rendered. Vincent Davis noted that "opponents serve the valuable function of filtering out the less worthy and less sound ideas."⁹ As noted above, most opposition will emerge from those who have succeeded under the old system (i.e., Flag officers). Their caution will undoubtedly remain the centerboard which provides stability in the troubled seas of international security. Left unchecked, however, their recalcitrance could undermine worthwhile innovations.

I know of no one currently arguing for the *status quo ante*. On the other hand, I have found no one stepping forward professing unerring prophetic skills concerning the future security environment. Donald Daniel noted that "trying to predict world political, economic, scientific-technical, and naval developments much farther than about ten years ahead inspires more humility than confidence."¹⁰

Achieving Success

All this suggests that one should be careful defining what is meant by "innovative success." Much has been written, for example, about the achievements of European doctrinal innovations during the inter-war years. The Germans, French and British all developed and implemented new war fighting doctrines but ultimately each doctrine proved inadequate. As Douglas Smith observed,

[T]hree very different strategies for overcoming the protracted static trench warfare of the First World War emerged in the period after 1918. The Germans, expanding on successes achieved at the end of the War through maneuver warfare, came up with the *Blitzkrieg*. . . . Similarly, the British sought to obviate trench warfare through strategic bombing and the French sought to eliminate it by fortifying the Maginot Line. *All* managed to come up with revolutionary strategies . . . but *all* were equally shortsighted in realizing the ultimate limitations of the new ways of conducting warfare they had devised.¹¹

Despite their shortcomings, adoption of these new doctrines nevertheless constituted success for their proponents. This article does not promote a particular technological or doctrinal innovation; rather it argues that proponents of innovative ideas will be more successful if they pursue evolutionary rather than revolutionary

change. Critics of such an approach are not hard to find. Paul Bracken fears the result of this strategy will be to produce "the next military" when what is needed is "the military after next."¹²

According to Stephen Rosen, an innovation is not truly "accepted" until it affects change in the organization.¹³ Implicit in Rosen's definition is the acceptance that "a new way of war" can be technologically supported. Technology generally triggers doctrinal innovation and not vice versa. Success will not be easy to achieve. Rear Admiral Ronald Kurth, USN (retired), former President of the Naval War College, contends that

. . . the politics of *incremental innovation* are comparatively free of conflict . . . [while] the politics of *innovative departure* are likely to be complex. . . . [T]here is a much more comfortable existence within the organization for those who make the existing system work better rather than attempt its displacement."¹⁴

The Aegis combat system provides an excellent example of how pursuing evolutionary change results in revolutionary innovation. Rear Admiral Wayne Meyer saw Aegis technology as a way to revolutionize war at sea by providing the commander a state of the art battle management system.¹⁵ The program would have been stillborn, however, had he marketed it as such. At the time Aegis was conceived, carrier aviation was the unquestioned centerpiece of naval power and aviators formed the Navy's most influential cabal. Aegis represented a clear and present danger to aviation's preeminent role since it had the potential to control the defensive air battle as well as other aviation warfare areas such as land attack using Tomahawk cruise missiles.

The aviation community was unwilling to support any system which had the potential of diverting funds from its programs. Meyer understood this and convinced the aviation community that his program was aimed at enhancing their roles and missions not displacing them. Although Meyer understood the nature of the cat he had in his bag, his strategy was to convince naval leadership that Aegis was only a better way to do a job the Navy already had. This evolutionary approach nevertheless resulted in the development of revolutionary doctrine. Recent war games have witnessed Joint Task Force Commanders demanding the early arrival of Aegis ships (especially those with ballistic missile defense capabilities) even if it meant

separating them from their Carrier Battle Groups.¹⁶ This is a dramatic doctrinal change from the Cold War when the inviolability of the Carrier Battle Group was chapter and verse of the Navy's operating bible.

Risk Management

Those who would rapidly and radically change military technologies, doctrines and organizations should look back to the years following the Second World War. "Advocates of strategic airpower argued that World War II had proven decisively that there would never again be a war like it, and that armies and navies were now virtually obsolete."¹⁷ Korea, Vietnam and even *Desert Storm* demonstrated the folly of that course. At the time, however, it was not an unreasonable proposition. The introduction of nuclear weapons seemed to have altered the face of warfare forever and "whether they constituted a revolution in warfare or just a bigger bomb was hotly contested."¹⁸ Had the radical idea been adopted — that only air forces were needed — the nation would have found it about as effective as the Maginot Line in protecting its interests. The risks of such a strategy were enormous.

