Major Weapons, Minor Wars: Battlefields of the 21st Century

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MAJOR WEAPONS, MINOR WARS:

Battlefields of the 21st Century

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And as water has no constant form, there are in war no constant conditions.

from The Art of War
by Sun Tzu
4th century B.C.

History is replete with vivid examples of military failure that can be attributed to an inability to grasp fundamental changes that affect the nature of the next battlefield. This myopia is largely born of perceived success, is constrained by the power of preconceived notions, and is characterized by a heavy reliance on the "lessons" and circumstances which brought success in the last conflict.

As the Cold War competition between two superpowers fades into history, America and the world deserve to savor their success at having walked through the gauntlet of nuclear armageddon. The demise of the Soviet Union does not mean the end of the threat of armed confrontation, however. Indeed, in many ways the relaxation of Cold War pressures could herald the advent of previously constrained regional disputes quickly reaching the combustion point. In any event, one thing appears obvious: the world now stands at the threshold of a **new** era of violent engagement.

America's efforts to shape an effective military capability for this aspect of the new world order will largely determine the nature of our political and economic role in the post—Cold War world. It is therefore imperative that we understand the defining characteristics of tomorrow's battlefield and fashion our military forces accordingly.

The purpose of the present study will be to sketch the salient factors affecting the nature of warfare in the wake of the Cold War and to address how the Marine Corps should respond to the challenges and opportunities presented by this new military environment. This response will address the broad philosophical issues that should guide the development of a Marine Corps specific role in likely military scenarios and will focus on weapons and equipment development as well as new directions for leadership selection and training.

THE NATURE OF WAR IN THE NEW WORLD ORDER

Two main features will characterize the bulk of violent conflicts in the foreseeable future: (1) the proliferation of increasingly sophisticated weaponry and equipment and (2) the escalation of ethnic, religious and other often transnational discord.

Between 1976 and 1983, the governments of lesser developed countries (commonly called the Third World) purchased over two hundred thirty-three **billion** dollars worth of assorted armaments

from the world's arms suppliers. These weapons transfers represent the delivery of over 17,310 tanks and self-propelled guns, 19,210 pieces of artillery, 32,816 armored personnel carriers, 197 major ships and submarines, 4,786 supersonic combat aircraft, 3,412 helicopters, 24,749 surface—to—air missiles, and countless lesser weapons and associated ammunition, including precision guided munitions.[1]

Unfortunately, the pressures on buyer and seller alike are such that the international market for increasingly sophisticated and lethal weapons is certain to continue. The arms sales of such powers as the United States, France, China, and the newly independent republics of the former Soviet Union, for example, can represent key ingredients of their foreign policy. Used shrewdly, arms exports can be employed to improve influence and increase allied security and stability. Arms sales are also variously fueled by economic advantages such as concurrent opportunities for expanded civilian trade and lower production costs for expensive weapons systems. For buyers, arms imports are generally perceived to be essential for domestic and regional stability and security. Further, they may provide the opportunity for expansion of political and economic influence.

Nor does the end of the Cold War and the possible reduction of associated superpower arms transfers arms translate automatically into reduced stockpiles or degraded weapons systems effectiveness. As early as 1987 the number of Third World arms producers had doubled from the early 1970's and this trend shows

every sign of accelerating.[2] At the same time, as pointed out by the U.S. Arms Control and Disarmament Agency's 1987 World Military Expenditures and Arms Transfers report, "the weapons industries of Brazil, India, and Israel have grown to encompass the entire range of ground, air, and naval weaponry."

Further, and perhaps more disturbing, is the proliferation of ballistic missile technology in the Third World. A 1990 study by the International Institute for Strategic Studies notes that "Developing states in the Middle East, South Asia, East Asia, Latin America and Southern Africa either possess or have demonstrated the intent to acquire ballistic missiles..." As a consequence, the superpower arms race may very well be replaced by a Third World arms race.

Equally significant is the maturation of China as a major supplier of replacement systems and spare parts for older Soviet systems. Selling spare parts and Soviet clones of its own manufacture at "extraordinary low prices,"[3] China is emerging as a dependable supplier to the Third World. Its ability to produce these spares and its own newer systems at easily affordable prices will ensure the continued lethality of existing Soviet weapons systems already in the arsenals of many Third World nations while encouraging modernization programs.