The greatest risks we run today are associated with preparations to counter the rise of the next peer competitor. Get them wrong and the perils are as great as those facing America at the start of the Cold War. No course is risk free. Those advocating the radical path to change risk getting it all wrong (i.e., developing and fielding equipment and doctrine that cannot effectively be used to counter emerging threats). Those advocating a more cautious path risk not changing quickly enough and being greatly outgunned and outmaneuvered should conflict occur.¹⁹

Having placed my marker down as an advocate of measured change, it's clear I believe the US faces fewer risks pursuing that course. My view is colored by the tremendous investment America has already made in its armed forces. Many of the weapons systems and platforms currently being procured have service lives between 20 and 50 years and will be around during the period in which some analysts see a need for radical change.²⁰ The US cannot afford to scrap these systems but can adapt them to changing circumstances. Given the tremendous ingenuity and capacity of American industry, I find it difficult to believe that the US can be either outsmarted or outbuilt.

However before declaring all is well, we should note the clouds gathering on the horizon threatening to darken this sunny picture. Congress has already threatened to decrease defense research funding for colleges. It has been argued that such cuts "would rob the military of its technology leadership while doing little to solve the defense budget problem."²¹ Anita Jones, the Pentagon's Director of Defense Research and Engineering, is quoted as saying, "This reduction in defense research would have very dire results. . . . You will not see them immediately, but over the long term they would be severe."²²

On the doctrinal front the signals are mixed. Service and Joint Doctrine commands now exist but their place in introducing innovation is far from certain. Robert Wood has observed that doctrine is made up of fixed principles which border on dogma – innovation represents just the opposite.²³ Advocates of change, such as Andrew Marshall and Paul Bracken, argue that institutions which foster innovative thought ought to be strengthened (e.g., national laboratories, test centers, war colleges, etc.). Doctrine commands are not among those institutions. Asking them to promote established doctrine while simultaneously trying to change it places them in an untenable situation much like the biblical notion that a house divided against itself cannot stand.²⁴

Unfortunately, there are also signs that those institutions recommended for strengthening instead may be weakening. National labs are being consolidated, War College budgets are being cut, and large numbers of military officers at some of these institutions are being retired rather than promoted. These actions speak volumes and should raise concerns. If America believes it cannot afford to fund ideas, what chance is there that it will fund a new, radically-equipped armed force? If we opt to trash our current forces in order to pursue an entirely new force (while at the same time cutting back on ideas), we may well end up with a force that meets neither today's needs nor tomorrow's challenges.

In Search of Tomorrow

No one has yet been able to define the era into which we are headed. It remains defined by the past; we still refer to it as the post-Cold War era. Andrew Marshall in an extremely thoughtful piece noted that America's "most important goal is to be the first, to be the

best in the intellectual task of finding the most appropriate innovations in concepts of operation and making organizational changes to fully exploit the technologies already available and those that will be available in the course of next decade or so."²⁵ No matter which course one recommends following (rapid or measured), the goal is the same: be prepared to meet the challenges of an emerging competitor.

Identifying potential competitors is not that difficult. Only a small number of countries have the manpower, industrial capacity, education, and resources to mount a serious challenge to the United States. The kinds of technologies that will be available to us and to them can be determined and the best ways to use and counter them can be debated, gamed and analyzed.

At this point in history even advocates of radical change, like Paul Bracken, agree that it is too early to make those changes.

The question of how exactly to achieve [radical change] remains. Details of what the military after next should look like are intentionally left out of this article for one simple reason. No one knows what they are. *It is impossible to design this force now. Instead, what is needed is a learning process that will produce the design.* This is a long-term, evolutionary project, one that requires a different approach to defense management than during the Cold War.²⁶

Mr. Marshall provides some excellent suggestions along these lines. He recommends that the Services' best and brightest officers "spend more time at war colleges . . . in wargaming and in research programs" and be given "credit for this in their careers; it has to be a way to the top for them."²⁷ The fact that he has to recommend this means, as noted earlier, that it is not happening now. Should it occur, officer fitness reporting policy should be changed to reflect the unique position and value these officers represent. Currently, researchers and gamers are ranked against one another – that means that no matter how good these officers might be, those ranked lower than third cannot help but be hurt by such comparisons. Often there is no measurable standard against which such officers can be compared. Giving them "one of one" fitness reports, however, would circumvent this difficulty and recognize that such assignments, by

themselves, represent the highest form of recommendation as to their promotion potential.

Marshall also recommends creation of organizations "like Rand of the 1950's." During my time with RAND,²⁸ analysts looked back with envy at the days when bright men and women could congregate in the halls and hold impromptu brainstorming sessions. At RAND and elsewhere, bottomline dollars now drive research agendas and often discourage such non-directed thinking. Given the proper financial backing, RAND, CNA, and other think tanks, could recreate this ambiance without much difficulty. New organizations are probably not needed.

Establishment of a Secretary of Defense Strategic Studies Group (SSG), along the lines of the Chief of Naval Operation's SSG in Newport was also recommended. The drawback to this program is its limited one-year timeframe. By the time participants get settled, receive their assignment, and bring themselves up to speed on the issues, they have precious little time to actually think and write about them before being asked to brief their results. Consideration should be given to lengthening these tours from 12 to 24 months.