Most alarming for military analysts, however, are the destinations and sophistication of the transferred weapons. During 1982, fifty-six percent of all weapons sold went to Iraq, Saudi Arabia, Libya, Syria, Egypt, Iran, India, Algeria, Israel,

and Cuba. Moreover, the weapons being delivered to the Third World represent an unprecedented level of sophistication. The Soviet Union, for example, agreed to provide MiG-25 Foxbat and MiG—27 Flogger aircraft, T-72 and T-80 tanks, SA-8 Gecko surface-to—air missiles, and SS-21 surface—to-surface missiles to such customers as Algeria, India, Iraq, and Libya. The MiG-25 and the T-72 tank were even provided to Third World clients before they were made available to the Soviet Union's Warsaw Pact allies![4]

The scope of this weapons buildup becomes even more disturbing when the potential for their use is considered. In this regard, the sparks which might incite armed conflict run the gamut from perceived insult and economic injury to undisguised greed. Among those regions with a history of instability, however, simmering ethnic discontent and economic adversity have the greatest potential for igniting violent confrontation.

Isolated and short-term economic difficulty is seldom the sole catalyst which moves a country (or a people) to violence. The impression of adversity not shared across the economic spectrum, however, may readily create a conducive environment for violent ethnic or regional upheaval. The absence of a significant middle class in much of the Third World underscores the lack of economic opportunity for the majority of people in such societies. Fundamentally, however, the perception of the populace and the government towards the causes and effective remedies of glaring economic imbalances will determine the level of disaffection and thus the intensity of their reactions.

Long suppressed ethnic and religious tensions may also be easily inflamed and lead to violent confrontations that do not recognize national boundaries. Coupled with economic inequity, increasingly obvious political disaffection may push ethnic or religious unrest into the realm of transnational violence as social and governmental pressures collide. Inherent nationalistic pressures may further intensify these volatile situations while no satisfactory solution may be available to the central government.

Obviously significant, then, is the disturbing notion that some of the world's most unstable regions possess large quantities of advanced weaponry. As a consequence, military planners must anticipate that **future military action is most likely to be represented by highly lethal, violent affairs occurring in regions made unstable by military imbalances and ethnic, political, religious, or economic inequities.**

THE NATURE OF A RESPONSE

Naval forces have several inherent qualities which make them attractive tools for policy makers and crisis managers. Among these strengths are their mobility and flexibility, general political availability, diverse capabilities, their ability to convey a calculated ambiguity of intent, and versatility in escalation control. As a consequence, the employment of naval forces in response to regional instability, as opposed to superpower jockeying on (and under) the high seas, can be expected

to continue.

Likely employment scenarios for Marine forces fall roughly into three categories: (1) military action as part of a coalition, (2) unilateral retaliatory action by the U.S., and, (3) stability and/or humanitarian assistance operations in the Third World, often as part of a coalition and under the auspices of the United Nations.

Aside from initial response requirements, coalition building will usually provide the time and circumstances wherein a more sustained buildup of ground combat power is both achievable and desirable. And, as recent history has demonstrated, the U.S. has preferred to reduce risks associated with unilateral action through the application of airpower. (Those risks will be reduced even further as advanced cruise missile technology becomes operational.)

At the same time, however, given the volatile nature of emerging transnational movements and the absence of moderating superpower influences, it is reasonable to anticipate violent eruptions in the Third World that have broad extra-regional implications and consequently compel a more aggressive role for United Nations or other third party mediation efforts and intervention. Professional, disciplined, and self—sustaining forces will be able to make the greatest contribution in such circumstances. Thus, while all three scenarios could easily develop in a manner so as to be significantly influenced by the rapid deployability of Marines, it may be most likely that the

expeditionary capability of amphibious forces will make them especially suitable to participate in stability operations or humanitarian assistance efforts.

Stability operations generally fall into two categories: peacekeeping and peacemaking. Peacekeeping operations are conducted to maintain the absence of violence. In contrast to the existence of a peace to be maintained, peacemaking operations connote the absence of peace and, paradoxically, its forceful imposition. Unfortunately, the environment in many such instances has shown a tendency to rapidly change from one category to another (and back again). Coupled with the presence of sophisticated and lethal weapons systems as mentioned above, stability operations will require the utmost flexibility and operational nimbleness.

In many ways, the Marine Corps' contribution to meeting the imperatives of future contingencies should continue present evolutionary trends. As U.S. military presence overseas declines, the Marine Corps should anticipate an increased strategic response requirement which will require fuller utilization of maritime pre—positioned assets. Concurrently, the Marine Corps should retain the capability to respond to crises across the spectrum of conflict. Thus, from a strategic perspective, the Marine Corps must continue to enhance its expertise at providing rapidly deployable multi-purpose forces capable of joint, combined, and independent operations.

The nature of the evolving threat, however, dictates a

restructuring of command and control policies and the development of operational flexibility to an extent previously unknown. Marine forces must develop and cultivate an intuitive ability to exploit vulnerabilities with little or no preparation. A mindset that views chaos and confusion as opportunities, not obstacles, must be institutionalized. The ability to operate at the small unit level with minimal guidance must become second nature.

In order to take advantage of fleeting operational and tactical opportunities in the face of an increasingly sophisticated and volatile environment, the Marine Corps must inculcate the idea that speed and operational tempo are tremendously lethal weapons in their own right. Force structure, weapons procurement, and leader selection and training should emphasize and be developed so as to maximize the individual Marine's ability to operate in the absence of constant guidance. Fundamentally, Marines must learn that speed and the ability to focus their efforts rapidly across time and space hold the greatest opportunity for success on the next battlefield.

TECHNOLOGY AND THE BATTLEFIELD

In order for the Marine Corps to develop and control operational tempo on the battlefield, the impact of several emerging technologies must be understood and effectively employed.[5]

First, Marines can anticipate routinely deploying to crisis areas via supersonic jet transports. Able to bring their initial

supplies and ammunition with them due to revolutionary lightweight rations, clothing, and munitions, this force will be able to commence operations even in the unlikely event that their associated shipping is not immediately available. Normally, however, their pre—positioned supplies will simultaneously arrive in theater aboard fast sealift ships that have been prepared enroute for rapid discharge of their cargo.

This rapid response capability means a significant reduction in planning time and will almost always preclude opportunities for rehearsal. As a consequence, Marine forces will be increasingly forced to modify existing contingency plans based on information received from technical intelligence assets. It is thus critically important that the Marine Corps develop the capability to directly access and process real-time intelligence sources in order to translate strategic flexibility into operational success.

Closer to the battlefield, the proliferation of effective hand—held, shoulder fired anti-aircraft and anti-armor weapons will force a search for new aviation and armor technologies and methods of employment. In both instances, the targeted systems (aircraft and armor) are approaching the point where it is becoming exponentially more difficult and expensive to achieve even marginal performance improvements.

For the bulk of manned aircraft, survivability is projected to remain largely a function of speed, agility, and associated deception techniques. Unfortunately for the pilot, these assets

translate into heat, thin skin, and increasingly irrelevant maneuvers for man—portable anti—aircraft missiles. Particularly in the low intensity environment likely to characterize stability operations, most aviation missions will revolve around close air support where high performance aircraft are even more vulnerable. Nor is the advent of low—observable "stealth" type aircraft designed around radar absorbing materials likely to play a significant role in stability operations. Due to their tremendous cost, these aircraft will continue to be employed as manned penetrating weapons systems designed largely to gain surprise and ensure air superiority.

The threat to manned aircraft will come largely from rapidly expanding computer related technologies which allow the integration of reprogrammable microprocessors (RPM) with multiple seekers on extremely fast man portable missiles. Such missiles will use infrared and ultraviolet sensors along with RPM technology to ignore aircraft deception techniques. These capabilities will be constantly upgraded as they represent extremely cost effective investments when compared to the price of attack aircraft.

To counter this emerging missile threat, the Marine Corps should pursue the development of close attack capable remotely piloted vehicles (RPVs). Equipped with "smart" bombs and various other ordnance modules, attack RPVs have the potential to supplant manned aircraft in striking targets unsuitable for other means of engagement. Such RPVs will evade air defense missiles

largely through maneuvers that a human pilot could not endure.

RPVs should also be developed to meet requirements for survivable, cost-effective electronic relay platforms, photo and electronic reconnaissance missions, and psychological and deception operations. Such aircraft will undoubtably have great utility in stability operations due to their substantially reduced support requirements.