Another program worth continuing, and one for which Marshall gives himself too little credit, is his Summer Study series in Newport which brings together interdisciplinary scholars to study current issues. Some of these recommendations are already being implemented – they all should be realized. As Marshall wrote, "The most important thing that we can focus on in the next several years is the investigation of, and experimentation with, novel concepts of operation and new organizations to exploit the technologies available now and likely to be available in the next 20 years."²⁹ We have the time; "we are not sure how warfare will change;"³⁰ until we do we need to "search for insights as to appropriate longer term changes in doctrine, concepts of operation, and organizational change."³¹ This measured and thoughtful approach to the next revolution in military affairs is the right one. Lord Rutherford was right when he noted, "We are short of money, so we must start to think."

Notes

1. Isaiah 2:4 (all cites from the King James Version).
2. Joel 3:10.

3. Joel 3:9 & 16.
4. For example, Andrew Krepinevich, Jr., in preliminary work he completed while working for the Office of the Secretary of Defense (Net Assessment) called many of today's platforms, such as aircraft carriers, sunset systems.
5. Thomas E. Ricks, "How Wars Are Fought Will Change Radically," *Wall Street Journal*, 15 July 1994, p. 1.
6. Glenn Collins, "Tough Leader Wields the Ax at Scott," *The New York Times*, 15 August 1994, p. D1.
7. *The Prince*.
8. James R. FitzSimonds and Jan M. van Tol, "Revolutions in Military Affairs," *Joint Force Quarterly*, Spring 1994, p. 27.
9. Vincent Davis, *The Politics of Innovation: Patterns in Navy Cases*, Monograph Series in World Affairs, vol. 4, no. 3 (Denver: University of Denver, 1967), p. 5n3.
10. Donald Daniel, *The Evolution of Naval Power to the Year 2010*, Research Report 6-94 (Newport: Strategic Research Department, 1994), p. 2.
11. Douglas Smith, "Who's That Tall Dark Stranger There?" in Bradd C. Hayes and Douglas V. Smith, eds., *The Politics of Naval Innovation*, Research Report 4-94 (Newport: Strategic Research Department, 1994), p. 77.
12. Paul Bracken, "The Military After Next," *The Washington Quarterly*, Autumn 1993, pp. 157-74.
13. Stephen Peter Rosen, "New Ways of War: Understanding Military Innovation," *International Security*, Summer 1988, p. 134.
14. Ronald J. Kurth, *The Politics of Technological Innovation in the United States Navy*, doctoral thesis (Cambridge: Harvard University, 1970), pp. 4, 45 and 71.
15. See Thomas C. Hone, Douglas V. Smith, and Roger C. Easton, Jr., "Aegis—Evolutionary or Revolutionary Technology," in Hayes and Smith, *op. cit.* in note 11, pp. 43-4.
16. For example, see Bradd C. Hayes, *Issues Raised in the Secretary of the Navy Wargame 94*, Research Memorandum 1-94 (Newport: Strategic Research Department, 1994), pp. 26-8 and Ricks, *op. cit.* in note 5.
17. James Lacy, *Within Bounds: The Navy in Postwar American Security Policy* (Alexandria: Center for Naval Analyses, July 1983), p. 19.
18. *Ibid.*
19. See Ricks, *op. cit.* in note 5.
20. It has been reported that Andrew Marshall, Director of Net Assessment in the Office of the Secretary of Defense believes the "next 30 years . . . may see the beginning of the end of the industrial era of attrition warfare." (*Ibid.*)
21. Ralph Vartabedian, "Colleges Fear Research Cuts by Pentagon," *Los Angeles Times*, Washington edition, 22 July 1994, p. 1.
22. *Ibid.*
23. Interview with Dr. Robert S. Wood, Dean of Naval Warfare Studies, 8 August 1994.
24. See Matthew 12:26 (no implication that those serving with Doctrine Commands have devilish motives is intended!). Paul Bracken believes "[a]nother predictable of the next military is its doctrine. This doctrine is likely to perpetuate current concepts rather than explore fundamentally new ways of doing things." (*Op. cit.* in note 12, p. 159.)
25. Andrew Marshall, Memorandum for the Record on "Some Thoughts on Military Revolutions - Second Version," dated 23 August 1993, p. 2.
26. Bracken, *op. cit.* in note 12, pp. 170-1 (emphasis added).
27. Marshall, *op. cit.* in note 25, p. 6.
28. The author served as a Federal Executive Fellow at RAND in 1988-89.
29. Marshall, *op. cit.* in note 25, p. 2.
30. *Ibid.*, p. 3.
31. *Ibid.*, p. 5.