Similarly, tanks on the battlefield of tomorrow will most likely become increasingly irrelevant as anti—armor sensor technologies and guidance systems continue to develop faster than tank defensive mechanisms. In an attempt to stay ahead of advancing anti—armor systems, tank designers have gone from simple rolled homogeneous steel to reactive armor and steel—encased depleted uranium armor. Each of these improvements has resulted in more powerful, heavier, and complex engines, transmissions, suspensions, and weapons systems, all of which require a substantial (and vulnerable) maintenance and support infrastructure.

At the same time, however, man-portable anti—tank missiles have become substantially more effective. Such enhancements as fiber optic filaments, top attack flight profiles, and tandem charge warhead munitions will take advantage of rapidly advancing sensor capabilities to destroy tanks at much greater ranges, in daylight or darkness, and through most types of natural or battlefield-generated obscuration.

The Marine Corps' response to the declining utility of

armored forces should be to concentrate on a multi—purpose, helicopter transportable mobile protected gun system (MPGS) and the development of an anti-armor doctrine that emphasizes tactical flexibility in confronting armor attacks. A versatile, **rapidly deployable** weapons system such as envisioned here would be tremendously more useful in stability operations throughout the littorals of the Third World were most bridges cannot even begin to support today's main battle tanks. Coupled with the continued maturation of light armored infantry doctrine and proficiency at independent small unit operations, the sound employment of MPGS and rapidly expanding anti-armor technologies will enable Marine forces to reduce armor associated support structure and more effectively employ its scarce manpower resources.

Numerous militarily relevant advances associated with the explosion of computer technology are becoming apparent as the 20th century comes to a close; and this trend shows many signs of accelerating. For the Marine Corps, decisions concerning the adoption of new weaponry and equipment should be guided by a singular focus on efforts to enhance decentralized operational performance. Ultimately, however, the effective employment of new technologies will depend on the attitudes and vision of those to whom such tools are entrusted.

LEADER SELECTION AND TRAINING

In order to institutionalize the ability to thrive amidst constantly changing and uncertain battlefield conditions, the Marine Corps needs to reexamine its leadership selection and training policies. Particularly among field grade officers, the ability to demonstrate mental and operational flexibility seems to become somewhat atrophied. No doubt the length of time combat arms officers spend **out** of their primary fields contributes to this situation, but the underlying causes must be addressed if Marines are to exploit the fleeting opportunities they encounter on tomorrow's battlefield.

The initial selection of Marine leaders should eliminate those who cannot demonstrate solid independent judgement under duress, lack determination, and are physically unsuitable. The process should focus on identifying intelligent, well-rounded, self—reliant, and quick—witted candidates who have demonstrated the ability to operate effectively in leadership positions despite great mental and physical stress. These characteristics will generally be found to be most useful in the decentralized and uncertain environment of post—Cold War combat.

Equally important are the career screening effected by promotion boards and the continuing professional development accomplished by various Marine Corps schools. Educational institutions in particular must be mentally and physically rigorous and challenging. They should stress the necessity for operational decentralization and underscore a fundamental approach that values and rewards initiative and mental agility.

Curriculums should be so constructed as to develop the ability to discern the key factor(s) affecting tempo on the battlefield of the moment and how they can be affected to friendly advantage. Finally, and most importantly, sub—standard performers must be mercilessly hounded from the ranks.

CONCLUSION

The battlefields of the 21st century represent significant challenges for the Marine Corps. The wide variety of emerging technologies, coupled with simmering tensions in regions that possess well—stocked arsenals of sophisticated and lethal weapons, will pose crucial questions of usefulness and effectiveness for and about the Marine Corps. In this regard, decisions on the adoption and employment of new technologies must flow from an educated recognition that speed on the battlefield and the ability to focus decentralized efforts across time and space will generate significant combat power while reducing casualties. Ultimately, however, the ability to rapidly adapt to the confusion and uncertainty of future war will rest on the cultivated intuition of the combat leader.

ENDNOTES

[1] Rajan Menon, Soviet Power and the Third World. (New Haven: Yale University Press, 1986), pp. 182 and 186.

[2]Daniel Gallik, ed., World Military Expenditures and Arms Transfers, 1987 (Washington, D.C.: U.S. Arms Control and Disarmament Agency, 1988), p. 14.

[3]Ibid., p. 20.

[4]Menon, p. 186.

[5]The following discussion of aircraft and armor vulnerabilities and missile technology is largely adopted from Rod Paschall, LIC 2010: Special Operations and Unconventional Warfare in the Next Century, (Washington, D.C.: Brassey's (US), 1990).